TEMPERATE RHODODENDRONS

Julian Taylor-Whall

- Volume Three -
Subgenus Hymenanthes (Part One)

Temperate Rhododendrons:

- the species and hybrids established outdoors in the leading woodland gardens of England, Scotland and Wales;

- the species curated in accordance with scientific advances and field study evidence published in the three decades since the 1996 Edinburgh revision of the classification;

- the hybrids selected and assessed with the benefit of hindsight rather than hype, disposition and floral beauty the key determinants for inclusion, not their commercial availability.

The texts are illustrated with over 3000 photographs taken by the author.

Volume One reviews and amends the classification of Genus *Rhododendron* to conform with the molecular phylogeny studies of 2005 and 2010, as well as taking account of recent work on polyploidy. A visual guide to help identify the various species follows this updating, along with a glossary of the scientific terminology and a listing of the various seed collecting expeditions.

Volume Two considers Subgenus *Therorhodion* and the species placed within Subgenus *Azaleastrum*.

Volumes Three and Four document the taxa assigned to Subgenus *Hymenanthes*.

Volume Five examines the rhododendrons within the three sections of Subgenus *Lepidorrhodium*.

Volume Six evaluates the Natural Hybrids, plants that have arisen in the wild from undirected pollination and established stabilised populations, as well as the host of seed pan rogues germinated in cultivation.

Volumes Seven and Eight survey the Azaleodendrons, Deciduous and Evergreen Azaleas, Lepidote and Elepidote Hybrids created through directed pollination.

TEMPERATE RHODODENDRONS

Julian Taylor-Whall

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- *front cover* -
R. falconeri (CH&M 3602)

- *title page* -
R. falconeri

- *contents* -
R. sinogrande

- Section *Leiorrhodium* -
R. hodgsonii ‘Poet’s Lawn’

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Section
Leiorrhodium

Subsection *Arborea:*



R. cinnamomeum



Taxa:

- *R. arboreum*
  - *R. arboreum* ssp. *albotomentosum*
  - *R. arboreum* ssp. *arboreum*
  - *R. arboreum* ssp. *cinnamomeum*
    - *R. arboreum* ssp. *cinnamomeum* var. *campbelliae*
    - *R. arboreum* ssp. *cinnamomeum* var. *cinnamomeum*
  - *R. arboreum* ssp. *delavayi*
    - *R. arboreum* ssp. *delavayi* var. *delavayi*
    - *R. arboreum* ssp. *delavayi* var. *peramoenum*
  - *R. arboreum* ssp. *nilagiricum*
  - *R. arboreum* ssp. *zeylanicum*
- *R. lanigerum*
- *R. niveum*

Taxonomic Revision:

Subsection *Arborea* is transferred from Section *Ponticum* and placed within the new Section *Leiorrhodium* as required by evidence presented in the 2010 study *A Phylogeny of Rhododendron subgenus Hymenanthes based on Chloroplast DNA Markers.*

Morphologically, the treatment of both *R. arboreum* ssp. *arboreum* and *R. arboreum* ssp. *cinnamomeum* in the 1996 Edinburgh Revision classification resulted in mismatched indumentum types and excluded flower colours, which caused unnecessary confusion. A more consistent arrangement is adopted herein.

The detailed descriptions in Volume 2 of H. H. Davidian's *The Rhododendron Species,* published in 1989, show that *R. arboreum,* along with its two forms - *R. arboreum* forma. *album,* and *R. arboreum* forma. *roseum* - have the same leaf under surface indumentum. Across what is a considerable natural distribution, both geographic and altitudinal, that covering of hairs transitions from thin and continuous to plastered or woolly, changes hue from off-white to silver to fawn or pale brown, and while usually unistrate, may sometimes be bistrate. If the extremes are compared, clearly differences would be found, but a progressive coalescence exists on the ground. It seems entirely logical therefore to include all these forms within the taxonomic box of *R. arboreum* ssp. *arboreum,* without the need for further varietal division, as this can only be made on the basis of corolla colour, which the Edinburgh Revision expressly rules out unless accompanied by a specific niche distribution.

As a result, *R. arboreum* ssp. *cinnamomeum* only holds plants that have a bistrate, rusty-brown, looser, and sometimes partially detersile indumentum, which predominantly are endemic to Nepal. Yet there is a clear geographic distinction between white flowered forms and those with rose, pink or scarlet-through-crimson corollas. The former are established to an altitude 600m higher than the latter group and will therefore exhibit greater hardiness than their deeper pigmented sisters.

Two varieties of *R. arboreum* ssp. *cinnamomeum* are therefore required: var. *cinnamomeum,* as previously defined by Nathaniel Wallich and George Don, for those white flowered plants; and var. *campbelliae,* as described by Sir Joseph Dalton Hooker, for those with rose, pink, scarlet, red or crimson corollas.

Subsection Morphology:

Large domed bushes to columnar, single- or multi-stemmed trees, up to 30m high; young shoots tomentose or floccose, glabrescent; bark rough, pale brown to tan, occasionally purplish, partly flaking.

Leaves thick, coriaceous, rugulose, 5 to 25cm long by 1 to 8cm wide, lanceolate to oblanceolate to narrowly elliptic, retained 1-3 years; upper surface dark- to olive-green, shiny or matt, indumented at first but glabrous when mature, the veins often deeply impressed; lower surface with a dense and compacted, thin, shiny and plastered, to thick, woolly and spongy, continuous, one- or two-layered indumentum, white, silvery, fawn or red-brown in hue, composed of dendroid hairs, the upper layer when present often loose, floccose and rufous.

Leaf anatomy comprises a 3-layered upper epidermis, with the cells of roughly equal size throughout; the cuticle is between half as thick and as thick as the cells are deep; water tissue is absent; the lower epidermis cells are not prolonged into papillae. Sclereid cells are present in the leaf tissue of each species.

Petiole 8-32mm long, varyingly tomentose, with or without glands, these short-stalked when present.

Inflorescence dense and compact, 10-35(-50)-flowered.

Pedicel 4-16mm long, varyingly tomentose, occasionally glabrous, with or without glands, these short-stalked when present.

Calyx minute, 1-4mm long, 5-lobed, hairy, glandular or glabrous.

Corolla 5-lobed, fleshy, campanulate to tubular-campanulate, 2.6 to 5cm long, with 5 nectar pouches at the base; pink to scarlet to deep crimson-red, magenta, purple, mauve or lilac, rarely white, white-tinged-pink, or two-toned; normally spotted dark crimson-purple, sometimes on all the lobes, and with or without a darker basal blotch.

Stamens 10, unequal, shorter than the corolla.

Ovary conoid to oblong, 3-8mm long, 6-10-12-locular, densely tomentose, with or without glands, these short-stalked when present.

Style glabrous.

Capsule oblong to oblong-oval, 1.5 to 3cm long, sometimes slightly curved, usually tomentose, with or without glands, these short-stalked when present.

Seeds elongate, narrowly winged to nearly unwinged, each end with appendages.


R. nilagiricum


R. arboreum

R. arboreum* ssp. *arboreum

Hardiness:
H2-4.
Flowering Period:
January-May.
Distribution in the wild:
Kashmir to Sikkim, N India; Nepal; Bhutan.
Growing in oak, pine, rhododendron and conifer forests, on open hillsides, and sometimes forming pure forest by itself, at elevations of 1,850-3,200m.

Identification:
Leaves mostly flat, 7.2 to 20cm long by 2 to 5.6cm wide; upper surface reticulate; lower surface with a thin, continuous, plastered or woolly, off-white to silver, or fawn to pale brown, sometimes bistrate but usually unistrate, compacted indumentum.
Inflorescence 15-20-flowered.
Corolla usually crimson, but also white, pink, rose or two-toned, with or without either or both deeper spotting or a basal blotch.

Seed Collections:

Bailey 3	1913	L&S 1261	1936	LS&H 20586	1949
Bailey 4	1913	L&S 1276	1936	LS&H 21294	1949
Bailey 5	1913	L&S 1281	1936	PS&W 1872	1952
Bailey 4	1914	L&S 1305	1936	PS&W 3670	1952
Bailey 5	1914	L&S 1307	1936	PS&W 3853	1952
Cooper 1291	1914	L&S 1308	1936	PS&W 3854	1952
Cooper 1545	1914	L&S 2825	1936	SSW 8	1954
Cooper 1575	1914	L&S 2960	1937	SSW 224	1954
Cooper 2089	1914	L&S 3017	1937	SSW 2608	1954
Cooper 2903	1914	LS&T 4029	1938	SSW 2614	1954
Cooper 2760	1914	LS&T 4031	1938	SSW 4914	1954
Cooper 2843	1914	LS&T 6776	1938	SSW 4963	1954
Cooper 3503	1914	LS&E 12491	1946/1947	SSW 5083	1954
Cooper 3786	1915	KW 17044	1948	SSW 5097	1954
KW 7140	1926	KW 17216	1948	SSW 9362	1954
KW 7968	1927/1928	LS&H 16007	1949	Stainton 184	1956
L&S 25	1933	LS&H 18620	1949	Stainton 228	1956
L&S 586	1934	LS&H 18703	1949	TSS 2	1961/1962
L&S 1105	1934	LS&H 18882	1949	TSS 3	1961/1962
L&S 1115	1934	LS&H 20232	1949	TSS 5	1961/1962
L&S 1143	1936	LS&H 20519	1949	TSS 16	1961/1962
L&S 1182	1936	LS&H 20523	1949	TSS 18	1961/1962
L&S 1185	1936	LS&H 20583	1949	TSS 22	1961/1962
TSS 23	1961/1962	Dingle 5	1984	NAPE 0066	2003
TSS 25	1961/1962	KR 755	1985	AC 5255	2004
TSS 26	1961/1962	KR 938	1985	AC 5259	2004
TSS 27	1961/1962	KR 966	1985	AC 5392	2004
TSS 45	1961/1962	DF 86023	1986	AC 5577	2004
TSS 50	1961/1962	DF 86048	1986	KR 7972	2005
TSS 58	1961/1962	KR 1023	1987	KR 8029	2005
TSS 60	1961/1962	Bluefield 12	1988	TDA 012	2011
SCH 1111	1966	EGM 57	1988	TDA 013	2011
TSS 61b	1970	EGM 98	1988	TDA 088	2012
TSS 61c	1970	C&S 1523	1990	TDA 089	2012
TSS 61e	1970	C&S 1532	1990	TDA 110	2012
TSS 65	1970	C&S 1561	1990	TDA 211	2013
TSS 67	1970	C&S 1695	1990	TDA 212	2013
TSS 68	1970	Kinmouth 95	1990	TDA 235	2013
TSS 70	1970	KR 1626	1990	TDA 237	2013
Bartholomew 200	1974	KR 1739	1990	TDA 263	2013
Bartholomew 261	1974	H&M 1923	1993	TDA 273	2013
Kumar 674	1975	AC 4751	2000	TDA 290	2013
Kumar 690	1975	AC 4752	2000	TDA 292	2013
Kumar 698	1975	AC 4753	2000	TDA 399	2013
Kumar 715	1975	AC 4754	2000	TDA 572	2013
Kumar 717	1975	AC 4760	2000	TDA 902	2016
Kumar 741	1975	AC 4767	2000	TDA 903	2016
Kumar 776	1975	AC 4768	2000	TDA 914	2016
Dingle 1	1984	Chadwell 4045	2001	TDA 920	2016
		KCSH 0312	2003		

R. arboreum has a wild distribution that stretches across northern India from Kashmir to Sikkim, taking in Nepal on the way and extending into Bhutan. Most plants are resident between the 1,850 and 2,550m contours, though some established populations will be found as high as 3,200m. The naturalist and soldier Major-General Thomas Hardwicke - at the time of the find a mere captain in the British East India Company's Bengal Artillery - encountered the species in flower at Kumaun, to the south-east of Dehra Dun, in the state of Uttar Pradesh, sometime between March and May 1796. Transcribed from Hardwicke's illustrated field notes, the first morphological description of the taxon appeared in 1805, included within Volume 1 of Sir James Edward Smith's *Exotic Botany*. Hardwicke's own account of chancing upon the rhododendron appeared in *Transactions of the Asiatic Society of Japan,* Volume 6, published in 1799. And the subtlety of the chosen epithet - 'tree-like' - remains to this day, an emblematic statement on botanic creativity.

A review of archive material at the Linnean Society by Doctor Mark Watson of the Royal Botanic Garden, Edinburgh, which was incorporated into an article in *Rhododendrons with Camellias and Magnolias 2011* - the Year Book of the RHS Rhododendron, Camellia and Magnolia Group - this written by Tony Schilling, former curator of the Royal Botanic Garden, Wakehurst Place, has clarified the record as to who in fact deserves credit for introducing *R. arboreum* into UK cultivation, with several contenders having previously vied for that distinction: Hardwicke himself, Francis Buchanan-Hamilton, and Nathaniel Wallich.

Hardwicke's collection of seed was from a lowland form of *R. arboreum,* which was successfully germinated, grown and flowered at the Calcutta Botanic Garden (as recorded in that establishment's catalogue of plants *Hortus Bengalensis,* this compiled by William Roxburgh, a former Superintendent of the gardens, and published in 1814). Whether seed from Hardwicke's gathering ever reached British shores remains a mystery, but if any plants did arise, they would certainly have been tender and unlikely to survive outdoors for very long. No records have been found to date indicating that any of this seed arrived in the UK, but it is only through Mark Watson's trawl of the archives that we know for a certainty that Hardwicke did indeed collect viable capsules.

Historical confusion over the introduction dates blurred the issue between Buchanan-Hamilton and Wallich, who for many years were believed to have sent seed home in 1810 and 1814 respectively, as there is no conclusive evidence as to which batch germinated nor a definitive link to the plant that was first to set and open any flower buds. Thankfully that first flowering date is undisputed. It occurred during 1825 in the Hampshire garden of Mr Alexander Baring, and was recorded by John Lindley in that year's *Botanical Register*.

The unearthed material in the Linnean Society archive is correspondence between Buchanan-Hamilton and William Roxburgh, an exchange of letters between 1802-03, which details consignments of seed from lowland forms of *R. arboreum* that had been collected during a journey to Kathmandu, the capital of Nepal, by a British diplomatic party. Francis Buchanan-Hamilton was a member of that mission, while William Roxburgh was then Superintendent at the Calcutta Botanic Garden. Roxburgh would certainly have despatched portions of those consignments to Britain, but again, as they came from altitudes at the base of the distribution, it is doubtful if any plants survived the rigours of the UK climate after their first hard winter, even if germination was successful. Buchanan-Hamilton finally obtained seed from high altitude plants of *R. arboreum* in 1810 while working on a detailed survey of Bengal for the East India Company. Camped in eastern Bihar State, near the Nepalese border, he sent his 'collectors' into the Morang Hills on a combined intelligence/plant gathering expedition, their finds despatched to Roxburgh, who forwarded them on to the UK.

The Nathaniel Wallich consignment of 1814 is now believed doubtful, as he only took up the post of Superintendent of the Calcutta Botanic Gardens in 1817 (succeeding Buchanan-Hamilton) and no definitive records have been found to confirm this despatch, unlike his later collections. This may be due to many of his seed lots arriving at Britain's botanic institutions via third parties - sometimes the Vice President of the Linnean Society, Aylmer Lambert, more often his predecessor as Superintendent, Buchanan-Hamilton, now returned to his Perthshire home in Scotland. Moreover, between 1814 and 1816, the Anglo-Nepalese War was raging as the East India Company attempted to expand its sphere of interest into that Kingdom, which probably ruled out any botanical collection forays. Seed from Wallich's 1820 expedition to Nepal is clearly recorded as arriving at the Royal Botanic Garden, Edinburgh, in 1821 - where Buchanan-Hamilton was Keeper - germinating well, with one plant ultimately growing into a magnificent, crimson-flowered specimen, some 9m high. But given the confirmed first flowering date of 1825, along with the fact that *R. arboreum* takes around fifteen years to bloom from seed, credit for introducing the species must posthumously go to Francis Buchanan-Hamilton.

R. arboreum seed was next despatched to the UK around 1840, the lots sent home to friends in Argyll, Scotland, by Doctor Archibald Campbell, then Political Resident in Nepal, but soon to become Superintendent of Darjeeling and the man responsible for the initial development of the area's tea plantations.

While he was still assigned to the UK's 1802-03 diplomatic mission to Nepal, Francis Buchanan-Hamilton managed to discover *R. arboreum* forma. *album* on the mountains near Narayanhiti - where the British Residency was sited - though it is unclear if he managed to collect any seed. Nathaniel Wallich is therefore credited with having introduced the plant in 1821 from seed gathered at the top of Mount Shivapuri, Nepal, and this form of the species first flowered in a Chester conservatory in 1839. Its botanic description appears in the second tome of Wallich's three-volume *Plantae Asiaticae Rariores,* published in 1831.

R. arboreum forma. *roseum* was assuredly a Wallich discovery, but here too, dates are muddled. The most likely is 1820-21, while he was based at the British Residency in Kathmandu, the collection location, the nearby Mount Shivapuri. First flowering in the UK is said to have occurred in 1828 at Knight's Chelsea Nursery in London, some seven years after the seed was successfully germinated, which is possible if a young scion were grafted onto a mature rootstock, but unlikely if the seedling was left to its own devices, unless otherwise stressed. The botanic description for the find was written by John Lindley and appears in Volume 15 of the *Botanical Register,* published in 1829.

A now close to 200-year-old plant of *R. arboreum*, free-flowering and well-over 10m in height, likely raised from Hamilton, Wallich or Campbell seed, can be seen at Stonefield Castle Garden, near Tarbert, in Argyll. Located on the west coast of Scotland tight against the shores of Loch Fyne, the garden is also home to many plants raised from seed collected during Joseph Hooker's 1849-1851 Sikkim-Himalaya expedition.

Widespread across the Indo-Himalayas, where the species can attain 30m in height and have a trunk circumference close to the ground in excess of 3.5m, in UK cultivation a more modest height of 12 to 18m is achieved, mature plants forming upright, columnar or rounded-spreading trees with a single main stem, or alternatively, rounded, bushy specimens with several boles. *R. arboreum* ssp. *arboreum* is long-lived, hardy outdoors along the west coast and in the south, but requires a sheltered position in gardens along the east coast. Crimson-flowering forms collected from lower down the altitudinal range are only truly fully hardy in west coast gardens benefiting from microclimates enhanced by the Gulf Stream, as recent climatic conditions have shown. However, if the cold damage after a hard winter is not too severe, the species will often send out new shoots from its trunk and base the following season.





R. arboreum (Bluefield 12)



R. arboreum (DF 86023)



R. arboreum (Kumar 674)



R. arboreum



R. arboreum (Kumar 717)



R. arboreum

R. arboreum (TSS 26)

R. arboreum

R. arboreum ssp. *cinnamomeum* var. *campbelliae*

Hardiness:
H3-4.
Flowering Period:
April-May.
Distribution in the wild:
E. Nepal; Bengal & Sikkim, N. India.
Growing in open forests and on rocky slopes at elevations of 2,750-3,050m.

Identification:
Leaves 6.8 to 13.5cm long by 2.1 to 3.8cm wide;
upper surface reticulate;
lower surface matt, with a thin, woolly, continuous, bistrate indumentum,
the upper layer partially detersile, cinnamon to dark-brown to rust coloured.
Inflorescence 15-20-flowered.
Calyx minute, 1mm long.
Corolla scarlet through crimson to red, rose and pink, with or without deeper spotting.

Seed Collections:

Cave 6715	1914	SCH 2049	1975
Cooper 2475	1914	SCH 2187	1976
Cooper 2924	1914	BMW 172	1978
Cooper 3540	1914	EN 619	1984
Cooper 3593	1914	CHM 2036	1985
Cooper 4981	1915	P&L 8	1986
L&S 2893	1936	KR 1050	1987
LS&T 6411	1938	C&S 1532	1990
LS&H 16026	1949	C&S 1561	1990
Polunin 1352	1949	Fox 60	1990
TSS 29	1961/1962	ENEP 193	2001
Bowes-Lyon 48	1962	TDA 096	2012
Bartholomew 151	1974	TDA 214	2013
Beer 703	1975	TDA 239	2013

R. arboreum ssp. *cinnamomeum* var. *cinnamomeum*

Hardiness:
H4-5.
Flowering Period:
April-May.
Distribution in the wild:
Nepal.
Growing on rocky slopes, in open forests, at relatively high elevations of 2,750-3,650m.

Identification:
Leaves 8 to 14.8cm long by 2 to 5cm wide;
upper surface reticulate; lower surface matt, with a thin, woolly, continuous, bistrate indumentum, the upper layer partially detersile, cinnamon to dark-brown to rust coloured.
Inflorescence 15-20-flowered.
Calyx minute, 1mm long.
Corolla white, with purple spots.

Seed Collections:

SCH 2649	1983

Nathaniel Wallich was the first plant hunter to introduce *R. cinnamomeum* into British gardens - the white-flowering *R. arboreum* ssp. *cinnamomeum* var. *cinnamomeum,* as now configured. The seed was gathered in Nepal during 1822, and the species debuted as entry 760 of 20,000 in *Wallich's Catalogue*, which was published in 1828. George Don included the accompanying description in the third volume of his own four-part work *A General History of the Dichlamydeous Plants,* dated to 1834, with first flowering in UK cultivation taking place two years later during 1836, at the Rollisson Nursery in Tooting, London, the specimen in bloom being grown under glass.

J. D. Hooker is credited with the 1849 discovery of *R. campbelliae* - the scarlet, crimson, red, rose, pink or bi-coloured blooming plant, herein defined as *R. arboreum* ssp. *cinnamomeum* var. *campbelliae*. This premier encounter took place on the summit of Mount Tonglo in the Sikkim Himalaya, but its primacy is rather undermined historically, as Wallich is recorded as introducing the plant from Nepal in either 1820 or 1822. The first botanic description of the species appears in Hooker's *Rhododendrons of Sikkim-Himalaya* (1849–51), which likely speaks volumes, with the probably new-to-science find named for the wife of his travelling companion on that expedition, Dr. Archibald Campbell, the British East India Company representative and Superintendent of Darjeeling, which was where Hooker was based when not out botanising.

Both varieties of ssp. *cinnamomeum* can be keyed from the other *R. arboreum* subspecies by the presence of a bistrate indumentum on the abaxial surface of the leaves. This is thin, woolly and continuous. The upper layer is cinnamon- to rusty-brown-coloured and composed of small dendroid hairs, which are often loose or detersile (shed completely) on older blades, thereby revealing the lower layer of rosulate hairs beneath.

R. campbelliae is endemic to eastern Nepal, neighbouring Sikkim, and the upper districts of West Bengal, while *R. cinnamomeum* is found only in Nepal. The distribution of both species begins at the 2,750m contour, with that of *R. campbelliae* not exceeding an altitude of 3,050m, while the populations of *R. cinnamomeum* continue upwards to an elevation of 3,650m, thereby providing the hook on which varietal status may be hung.

The Edinburgh Revision reworking of Balfourian taxonomy reduced *R. campbelliae* to synonymy, while white-flowered *R. cinnamomeum* plants were consigned to a pigeonhole stamped *R. arboreum* ssp. *cinnamomeum* var. *roseum*. It gets even better, as both species were considered distinctive enough to be given group motifs by the RHS, which meant plants could be labelled *R. arboreum* ssp. *cinnamomeum* var. *cinnamomeum* Campbelliae Group, or as *R. arboreum* ssp. *cinnamomeum* var. *roseum* Album Group, the latter combination faintly ridiculous, if not outright laughable. Equally, it should be pointed out that the var. *roseum* epithet, though formulated by John Lindley back in 1829, is actually predated by an 1813 Frederick Pursh concoction - *R. maximum* var. *roseum* - so its dual use is technically illegal under the nomenclature rules. Oops! Suffice to say, the reworking adopted herein straightens out that self-inflicted botanic boo-boo.

In British gardens, *R. campbelliae* grows into a small, broadly-upright or columnar tree around 10m or more high, and is prolifically free-flowering at maturity, though in some clones, the corolla colour can only be described as 'harsh'. Plants are hardy outdoors along the west coast and in the south, but elsewhere will need a sheltered position, protected from damaging, cold winds, to assure success. Specimens of *R. cinnamomeum* tend to top out at around 7.5m, are equally floriferous, but only come in shades of white, augmented by a sprinkling of purple spots. If grown from seed capsules sourced from close to the highest elevations of the distribution however, they will often succeed in gardens otherwise considered marginal for woodland rhododendron cultivation.

The rusty-red indumented and white-flowered hybrid cross 'Sir Charles Lemon' is continually being mistaken for *R. cinnamomeum* in gardens, but its lax truss and much broader, elliptic-shaped leaves, should quickly rectify a labelling faux pas.


R. campbelliae


R. campbelliae


R. cinnamomeum (SCH 2649)

R. campbelliae

R. cinnamomeum

R. niveum

Hardiness:
H3-5.
Flowering Period:
April-May.
Distribution in the wild:
Sikkim, NE India; W Bhutan.
Growing in rocky valleys and on ridges in bamboo, fir, hemlock and mixed forest
at elevations of 2,900-3,700m.

Identification:
A multi-stemmed small tree to around 6m in height;
branchlets densely white tomentose; bark pale brown to grey.
Leaves oblong-elliptic to oblanceolate, 8 to 17cm long by 2.5 to 6.3cm wide,
retained 1-3 years;
upper surface dark green, white tomentose at first, glabrous at maturity;
lower surface matt, the indumentum continuous, bistrate, thick and woolly,
white at first, then grey to fawn at maturity.
Inflorescence very compact, 15-30-flowered;
the flower buds large, to 2.8cm long, oval to oblong,
the bud scales rusty-brown to grey-green, densely tomentose.
Corolla 3 to 4cm long, deep magenta through mauve to deep lilac,
with or without a deeper coloured basal blotch, the nectar pouches also deeper coloured.
Capsule 6-locular.

Seed Collections:

Gould 22	1937	TDA 376	2013
LS&H 20620	1949	TDA 381	2013
Bowes-Lyon 6003	1970	TDA 501	2013
Bowes-Lyon 6008	1970	TDA 933	2016
P&L 2	1986	TDA 934	2016
P&L 21	1986	TDA 935	2016
DSE 110	1995	TDA 936	2016
DSE 111	1995	TDA 938	2016
TDA 374	2013		

Joseph Dalton Hooker discovered *R. niveum* on the hills of Sikkim during November 1849, out-of-flower, but in fruit, and somehow managed to return seed to the UK before December transitioned into January.

At least, according to the official account.

That accepted narrative is in error, however: challenged in Volume 1, Number 1, of *The Rhododendron Society Notes;* where Colonel John Middleton Rogers, of Riverhill House, near Sevenoaks, Kent, writes that:

'I have here a good many Himalayan species between seventy and eighty years old, including falconeri, niveum, barbatum, thomsonii, lanatum, fulgens, campanulatum of several varieties, hodgsonii and arboreum.'

He is referring to plants grown from seed obtained by his grandfather, John Rogers, which came from capsules collected by Colonel William Henry Sykes, who made those gatherings around 1830, almost two decades before Hooker even set sail for India, and eighty-six years prior to the publication print run of the first edition of the Rhododendron Society's *Notes*. History, therefore, will need to be revised.

R. niveum was first described in Hooker's 3-part botanic travelogue of the expedition *Rhododendrons of Sikkim-Himalaya,* published during 1851, and is easily identified when in bloom as the compact, 15-30-flowered, lilac-mauve to purple globes are highly distinctive, even from afar. Smaller leaves and flower buds than its closest relative, *R. lanigerum,* are less than perfect identifiers when out of bloom, respectively: 8 to 17cm long, by 2.5 to 6.3cm wide, rather than 10 to 25cm, and 3 to 7.5cm; and to just 2.8cm, instead of 3.4cm. The six-chambered seed capsule and thick, woolly indumentum found on the underside of the leaves, will however, unerringly distinguish it from the six *R. arboreum* subspecies.

Specimens of *R. niveum* will be found in the majority of the UK's woodland gardens, those individuals established in sites along the west coast, especially spectacular, and a plant from Hooker's 1849 reintroduction can still be seen flourishing in the gardens of Stonefield Castle - now a hotel, whose grounds are open to the public - just north of Tarbert, in Argyll. The species opened its first bloom in cultivation at Kew during the spring of 1853, this event illustrated in Volume 79 of *Curtis's Botanical Magazine,* Tab 4730, though of course, unofficially, flower buds may have been swelling at Riverhill much earlier than that.



R. niveum (P&L 2)



R. niveum (P&L 21)

R. niveum (Gould 22)

R. niveum

R. zeylanicum

R. arboreum* ssp. *zeylanicum

Hardiness:
H2-3.
Flowering Period:
June-August.
Distribution in the wild:
Sri Lanka; Manipur, Assam, India.
Growing on hillsides, in scrub and in forests at elevations of 900-2,745m.

Identification:
Height 1.8 to 11m; branchlets tomentose and glandular; bark deeply fissured.
Leaves, 5.6 to 17.5cm long by 2.5 to 8cm wide, elliptic to ovate, apex blunt to acute;
upper surface strongly bullate with deeply impressed veins,
convex, the margins strongly recurved;
lower surface with a thick, spongy, brownish to fawn or off-white bistrate indumentum,
the midrib glandular.
Petioles, pedicels and calyx moderately to densely glandular.
Inflorescence 12-20-flowered.
Corolla crimson to pink.

Seed Collections:

L&S 1184	1936


R. zeylanicum

R. zeylanicum is the sole member of the genus endemic to the island of Sri Lanka, formerly Ceylon. The species was introduced into UK cultivation during 1830, opening its first set of blooms twenty years later in the Cornish garden of Sir Charles Lemon, the 2nd Baronet Lemon of Carclew. William Beattie Booth, his head gardener, recorded that first flowering when describing the species for an edition of the *Gardeners' Chronicle* periodical published on March 9th 1850:

> "This is now in great beauty in the open border, and proves to be a very fine thing, far surpassing in my opinion, the old *Rhododendron arboreum,* or any of the numerous hybrid varieties that have originated from it. The rugged corky bark, and rough, wrinkled thick leaves, revolute at the margin, and clothed underneath with a somewhat rusty-coloured pubescence, give a peculiar character to the plant, by which it may be easily recognised. The head of flowers is round and compact, like that of *R. arboreum,* but the colour is much richer, being a deep blood red, with a few dark spots at the bottom of the tube,.."

R. kingianum was described in the October 21st 1899 edition of the same journal, having been collected in Manipur, during 1882, by Sir George Watt, who found the plants growing a little below the 3,000m contour on a mountain known as Ching Low. Seed was sent to Kew and seventeen years later during June 1899, a specimen established in the Temperate House flowered for the first time in a British garden. It's specific status however, was relatively short-lived, as the taxon proved identical to *R. zeylanicum* despite the 1500-mile/2,400-kilometre disjunct between the two populations, synonymy being applied years before the recruitment process at Edinburgh Botanic had even begun to interview potential candidates for the classification revision project.


R. zeylanicum

The National Trust for Scotland's Arduaine Garden, on the west coast between Oban and Lochgilphead, is home to the most famous collection of *R. zeylanicum* resident in the UK, though mature specimens can also be seen at Brodick Castle Gardens, on the Isle of Arran, at Inverewe Gardens, near Poolewe, in Wester Ross (both NTS properties), and at Logan Botanic Garden, near Stranraer (one of the RBGE outstations).

As to keying, the branchlets, petioles, leaf abaxial midrib, pedicels and calyx of *R. zeylanicum* are densely covered in short-stalked, glandular hairs, these distinguishing the taxon from its closest relative, *R. nilagiricum,* another outlier, established 400-miles/650-kilometres away across the Gulf of Mannar on the Nilgiris Hills of northwestern Tamil Nadu in southern India. This species too has convex and decidedly bullate leaves, plus crimson through rose to pink corollas, but is graced with non-sticky, eglandular hairs.

R. nilagiricum was discovered by the Reverend Bernhardus Schmidt sometime before 1836, that date corresponding to when a description of the plant, written by Jonathan Carolus Zenker, was published in Series 2, Volume 6, of the journal *Annales des Sciences Naturelles (Botanique)*.

R. wattii, named for and collected by, Sir George Watt - again off of Ching Sow in Manipur, Assam, most likely in 1882 - was only described in 1936 - John MacQueen Cowan putting pen to paper five decades after the find was made for Volume 19 of *Notes from the Royal Botanic Garden, Edinburgh* - and though it offers a thought-provoking, near mirrored disjunct distribution, shared the exact same synonymic fate as befell *R. kingianum.*

In cultivation, *R. nilagiricum* grows to around 4m high, forming a compact or broadly-upright shrub or small tree, but as with *R. zeylanicum,* the species is only hardy enough to be successfully grown outdoors in the west and south of the UK, and even then, requires a well-sheltered position. It is therefore a very rare find in British gardens.


R. nilagiricum

R. arboreum* ssp. *nilagiricum

Hardiness:
H2-3.
Flowering Period:
April-May.
Distribution in the wild:
Nilgiris Hills, Madras, and Manipur, Assam, India.
Growing at elevations of 1,800-2,250m.

Identification:
Height to 12m; branchlets tomentose and eglandular.
Leaves elliptic, oblong-elliptic to ovate, 5 to 15cm long by 2.5 to 6.5cm wide,
apex rounded-apiculate;
upper leaf surface bullate with deeply impressed veins, convex, the margins recurved;
lower leaf surface with a thick yellowish-brown spongy indumentum, the midrib eglandular.
Petioles, pedicels and calyx eglandular.
Inflorescence 10-20-flowered.
Corolla deep crimson to rose, occasionally pink.

Seed Collections:

AC 5545	2004


R. nilagiricum

R. arboreum ssp. *delavayi* var. *delavayi*

Hardiness:
H3-4.
Flowering Period:
March-May.
Distribution in the wild:
NE India; Myanmar; Thailand; Yunnan & Guizhou, China.
Growing in pine, conifer and mixed forests at elevations of 1,500-3,000m.

Identification:
Height to 12m.
Leaves relatively broad, 5 to 18cm long by 1.6 to 5cm wide; upper surface reticulate; lower surface with a somewhat thin,
unistrate, brown to fawn, woolly, spongy or agglutinated indumentum.
Inflorescence 10-30-flowered.
Calyx 1-3mm long.
Corolla pure red to crimson,
with or without either or both darker crimson spotting or a blotch at the base.

Seed Collections:

F 6769	1910	F 26157	1924/1925	SBEC 47	1981	AC 2002	1996
F 7463	1912/1914	F 26466	1924/1925	SBEC 720	1981	AC 2011	1996
F 11073	1912/1914	F 26475	1924/1925	EN 8	< 1982	AC 2084	1996
F 12113	1912/1914	F 27370	1924/1925	EN 21	< 1982	KR 3909	1996
F 15102	1917/1919	F 27498	1924/1925	KR 1131	1987	KR 3910	1996
F 15719	1917/1919	F 27697	1924/1925	C&S 1515	1990	KR 4229	1996
F 16632	1917/1919	F 27717	1924/1925	CLD 1464	1990	GR 5025	2003
KW 3784	1921	F 27718	1924/1925	KR 1562	1990	AC 5249	2004
KW 3948	1921	F 27768	1924/1925	KR 2570	1993	AC 5253	2004
F 21969	1921/1922	KW 6403	1924/1925	CNW 994	1994	ZH-G 059	2006
R 6656	1923/1924	McLaren A 226	1932/1939	CNW 995	1994	C&N 5979	2007
R 6743	1923/1924	McLaren C 01a	1932/1939	CNW 1086	1994	C&N 5982	2007
R 7911	1923/1924	McLaren C 226	1932/1939	Valder I39	1994/1995	JN 11040	2011
R 7935	1923/1924	KW 396	1938/1939	C&H 7179	1995	JN 12172	2012
R 11279	1923/1924	KW 21768	1956	C&H 7178	1995	JN 12350	2012
R 11282	1923/1924	C&H 305	1965	AC 911	1995	JN 12387	2012
R 11282a	1923/1924	KR 156	1980	AC 1140	1995		
F 24009	1924/1925	SBEC 120	1981	EGM 360	1995		

R. arboreum ssp. *delavayi* var. *peramoenum*

Hardiness:
H3-4.
Flowering Period:
March-May.
Distribution in the wild:
Arunachal Pradesh, NE India; W Yunnan, China.
Growing on open hillsides, in thickets and forests, at elevations of 2,440-3,355m.

Identification:
Height to 12m.
Leaves relatively narrow, 5 to 18cm long by 1 to 3cm wide; upper surface reticulate; lower surface with a somewhat thin,
unistrate, brown to fawn, woolly, spongy or agglutinated indumentum.
Inflorescence 10-30-flowered.
Calyx minute, 1mm long.
Corolla pure red to crimson,
with or without either or both darker crimson spotting or a blotch at the base.

Seed Collections:

F 15975	1917/1919	R 7907	1923/1924	CCHH 8015	1997
F 15976	1917/1919	F 26066	1924/1925	CCHH 8036	1997
F 17708	1917/1919	F 27701	1924/1925	AC 5256	2004
F 17930	1917/1919	McLaren 39/117	1932/1939	AC 5555	2004
R 7906	1923/1924	KR 2553	1993	BE 12-54	2012

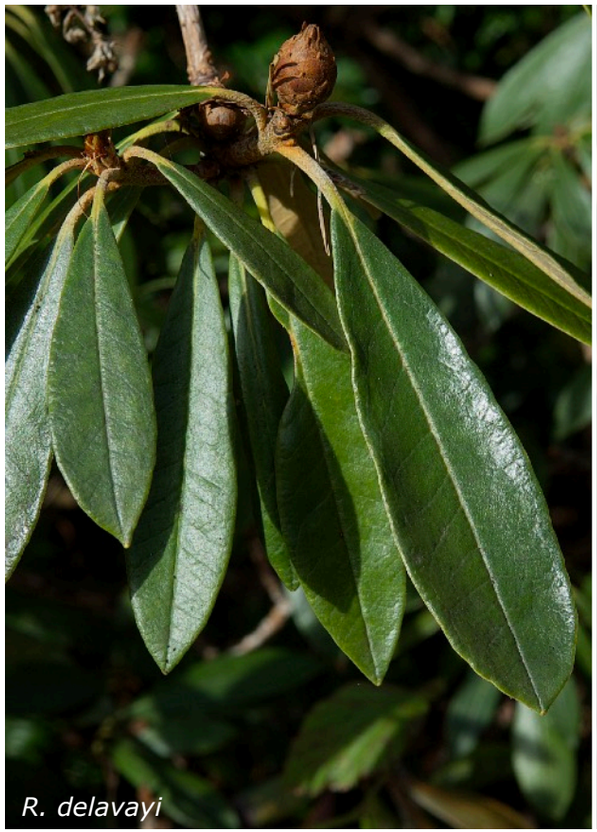
R. delavayi was named for the French missionary priest and collector Abbé Jean-Marie Delavay (1838-1895), who discovered the species during April 1883 in western Yunnan. Herbarium specimens sent back to France arrived in 1884, which allowed Adrien Franchet to describe and christen the new rhododendron in Volume 33 of the *Bulletin de la Société Botanique de France,* published during 1886. Seed had also been gathered and returned, successfully germinated at the Jardin des Plantes in Paris, and a number of those juveniles were sent to the Royal Botanic Garden, Kew, in 1899, one of which flowered in cultivation during the spring of 1904 at Kilmacurragh, County Wicklow, the arboretum now a satellite site of the National Botanic Gardens of Ireland.

The wild distribution takes in northeastern India, Myanmar and Thailand, Yunnan and Guizhou, the latter two locales prompting *R. delavayi* to be described as the Chinese equivalent of the Himalayan *R. arboreum*. The population overlap occurs in Bhutan, where the three main subspecies - *arboreum, cinnamomeum* and *delavayi* - all meet up, though there is ongoing confusion as to which subspecies the Bhutanese plants should be referred to, and hence the westward limit of the *R. delavayi* populations remains unclear.

The taxon is furnished with fairly broad leaves whose upper surface is reticulate, the lower covered by a thin, unistrate, brown through fawn, woolly, spongy or agglutinated indumentum, these the chief distinguishing features between *R. delavayi* and the other two prime subspecies.

A George Forrest find, made during June 1918 on the Shweli-Salwin Divide of western Yunnan, was named *R. peramoenum* and described jointly with Sir Isaac Bayley Balfour in *Notes from the Royal Botanic Garden, Edinburgh,* Volume 13, this published in 1920. Part 2 of the Edinburgh Revision's *Preliminary Synopsis* paper - found within 1979's Volume 37 of *Notes* - reduced its ranking to a variety of *R. delavayi,* David Chamberlain, the author of that change, later highlighting the fact that the only morphological difference between the two species was the leaf shape - narrower, and often near linear-lanceolate in outline - this set out in his full Subgenus *Hymenanthes* text (*Notes, V*olume 39, Number 2, 1982). It was only possession of a niche distribution that prevented full synonymy, for in places across that range, var. *peramoenum* sometimes forms large stands of pure forest. Some of those clines also exhibit small and quite poor flowers.

Both varieties of *R. arboreum* ssp. *delavayi* are less hardy than ssp. *cinnamomeum,* but less tender than ssp. *arboreum,* so thrive in gardens along the west coast and in the south, but require good micro-climate shelter protection elsewhere. Along the east coast, progeny collected from the highest elevations of the distribution will be found to succeed best. All flower freely once mature.



R. delavayi



R. peramoenum



R. delavayi



R. delavayi



R. peramoenum

R. lanigerum

Hardiness:
H3-5.
Flowering Period:
February-April.
Distribution in the wild:
Arunachal Pradesh & Assam, NE India; Tsangpo Gorge, Pemako, SE Tibet.
Growing on steep slopes amongst bamboo, in rhododendron and fir forest, at elevations of 2,550-3,400m.

Identification:
A multi-stemmed small tree to 6m high; branchlets at first tomentose; the brown, grey or greenish bark partly flaking.
Leaves elliptic to oblanceolate, 10 to 25cm long by 3 to 7.5cm wide, retained 1-2 years;
upper surface dark green, densely creamy-white tomentose at first;
lower surface matt, indumentum continuous, bistrate, thick and woolly, white to fawn to tan.
Inflorescence 16-35(-50)-flowered, densely compact;
the flower buds large, to 3.4cm long, ovate to orbicular,
with brown to rust coloured bud scales, densely tomentose.
Corolla 4 to 5cm long, deep rose-pink through reddish-purple to crimson.
Capsule 6-locular.

Seed Collections:

KW 6258a	1924/1925
KW 8251	1927/1928
R 18407a	1929
LS&E 13043	1946/1947
LS&E 13591	1946/1947
CV 9526	1995
CV 9530	1995
CC 7526	1996

It was Frank Kingdon-Ward who discovered both *R. lanigerum,* and the now-sunk synonymous form, *R. silvaticum:* the former, during May 1928, in the Delei Valley, Assam; the latter, in the Tsangpo Gorge of then-independent Tibet, almost four years earlier during October 1924. Harry Tagg, one of the rhodo-savvy botanists at Edinburgh Botanic, penned the species description for *R. lanigerum* that was included within the Rhododendron Society's 1930-publication, *The Species of Rhododendron,* while that for *R. silvaticum* can be found in Volume 19 of *Notes from the Royal Botanic Garden, Edinburgh,* published in 1936, and written by Tagg's colleague, John MacQueen Cowan, such precedence explaining the unfair synonymic pecking order.

When out of flower, the longer, narrower leaves, and larger, rusty-brown-coloured, spherical-shaped flower buds distinguish *R. lanigerum* from its closest relative within the subsection, *R. niveum.* From the sextet of *R. arboreum* subspecies, a capsule with just six chambers, plus a thick and woolly abaxial leaf surface indumentum do the trick. When in bloom, the *R. lanigerum* corolla colour is rose-pink through crimson, rather than the purple or mauve of *R. niveum,* and with up to 50 corollas packed tightly into its flower truss, the hexad, maxing-out at a paltry 30, are rather put to shame.

In the wild, *R. lanigerum* is established across a slightly lower altitudinal band than *R. niveum,* though in UK cultivation each is in receipt of the same H3-5 RHS hardiness rating. However, because *R. lanigerum* can flower from as early as February, with its vegetative growth correspondingly advanced, the species requires a near frost-free and well-protected site to succeed, thereby restricting it to gardens along the western seaboard or southern littoral. Established therein, magnificent mature specimens will result, these producing a spectacular floral display year after year.



R. lanigerum (KW 6258a)



R. lanigerum



R. lanigerum



R. lanigerum (KW 8251)

R. lanigerum

R. lanigerum



R. albotomentosum (KW 21976)

R. arboreum* ssp. *albotomentosum

Hardiness:
H3.
Flowering Period:
April-May.
Distribution in the wild:
Nat Ma Taung, Myanmar.
Growing on the summit environs amongst *Quercus semecarpaefolia,*
at elevations of 2,400-3,000m.

Identification:
Height to 12m; branchlets white tomentose.
Leaves 6 to 9cm long by 2 to 3cm wide;
upper surface reticulate; lower surface with a pure white spongy indumentum.
Inflorescence 10-30-flowered.
Petioles white tomentose.
Corolla intense scarlet without spots.

Seed Collections:

KW 21976	1956

The doyen of British plant hunters, Frank Kingdon-Ward, found *R. albotomentosum* in west-central Burma (now Myanmar) at the beginning of April 1956. The specimens he encountered were growing in a forest of evergreen oak trees, close to the summit of Nat Ma Taung - previously known as Mount Victoria - at an altitude of 3,000m, though the distribution has since been found to extend down the mountain to the 2,400m contour. It took thirty-three years for a botanic description to be published, H. H. Davidian recognising the taxon's uniqueness in 1989, within Volume 2 of his *The Rhododendron Species,* after the Subgenus *Hymenanthes* monograph of 1982 lumped it in with *R. arboreum.*

Davidian classified the plant as a variety of *R. delavayi* and some authorities continue to maintain this ranking despite a more recent promotion to subspecies status in 1997. This was advanced by the senior Edinburgh Revision botanist, Doctor David Chamberlain, after field study revealed the population to be geographically isolated from 'the more typical forms of *R. arboreum* that occur on the same mountain at lower altitudes' (*The Rhododendron Handbook,* 1998). Regrettably, Davidian's chosen epithet is misspelt as 'albomentosum' in that publication - on pages 89 and 350 - this error corrected herein and not evidenced in *The Encyclopedia of Rhododendron Species,* by Peter and Kenneth Cox, or *The Pocket Guide to Rhododendron Species,* by John McQuire and Mike Robinson, published in 1997 and 2009, respectively.

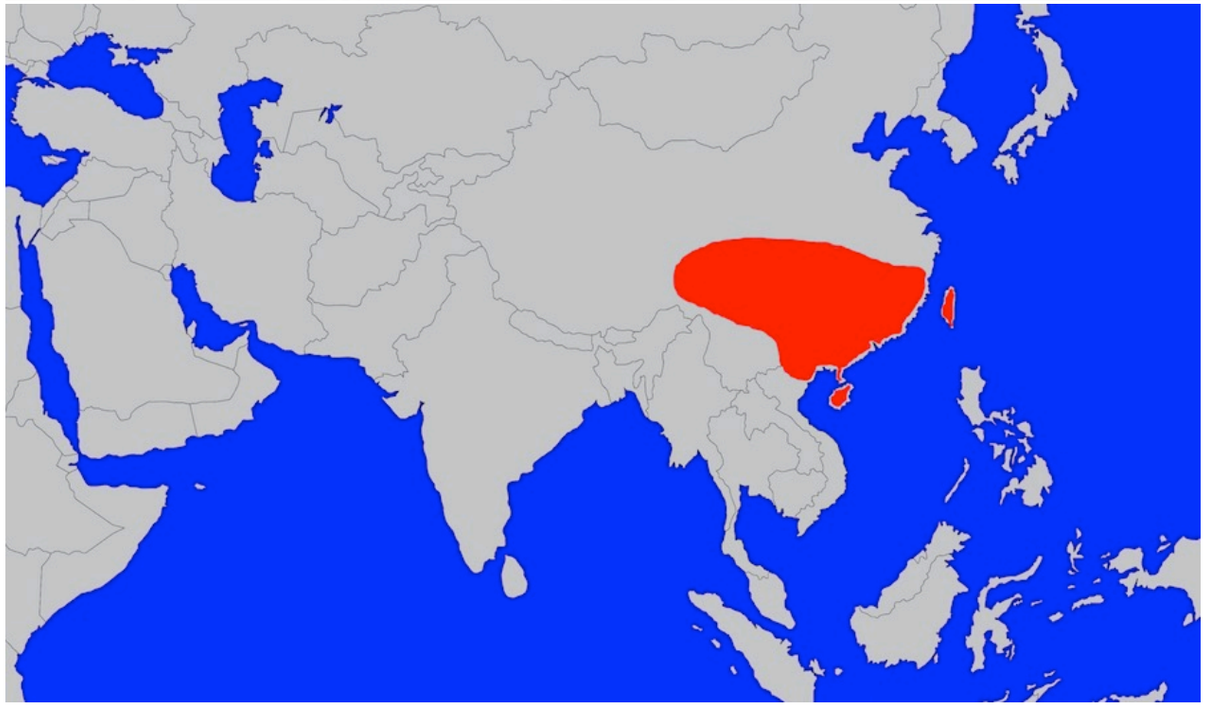
R. arboreum ssp. *albotomentosum* displays characteristics intermediate between *R. arboreum* ssp. *arboreum,* and *R. arboreum* ssp. *delavayi*. However, as the epithet suggests, the pure white spongy indumentum cloaking the underside of the leaves, and the similarly-coloured tomentum found on the young branchlets, make the plant easily distinguishable from its relatives.

In UK cultivation, the species develops into a broadly upright or spreading shrub, or a small tree, is free-flowering when mature and relatively hardy. It does best in sheltered gardens along the west coast where its blooms can open without the risk of being frosted. Along the east coast, it requires a well-protected position to flourish.

R. albotomentosum (KW 21976)

Subsection *Argyrophylla:*


R. thayerianum



Taxa:

- *R. argyrophyllum*
  - *R. argyrophyllum* ssp. *argyrophyllum*
  - *R. argyrophyllum* ssp. *hypoglaucum*
  - *R. argyrophyllum* ssp. *nankingense*
  - *R. argyrophyllum* ssp. *omeiense*
- *R. coeloneuron*
- *R. coryanum*
- *R. denudatum*
- *R. farinosum*
- *R. floribundum*
- *R. formosanum*
- *R. haofui*
- *R. hunnewellianum*
- *R. longipes*
- *R. pingianum*
- *R. ririei*
- *R. simiarum*
- *R. thayerianum*

Taxonomic Revision:

Subsection *Argyrophylla,* with two exceptions, has been transferred into Section *Leiorrhodium* as a result of evidence presented in the 2010 Milne-Chamberlain study *A Phylogeny Of Rhododendron Subgenus Hymenanthes Based On Chloroplast DNA Markers: Between-Lineage Hybridisation During Adaptive Radiation?*

The unanticipated cladal relationships and associations revealed in that analysis necessitate the transfer of *R. adenopodum* into the newly created Subsection *Smirnowia,* and the relocation of *R. insigne* into a repurposed Section *Ponticum.*

Subsection Morphology:

Shrubs or small trees, 1 to 12m high, broadly upright or rounded, rarely lax, sometimes compact and bushy; young shoots pubescent or tomentose, the tomentum whitish- or fawn-coloured, rarely rufous, often glabrescent, sometimes glandular, the glands minutely short-stalked, or glabrous; bark smooth to rough or shaggy, grey through greenish-brown.

Leaf bud scales usually deciduous, rarely persistent.

Leaves coriaceous, sometimes stiff and thick, lanceolate through elliptic-lanceolate to elliptic, oblanceolate to oblong, 4 to 22cm long by 0.8 to 7cm wide, often convex, apex obtuse, acuminate, apiculate or acute, retained 1-6 years;
upper surface olive green through dark green, glabrous, reticulate or moderately rugulose, shiny or matt, the midrib often grooved and the veins deeply impressed,
the margins sometimes recurved; lower surface with a thin, plastered or compacted, white, grey, fawn, brown or rufous indumentum, sometimes shiny,
composed of rosulate hairs when unistrate,
or when bistrate, the woolly upper layer formed of ramiform hairs,
this often peppered with widely-spaced short-stalked glands.

Leaf anatomy comprises a single- or 2-layered upper epidermis, with the cells in the top and lower layers equal in size when bi-layered; the cuticle is between half as thick and as thick as the cells are deep; water tissue is well developed; the lower epidermis cells are usually prolonged into papillae. Sclereid cells are present in the leaf tissue of each species.

Petiole 8-32mm long, sometimes grooved, glabrous, moderately through densely floccose, or with a thin tomentum, sometimes glandular, the glands minutely short-stalked.

Inflorescence lax or dense, 4-30-flowered; flower bud scales often persistent.

Rhachis 3-40mm, rarely to 50mm, moderately through densely floccose, the hairs whitish- or fawn-coloured.

Pedicel 4-50mm long, glabrous or hairy, sometimes glandular, the glands long- or short-stalked.

Calyx usually minute, 5-lobed, these usually 1-2-5mm long but occasionally to 15mm, ovate, oblong or lanceolate; outer surface glabrous, floccose or sometimes glandular, the glands short-stalked; margins glabrous, floccose or hairy, and sometimes glandular, the glands short-stalked.

Corolla 5-lobed, rarely more, open- to funnel-campanulate, 3 to 5cm long, white or pale pink to deep rose and purple, sometimes spotted, without nectar pouches at the base (*R. ririei* excepted); outer surface glabrous, occasionally pubescent at the base of the tube; inner surface often densely pubescent at the base of the tube.

Stamens 10-20, unequal, usually shorter than the corolla, rarely equal to or longer; filaments densely pubescent towards the base or glabrous.

Ovary cylindrical or conical, densely tomentose, sometimes glabrous, often glandular, the glands long-stalked.

Style shorter, as long or longer than the corolla, slender, glabrous, or glandular at the base, rarely to the tip.

Capsule cylindric, sometimes quite slender, straight or curved, often ridged, 1 to 4.2cm long, sparsely through densely tomentose, sometimes glandular, the glands long- or short-stalked.

Seeds elongated, winged, each end with large appendages.


R. coryanum


R. nankingense

R. argyrophyllum* ssp. *argyrophyllum

Hardiness:
H5-6.
Flowering Period:
May.
Distribution in the wild:
NE Yunnan, Sichuan & S Shaanxi, China.
Growing in forests and on open slopes at elevations of 2,000-3,600m.

Identification:
Shrub or tree, 2 to 12m high.
Leaves 6 to 12cm long by 2 to 3cm wide, narrowly elliptic through oblanceolate, retained 2-3 years;
upper surface green through olive-green, matt;
lower surface indumentum unistrate, plastered, thin and compacted, embedded in a surface film, white or silvery.
Inflorescence 4-10-flowered.
Rhachis 6-20mm long, densely through moderately, tomentose, rarely glabrous, the hairs white, dark brown or rufous.
Pedicels eglandular.
Calyx 1-2mm, floccose.
Corolla 3 to 3.5cm long, white through pink.
Stamens 11-15.
Ovary eglandular.

Seed Collections:

W 1521	1904	CEE 160	1991
W 1526	1904	CEE 311	1991
W 1210	1906	CEE 500	1991
W 4275	1910	C&H 7032	1995
W 4276	1910	C&H 7033	1995
McLaren 38/016	1932/1939	C&H 7045	1995
SICH 316	1988	SICH 2190	2001
SICH 320	1988	CNC 12109	2012
CEE 142	1991		

Adrien Franchet described *R. argyrophyllum* in 1886, writing in Volume 33 of the *Bulletin de la Société Botanique de France,* his prose detailing dried herbarium specimens collected at Moupin in western Sichuan by Père Armand David in 1870. Moupin, which is now known as Baoxing, was also the locale where Ernest Wilson stumbled upon *R. argyrophyllum* var. *cupulare* in June 1908, describing his find in *Plantae Wilsonianae* some five years later, the text jointly written with Alfred Rehder. However, the variety is now considered to be synonymous, as in the wild there is a complete overlap between those forms with the more openly-campanulate pink flowers of var. *cupulare,* and the more populous form of ssp. *argyrophyllum* with funnel-campanulate, white flowers.

The taxon is also currently divided into four subspecies, with the ranking of the once-specific *R. hypoglaucum* reduced in the Edinburgh Revision's *Preliminary Synopsis* paper's second instalment (*Notes from the Royal Botanic Garden, Edinburgh,* Volume 37, 1979), and the status of two other varieties - *nankingense* and *omeiense* - raised. Identification is straightforward: the lack of glands on the pedicel, calyx and ovary quickly identify specimens of ssp. *argyrophyllum* from those of ssp. *hypoglaucum;* a matt rather than shiny upper leaf surface distinguishes the former from ssp. *nankingense,* whose glossy leaves also tend to be longer, wider and somewhat rugose; and the white through silver abaxial indumentum colour of the ssp. *argyrophyllum* leaf is in contrast to the fawn or brown of ssp. *omeiense*.

Within the subsection, the abaxial indumentum colour and form is also the key identifier that swiftly separates ssp. *argyrophyllum* from its close relatives, though when out-of-flower, *R. coryanum* will prove the hardest to differentiate on that basis. Here, the presence or not of glands mixed-in amongst the indumentum hairs is the separator, the *R. coryanum* lower leaf surface having a sparse to moderate scattering of such amidst its rosulate hairs. When in bloom, identification is much easier as ssp. *argyrophyllum* will be seen to have an inflorescence of up to 12 flowers, *R. coryanum* a truss of 15 to 30.

Ernest Wilson was responsible for the first five batches of *R. argyrophyllum* seed to arrive in the UK, these docking in 1904, 1906 and 1910, with all the gatherings originating from western Sichuan, the first two expeditions sponsored by the Veitch Nurseries, that of 1910 by the Arnold Arboretum. In British gardens, the species is fully hardy, free-flowering when mature, and while unlikely to match the 12m height attained by plants in their native environs, specimens will grow to 5m and beyond in favoured locales, with a wider spread. Unfortunately, some forms have foliage that exhibits chlorotic tendencies but others - long-established plants sourced from the W 1210 collection, for instance - are amongst the most beautiful of the rhododendrons we can grow.



R. argyrophyllum (SICH 316)



R. argyrophyllum (W 1210)



R. argyrophyllum (W 4276)



R. argyrophyllum

R. argyrophyllum

R. floribundum

Hardiness:
H5.
Flowering Period:
March-April.
Distribution in the wild:
NW Guizhou, C & SW Sichuan & NE Yunnan, China.
Growing in mixed woodlands at elevations of 1,200-2,700m.

Identification:
Shrub or small tree, erect, 2 to 10m high; branchlets densely white-floccose, becoming glabrescent; bark somewhat rough.
Leaves oblanceolate through elliptic, 6.8 to 18cm long by 1.8 to 5.5cm wide, convex, retained 1-3 years;
upper surface olive-green, matt, though sometimes moderately shiny, glabrous when mature, bullate, the veins deeply impressed;
lower surface indumentum bistrate, the upper layer loose, relatively thick, woolly and persistent, yellowish at first becoming white or ash-grey, the lower layer white and compacted.
Petiole 10-20mm long, densely white-floccose.
Inflorescence 5-12-flowered, in a lax truss.
Rhachis quite short, 5-7mm, densely through moderately, fawn or whitish, floccose.
Pedicel 4-20mm long, densely yellowish through white tomentose.
Calyx 1-1.5mm long, outer surface and margins densely tomentose.
Corolla 3 to 4cm long, magenta-rose through purplish-lavender to pale pink, with darker crimson-purple spotting and a large basal blotch.
Stamens 10, sometimes slightly longer than the corolla; filaments glabrous, often puberulous at the base.
Ovary densely white-tomentose, the hairs silky.
Style glabrous, sometimes hairy at the base.
Capsule straight or curved, ridged, with a dense covering of yellowish to fawn-coloured hairs.

Seed Collections:

W 4266	1910/1911	CEE 318	1991
SICH 284	1988	SICH 929	1992
SICH 310	1988	SICH 1456	1994
Cox 5020	1990	SICH 2181	2001
EGM 118	1990	SICH 2196	2001

Missionary priest, botanist and zoologist Jean-Pierre-Armand David, a Lazarist of the Roman Catholic Vincentian Order, was also the first Westerner to encounter and collect *R. floribundum,* as with *R. argyrophyllum,* finding the species growing near Moupin (Baoxing) in 1870. Dried herbarium specimens were despatched to the Muséum National d'Histoire Naturelle in Paris for Adrien Franchet to examine and describe, this text appearing in Volume 33 of the *Bulletin de la Société Botanique de France,* published in 1886. British gardeners had to wait until 1910 before the contents of some Ernest Wilson-gathered seed capsules arrived from western Sichuan, and then another decade until first flowering occurred in April 1920. An earlier introduction date of 1903, again of Wilson-collected seed from Sichuan under the Veitch Expedition field number 3967 (*Plantae Wilsonianae,* Volume 1, 1913, page 535), though referred to in some texts - H. H. Davidian's *The Rhododendron Species,* Volume 2, 1989, for instance - is now considered suspect.

R. floribundum is clearly related to *R. coeloneuron* and *R. denudatum,* with leaf size, shape and abaxial indumentum colour the key distinguishing features between the trio. The foliage of *R. floribundum* is shorter and narrower than the blades of *R. denudatum* - 6.8 to 18cm long by 1.8 to 5.5cm wide, as opposed to 10 through 20.5cm, and 2.5 through 7cm - and about one-third larger than those of *R. coeloneuron,* which are 7 to 12cm in length and 2.1 to 4cm in width. Mature leaf indumentum colour is white for the woolly upper layer, rather than yellowish-white or rufous respectively and with regard to *R. denudatum* specifically, continuous-persistent rather than patchy-detersile. The blotched and spotted, purplish-pink flowers and olive-green, distinctly bullate and convex leaves swiftly separate *R. floribundum* from all the other Subsection *Argyrophylla* species, including the recently introduced *R. farinosum*.

Bark-split and leaf chlorosis are the major issues faced by specimens of the species in UK cultivation. The first, prompted by a March-April flowering period, can be avoided if adequate frost drainage plus shelter has been pre-provided, while a topsoil dressing of either gypsum or dolomitic limestone should treat the second. Otherwise, *R. floribundum* is fully hardy, with plants growing into an upright narrow dome that will reach the 7m-mark given time and, as the name implies, flower spectacularly when mature.



R. floribundum



R. floribundum (W 4266)



R. floribundum (CEE 318)

R. simiarum

Hardiness:
H2-3.
Flowering Period:
April-May.
Distribution in the wild:
Hainan, Hong Kong, S & E China.
Growing in thickets, open woodland and on rocky mountain slopes
at elevations of 500-1,800m.

Identification:
Shrub or small tree, 1 to 6m high; branchlets stout,
sparsely through moderately grey-floccose and often moderately through densely short-stalked glandular, becoming glabrescent in the second year; bark grey and flaking.
Leaves thick and rigid, oblong-lanceolate through oblong-obovate to obovate,
4 to 15cm long by 1.1 to 4.8cm wide, rarely to 17cm long and 5.5cm wide,
apex usually rounded, retained 1-2 years;
upper surface olive-green, sometimes shiny, glabrous, reticulate, margins recurved;
lower surface indumentum unistrate, matt, greyish-white through cork-brown,
thin, plastered and compacted, embedded in a surface film.
Petiole 10-28mm long, grooved above, variably floccose at first, becoming glabrescent,
often sparsely short-stalked glandular, but sometimes glabrous and eglandular.
Inflorescence 4-12-flowered, truss lax.
Rhachis 6-28mm long, variably pilose, the hairs whitish or brownish,
and sometimes short-stalked glandular.
Pedicel 15-50mm long, stout or slender, variably floccose,
the hairs greyish-white to rusty-brown, becoming glabrescent,
and sometimes sparsely through moderately short-stalked glandular.
Calyx 1-2mm long, outer surface and margins floccose or short-stalked glandular.
Corolla 2.5 to 4cm long, white, or pink through pale rose,
usually with darker spotting.
Stamens 10-12, unequal; filaments variably tomentose along the lower half or at the base.
Ovary densely rufous stellate-tomentose and short-stalked glandular.
Style glabrous, but sometimes sparsely hairy or short-stalked glandular at the base.
Capsule straight and ridged, usually densely rufous-pubescent.

Seed Collections:

Valder I47	1974/1975
AC 5102	2002
AC 5106	2002
AC 5113	2002
AC 5123	2002

R. simiarum was the next future occupant of Subsection *Argyrophylla* to be found, the Reverend Benjamin C. Henry making the discovery in May 1883 around Foshan in China's Guangdong Province (then known to Westerners as Kwangtung, Foshan as Lofaushan). A priest sent to China by the American Presbyterian Board of Missions, Henry had arrived in Canton (Guangzhou) during 1873 and began botanising shortly thereafter. His finds can usually be identified from those of Augustine Henry, who was active at the same time, by the citation given for the botanic description. Reverend Henry's discoveries were described by Henry Fletcher Hance, the British consul in Canton, and later Amoy (Xiamen), who was also an amateur botanist with a passion for Chinese plants, while William Botting Hemsley or Daniel Oliver, both professional botanists employed at the Royal Botanic Gardens, Kew, wrote those for Augustine Henry's collections.

The *R. simiarum* outline, written by Hance in 1884, appears in Volume 22 of the *Journal of Botany, British and Foreign*.

Found across much of southern and eastern China, *R. simiarum* has also crossed the Qiongzhou Strait onto Hainan, as well as taken the Pearl River delta by storm to establish a colony on Hong Kong, its wide natural distribution stretching from Sichuan to Anhui and Zhejiang in the north, sweeping through Guizhou, Hunan and Jiangxi to reach the lowland provinces of Guangxi, Guangdong and Fujian in the south, before island hopping across the South China Sea. Given that range, the morphological characteristics of the species will differ somewhat, and to reflect this, Chinese botanists have separated-out and described four varieties: *deltoideum, grandifolium, simiarum* and *versicolor*.

In *R. simiarum* var. *deltoideum,* the calyx lobes are reflexed and deltoid, all its other features conforming to those of var. *simiarum.*

Var. *grandifolium* has leaves that extend up to 17cm in length and 5.5cm in width, the pedicels are 30-40mm long and the truss features 8-12 corollas. On the ground, the variety is apparently confined to Guangxi Province and the island of Hainan.

The populations of var. *simiarum* have pink corollas 3.5 to 4cm long, and leaves that only extend to 9 by 3cm.

Plants of var. *versicolor* feature white corollas just 2.8cm in length, and leaves that are 8 to 15cm long by 3 to 4.8cm wide. Their distribution is restricted to the area around Longsheng in the northeast of Guangxi, with the plants also corralled between the 800 and 1800m contours.

However, the Edinburgh Revision botanists categorised these character variations as minor, for they all fell within the boundaries set by the overall species description and no niche distributions were noted, as the locales detailed above were not exclusively occupied by a single variety. Their conclusion: no varietal treatment was required.

In the wild, *R. simiarum* is endemic across an altitudinal band that at best, equates to a H2-3 hardiness rating in UK cultivation. Most forms are therefore frost sensitive and easily damaged, with only those sourced from the highest elevations of the distribution able to survive outdoors in the most sheltered of sites along the west coast. Elsewhere, the species will require winter protection under glass, the absence herein of any accompanying photographs, speaking volumes on the shrub's longterm, open-air viability.

R. coeloneuron

Hardiness:
H5.
Flowering Period:
April-May.
Distribution in the wild:
Chongqing, N Guizhou, SE & W Sichuan, China.
Growing in mixed forest on mountain slopes at elevations of 1,200-2,300m.

Identification:
Shrub or small tree, 3 to 8m high; branchlets rufous-tomentose.
Leaves oblanceolate through oblong-elliptic, 7 to 12cm long by 2.1 to 4cm wide;
upper surface moderately shiny and rugulose, margins somewhat revolute;
lower surface indumentum bistrate, thick and woolly,
the upper layer rufous, sometimes patchy or evanescent,
the lower layer compacted, whitish, embedded in a surface film.
Petioles 10-20mm long, densely rufous–tomentose.
Inflorescence 4-9-flowered in a lax to somewhat dense truss.
Rhachis very short, 3-5mm, densely rufous-tomentose.
Pedicel 7-15mm, densely rufous-tomentose.
Calyx 0.5-2mm, rufous-tomentose.
Corolla 4 to 5cm long, pale pink to purplish,
spotted crimson or purple on the tube and upper lobes.
Stamens 10; filaments densely puberulous at the base.
Ovary densely rufous-tomentose.
Style glabrous, sometimes pubescent at the base.
Capsule hairy.

Seed Collections:

SICH 1198	1992
EN 4029	1994
PW 7a	1994
PW 9	1994
PW 27	1994
AC 1202	1995
AC 1205	1995
AC 4315	1999
AC 4324	1999
C&N 6006	2007
NN 0926	2009

R. coeloneuron was first pigeonholed as a member of Subsection *Taliensia* due to a wrongly perceived morphologic similarity with *R. wiltonii.* Field studies carried out post-publication of the Edinburgh Revision, in tandem with an examination of the maturing, cultivated specimens, have required the taxon to be rehoused in Subsection *Argyrophylla,* where it is allied with *R. denudatum* and *R. floribundum*. Discovered in 1891 by Charles Bock and Arthur von Rosthorn, at a site close to Nanchuan Hsien in southeastern Sichuan (this administratively now part of the Chongqing Municipality), and boasting a botanic description authored by Friedrich Diels in 1900 - Volume 29 of *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* holds the text he composed - the species was only introduced into British gardens a mere eight years before the millennium by an expedition team representing the Royal Botanic Garden, Kew, the Quarryhill Botanic Garden of California, and Howick Hall in Northumberland.

Character differences used to distinguish *R. coeloneuron* from *R. wiltonii* included the less bullate leaves, its bistrate rather than unistrate abaxial indumentum, and a branchlet, petiole, pedicel, calyx and ovary tomentum that is rufous-coloured, not brown or whitish. Keying the species from the *Argyrophylla* rhododendrons it is now associated with is also a cinch, thanks in large part to that rufous-tomentum, which is unique amongst the subsection's membership.

Following the initial 1992 introduction, another six expeditions returned seed to the UK over the succeeding two decades and *R. coeloneuron* can now be found flourishing in many British woodland gardens. Cultivation appears straightforward and so far, there are no reports of the foliage chlorosis problems suffered by *R. argyrophyllum, R. floribundum* and *R. haofui*. Better yet, the two successive hard winters of 2009-10, and 2010-11, left established specimens unscathed.



R. coeloneuron (SICH 1198)



R. coeloneuron (SICH 1198)



R. coeloneuron (PW 27)



R. coeloneuron (SICH 1198)

R. formosanum

Hardiness:
H3-4.
Flowering Period:
April-May.
Distribution in the wild:
S Taiwan.
Growing in mixed woodland, often alongside streams,
at elevations of 800-2,300m.

Identification:
Shrub or small tree, upright and sparse, 2 to 6m high; branchlets sparsely grey-tomentose.
Leaves narrowly lanceolate through oblanceolate to elliptic,
7 to 18cm long by 1.5 to 5cm wide, apex obtuse;
upper surface reticulate, somewhat shiny or matt,
densely floccose and short-stalked glandular at first but quickly becoming glabrous and eglandular, the margins somewhat recurved;
lower surface indumentum unistrate, thin, compacted and plastered, fawn or whitish, sparsely glandular.
Petioles 10-20mm long, somewhat floccose.
Inflorescence 7-20-flowered, in an open truss.
Rhachis 15-20mm long, brownish-pilose.
Pedicel 10-30mm long, stout, rufous-brown pubescent.
Calyx c. 1mm, outer surface and margins puberulent.
Corolla 3 to 4.5cm long, open-funnel-shaped, white through pink, with purple spotting.
Stamens 10-12; filaments pubescent at the base.
Ovary densely rufous-brown tomentose.
Capsule brown-tomentose.

Seed Collections:

RV 69/215	1969
RV 9892	1970
RV 73/102	1973
RV 74/006	1974
RV 74/007	1974
ETOT 37	1992

Augustine Henry was the first Western plant hunter to encounter *R. formosanum,* discovering a population of plants near Cape Eluanbi - Taiwan's southernmost peninsula - sometime between October 1892 and the summer of 1893. William Botting Hemsley was the recipient of those herbarium specimens and published the species botanic description in Kew's 1895 *Bulletin of Miscellaneous Information,* the epithet reflecting the old Portuguese name for the island, Ilha Formosa. Ernest Wilson missed finding the species when he visited Taiwan in 1917, two decades after its 1895 ceding to Japan, so it was the collecting team of John Patrick and Chien Chang Hsu who introduced *R. formosanum* into cultivation, the first of their Rhododendron Venture gathering arriving in 1969.

The narrowly-lanceolate through oblanceolate shaped leaves of *R. formosanum,* along with the single-layered, off-white coating of indumentum found on the underside of those blades, will key the species from most other members of the subsection, as will the open truss of 7-20 white or pink, widely-funnel-shaped corollas. The taxon it most closely mirrors - *R. argyrophyllum* ssp. *omeiense* - differs only in the number of corollas held within the inflorescence - 4 to 10 - and the slightly longer pedicels - to around 40mm in length - and in consequence a number of doyens have suggested incorporation within the *R. argyrophyllum* family as either a subspecies or variety, the morphologic differences and, in this case, the disjunct distribution, ruling out full synonymy. There is also a resemblance with *R. thayerianum,* however, the leaves of *R. formosanum* are not as thick, they are certainly not as stiff, and its vegetative bud scales are not persistent.

Though it was not one of the rhododendrons tested in the Milne-Chamberlain 2010 chloroplast DNA study, the lead authors offer the view that because of its outlier status, *R. formosanum* might be the oldest extant member of Subsection *Argyrophylla.* The mainland outlier previously associated with the group, *R. adenopodum,* showed a clear alliance with *R. smirnowii* and *R. degronianum* in the cpDNA phylogeny and herein, has been transferred into the newly created Subsection *Smirnowia.* However, Milne-Chamberlain suggest these two rhododendrons - *R. formosanum* and *R. adenopodum,* probably the oldest surviving evergreen *Hymenanthes* species in Southeast Asia - should be placed together in a new subsection, apart from both *Argyrophylla* and *Pontica.* That this move would compromise the relationships their own scientific evidence presented, is not discussed.

In its native environment, *R. formosanum* is considered to be Taiwan's most beautiful rhododendron species, yet in many British gardens that mystical status has been severely dented. Because unfortunately, collections from the lower altitudinal levels of the species range have proven tender outdoors. Not unexpectedly, it should be said, as that final finger of the Taiwanese landmass is fringed on three sides by the South China Sea and favoured by a marine tropical climate similar to the holiday destinations of Cancún and Oahu. Plants known to have a higher-elevation provenance are proving successful, doing best in the south and in gardens along the west coast, these free-flowering from quite a young age. But as yet, in the UK, specimens are unlikely to challenge or topple *R. pseudochrysanthum* from its top spot as Taiwan's most beautiful rhododendron export.



R. hypoglaucum

R. argyrophyllum* ssp. *hypoglaucum

Hardiness:
H5-6.
Flowering Period:
May.
Distribution in the wild:
E Sichuan & W Hubei, China.
Growing in thickets and woods at elevations of 1,500-2,700m.

Identification:
Shrub or tree, 1 to 7m high.
Leaves narrowly elliptic through oblanceolate, 5.2 to 11cm long by 1.6 to 4cm wide, retained 2-3 years;
lower surface indumentum unistrate, plastered, thin and compacted, embedded in a surface film, distinctly glaucous white.
Inflorescence 4-8-flowered.
Rhachis 8-25mm long, pubescent or glabrous.
Pedicel glandular.
Calyx 1-2mm, outer surface and margins moderately to densely glandular.
Corolla 2.8 to 3.5cm long, white, pink, or white-flushed-rose, with darker spotting and sometimes a reddish blotch at the base.
Stamens 10-13; filaments densely puberulous at the base.
Ovary glandular.
Style often glandular at the base.

Seed Collections:

W 311	1900
W 752	1900
W 1885	1903
W 5137	1903/1905
W 3443	1907
SABE 1322	1981
EGM 116	1990
JN 11021	2011

Augustine Henry (1857-1930), an Ulsterman from Cookstown and employee of the Imperial Maritime Customs Service of China, was based in Hubei Province when, exploring near the town of Patung, he discovered *R. hypoglaucum*. The Irishman had arrived in China early in 1882 and was initially stationed in Shanghai, but with the opening of inland trading stations on the Yangtze River, from around 1885 he was assigned to Yichang. Here, he would spend the next seven years of his life, and botany - because part of the Customs Officer's job spec was to search for new plants with potential medicinal properties - would swiftly became an enduring passion.

His first batch of herbarium specimens containing ornamental plants arrived at the Royal Botanic Garden, Kew, during 1889, with those for *R. hypoglaucum* included in the consignment. William Botting Hemsley would describe these later that same year in Volume 26 of the *Journal of the Linnaean Society of London,* and in all, over a twenty-year period, from Hubei, and then from Sichuan, Yunnan, and finally Taiwan, Augustine Henry would despatch over 16,000 collections to the RBGK, set out on around 150,000 herbarium specimen plates. This amounted to 5000 species, 500 of which were new to Western science. And many of those finds were named for the man who discovered them: *Acer henryi, Clematis henryi, Iris henryi, Salix henryi* and *Viburnum henryi,* to select but a few. Yet one other honorific from the panoply, perhaps the most stunning of them all, now a member of Subsection *Triflora,* should also be named - the absolutely drop-dead gorgeous lepidote, *R. augustinii*.



R. hypoglaucum

If Augustine Henry sent seed of *R. hypoglaucum* back with his dried specimens, then either it failed to germinate or was subsequently lost, as credit for the first successful introduction was awarded to Ernest Wilson. Two batches garnered on his first Veitch-sponsored expedition arrived in 1900 and the species has been grown in British gardens ever since, proving hardy, free-flowering once mature, and easy to cultivate. Older plants top out around the 4m-mark, are usually broadly-upright rather than rounded, and cover themselves in flowers each year, though only a minority of the UK's major rhododendron gardens are graced with a specimen, *R. hypoglaucum* being a rarer find in cultivation than either of its more popular sisters, *R. argyrophyllum* or *R. nankingense*.

The glandular pedicel, calyx and ovary, along with a style that may also be sticky at the base, are the characteristics most often used to identify the species from those close relations, these keys augmented by the intensely glaucous lower leaf surface.



R. hypoglaucum (W 5137)

R. argyrophyllum* ssp. *omeiense

Hardiness:
H5.
Flowering Period:
May.
Distribution in the wild:
Emei Shan, Sichuan, China.
Growing in forests along ravines at elevations of 1,800m.

Identification:
Shrub or tree, 2 to 12m high.
Leaves 6 to 8.5cm long by 1.5 to 2cm wide, narrowly elliptic through oblanceolate, retained 2-3 years;
lower surface indumentum unistrate, plastered, thin and compacted, embedded in a surface film, fawn through brown.
Inflorescence 4-10-flowered.
Rhachis 6-20mm long, densely through moderately, white, dark brown or rufous tomentose, rarely glabrous.
Calyx 1-2mm, floccose.
Corolla 3 to 3.5cm long, pink or white.
Stamens 11-15.
Ovary eglandular.

Seed Collections:

Hu 8189	1980
L 530	1980
AC 4981	2001
AC 4982	2001
C&N 6166	2007

Ernest Wilson discovered *R. omeiense* while exploring Mount Omei (now, Emei Shan) in western Sichuan, during May 1901, returning herbarium material under the field number W 3962, and a Wilson-Rehder-penned botanic description in *Plantae Wilsonianae* Volume 1, published in 1913, named the plant after its mountain abode. Surprisingly, given the plant hunter involved, that premier collection did not introduce the species into British gardens, a task only accomplished in 1980 when a Wen Kwang Hu gathering from central Sichuan arrived at Edinburgh Botanic and Roy Lancaster secured seed while visiting the peak during October of that same year. Only three additional seed lots have been returned since: two Alan Clark gatherings from Long Shi in eastern Sichuan, secured during October, 2001; and C&N 6166, a 2007 find collected by Clark and Shelagh Newman on Mount Omei.

The fawn to brown colour of the lower leaf surface indumentum quickly identifies *R. omeiense* from the other *R. argyrophyllum* subspecies, but within the subsection, the plant is almost a mirror image of the Taiwanese *R. formosanum* and only when in bloom can the two be reliably separated. Corolla number provides the key: the truss of *R. omeiense* holding 4-10; that of *R. formosanum,* 7-20. As yet, no one has suggested making the two synonymous, geographic distribution being the likely killjoy, plus there is no published DNA evidence supporting such a merger, though a number of authors have commented that *R. omeiense* might better be classified as a variety of *R. argyrophyllum* rather than retain its subspecific status.

The handful of plants established in British gardens have so far offered flowers that are not as showy as the other three *R. argyrophyllum* subspecies and some display foliage that exhibits a high degree of chlorosis.



R. omeiense (Hu 8189)

R. omeiense (Hu 8189)


R. ririei


R. ririei (W 1808)


R. ririei (W 1808)

R. ririei

Hardiness:
H4-6.
Flowering Period:
January-April.
Distribution in the wild:
Guizhou & SW Sichuan, China.
Growing in thickets and woodland on mountains slopes
at elevations of 1,200-2,200m.

Identification:
Tree, 3.5 to 16m high, rounded or erect, rarely a large bushy shrub;
branchlets sparsely through moderately white-tomentose, the covering thin, or glabrous;
bark roughish, pale grey through brownish-black, striate, flaking in small oblong plates.
Leaf buds long, thin and pointed.
Leaves oblanceolate through elliptic, 6.8 to 17cm long by 2.3 to 5.5cm wide,
retained for 2-3 years;
upper surface olive-green, matt, glabrous, reticulate, the veins deeply impressed;
lower surface indumentum unistrate, silvery-white, occasionally discontinuous,
thin, plastered and compacted, embedded in a surface film.
Petiole 10-20mm long, grooved above, thinly white-tomentose, or glabrous.
Inflorescence 4-10-flowered, in a loose truss; the buds pointed but not acutely so,
the scales reddish, turning greenish where exposed, densely white-hairy.
Rhachis 5-13mm long, white-floccose.
Pedicel 6-20mm long, stout or slender, moderately through densely white-tomentose.
Calyx variable, 1-2mm long, sometimes to 5mm,
the scales often coloured as the corolla,
these reflexed, and glabrous, or with a thin, sparse, whitish-tomentum.
Corolla 4 to 6cm long, campanulate, violet through lilac-purple to reddish-purple,
with 5 darker, black-purple, glistening nectar pouches at the base.
Stamens 10-12, unequal, anthers mid-brown;
filaments glabrous, or rarely somewhat pubescent at the base.
Ovary densely white or grey tomentose, the hairs matted together.
Capsule oblong-cylindric, 1.8-3.8 cm long,
usually straight, ridged, variably greyish-white tomentose, becoming glabrescent.

Seed Collections:

W 1808	1904
W 5139	1904
EN 3074	± 1985
CEE 285	1991
AC 2036	1996
CNC 12141	2012
JN 12334	2012



R. ririei

R. ririei is an anomaly amongst the Subsection *Argyrophylla* rhododendrons in that its flowers have nectar pouches. Black-purple in colour, five of these will be found ringing the base of each and every corolla, making identification within the subsection child's play. Out of bloom, the long and tapering vegetative growth buds are distinctive; so too is the thin, silvery-white, single-layered abaxial leaf surface indumentum; and equally, the clusters of large, straight, cylindric-oblong-shaped seed capsules.

Ernest Wilson was again the first Western plant hunter to discover the species, Emei Shan unveiling another of her treasures in 1904. The botanic description, jointly written by Wilson and Kew's William Botting Hemsley, appeared in the 1910 *Bulletin of Miscellaneous Information,* with the plant named for the Reverend Benjamin Ririe. A Canadian protestant priest working for the China Inland Mission Society - the sixty-third of the hundred or so sent out to proselytise during 1887 alone - Ririe was based at Kiating (now, Leshan), in western Sichuan, and became friends with Wilson while the collector was planning the routes and organising supplies for his second Veitch venture, the evangelist apparently providing the nascent expedition with much local assistance.

Chinese botanists currently divide the taxon into two, recognising *R. ririei* ssp. *leiboense.* This was described by Ming Yuan Fang in 1992 from plants found in Sichuan's Leibo County - *Chih Su Fen Lei Hsueh Pao,* Volume 30 - with the ascribed differences listed as: a narrower, less leathery leaf blade, wedge-shaped at the base and with indumentum that is silvery more than white; pedicels that are more slender; and corollas with a narrower base. All of which were features the Edinburgh Revision botanists considered to be included within the remit of the existing *R. ririei* description.

Arriving through the propagation frames of the J. Veitch & Sons nursery at Coombe Wood, Kingston-upon-Thames, young plants of W 1808 (the type herbarium specimen) and a second collection, W 5139, introduced the species into UK cultivation in the later years of the 20th century's noughties. A contribution from Colonel Robert Stephenson Clarke in the premier edition of *The Rhododendron Society Notes* - Volume 1, Number 1 - reports that a plant first flowered at Borde Hill early in 1916:

> 'Before the winter had ended or rather before it began in March. The individual flowers, if not as large as those of *R. sutchuenense,* were larger than those of any other campanulate flowered Chinese rhododendron that has flowered here… and it came at a season when there was little competition from other varieties.'

Many specimens of *R. ririei* begin opening their blooms at the end of January, or in the first few weeks of February, so frost protection is essential, not only to safeguard the floral display from damage, but to prevent bark split, dieback and the repeated annual loss of emerging young shoots. Luckily, some clones choose to flower later on in the year, during March or April, so can fair well in more challenging locales, outwith the microclimate of a west or south coast garden. Cultivation is otherwise without problem, though mature plants will be found to bloom heavily only on alternate years.

Post the two Wilson gatherings, eight decades would fly by before *R. ririei* seed was reintroduced into British gardens, an extraordinary amateur plantsman accomplishing that feat during the mid-1980s. Edward Needham (1931-2008), was a Truro resident and ex-librarian. He eschewed organised expeditions; preferred to explore South-East Asia's botanic hotspots alone; used public transport to reach them; and then hiked on foot to the more remote locations. In consequence, as here, he would often find long-lost treasures years before others chanced upon their capsules, if indeed, they ever did.

A Reginald Farrer 1914 Guizhou find - Farrer 46 - despite being a spectacular sight in flower, was long ago assigned an affinity label.



R. ririei (W 5139)



R. ririei (W 5139)

R. ririei

R. longipes

Hardiness:
H4-5.
Flowering Period:
April-May.
Distribution in the wild:
E Guizhou, SW Sichuan & NE Yunnan, China.
Growing in thickets and woodland at elevations of 1,700-2,900m.

Identification:
Shrub or small tree, bushy to erect, 1 to 4m high;
branchlets pubescent at first becoming glabrous.
Leaves narrow, lanceolate through oblanceolate, 5 to 13cm long by 1.5 to 3.5cm wide,
apex long acuminate or cuspidate, base tapered, concave, retained 2-3 years;
upper surface dark green, glabrous, margins revolute;
lower surface indumentum unistrate, fawn to brown, thick or thin, felted to compacted,
sparsely glandular, midrib prominent.
Petiole 8-15mm long, glabrous, grooved above.
Inflorescence 8-15-flowered, in a very lax truss.
Rhachis 12-25mm long, glabrescent.
Pedicel 25-45mm long, sparsely short-stalked glandular-hairy.
Calyx 1-2mm, discoid, outer surface and margins glabrous or sparsely glandular-hairy.
Corolla 2.5 to 4cm long, pink through rose to purple, usually with darker crimson spotting.
Stamens 10-12, unequal; filaments glabrous.
Ovary rufous-tomentose and short-stalked glandular.

Seed Collections:

R. longipes		*R. longipes* var. *chienianum* (?)	
C&H 7072	1995	AC 4244	1998
EGM 328	1995	AC 4978	2001
EGM 336	1995	AC 4984	2001
EGM 337	1995	AC 4985	2001
AC 2035	1996		
AC 4305	1999		

R. longipes was another Ernest Wilson discovery, collected in May 1907, on his first Arnold Arboretum-sponsored expedition and described in *Plantae Wilsonianae,* the book he wrote jointly with Alfred Rehder in 1913. But only herbarium specimens were secured; seed would take another eighty-plus years to arrive. That complete paucity was satiated in 1995 when a team that included rhododendron experts Peter Cox and Ted Millais, both specialist nursery owners, re-discovered a plant population in southwest Sichuan and returned four different seed batches to the UK, with young plants becoming available from Crosswater Farm and Glendoick around the turn of the millennium.

Some botanists and horticulturalists complicate matters by splitting the taxon into two varieties - *chienianum* and *longipes* - on the basis of slight differences in the petiole and leaf blade length, as well as equally minor disparities in the indumentum, this slightly thicker and hence more spongy and felted. But as the online *Flora of China* entry makes perfectly clear, Wen-Pei Fang's 1939 original description of *R. chienianum* in *Contributions from the Biological Laboratory of the Science Society of China* - this ranking amended to *R. longipes* var. *chienianum* in 1979 by David Chamberlain in part two of the *Preliminary Synopsis* paper (*Notes from the Royal Botanic Garden, Edinburgh,* Volume 37) - was based on specimens collected in northeastern Yunnan that have a dubious provenance and are now thought by the Chinese themselves to be bog-standard *R. longipes*.

Four Alan Clarke seed lots collected from southwest Sichuan have provisionally been tagged as *R. longipes* var. *chienianum,* but the leaves of labelled specimens growing in the grounds of Muncaster Castle in Cumbria, show little resemblance to the species, being pale green in hue and quite widely oblong in shape. The blades also have an obtuse apex with no cuspidate 'drip-tip' and the veins on the upper surface are quite markedly impressed. Moreover, the indumentum is bistrate, composed of two layers. So they are not *R. longipes* therefore, but may be closer to the form of *R. chienianum* that is described in Volume 2 of H. H. Davidian's *The Rhododendron Species,* though again, the match is not perfect and the characteristics are at variance with Wen-Pie Fang's text.

R. longipes is probably most closely related to *R. argyrophyllum,* although when out of flower and at first glance, the leaves of the species could also be confused with those of *R. hunnewellianum, R. pingianum* and *R. thayerianum*. The fawn or brown, not white, abaxial indumentum quickly identifies the species from both *R. hunnewellianum* and *R. pingianum,* plus all of the *R. argyrophyllum* subspecies forms apart from ssp. *omeiense.* Here, the presence or not of glands on the ovary will key-out the two, sticky equalling those of *R. longipes*. The foliage of *R. thayerianum* also has a fawn-coloured lower surface indumentum and its ovaries are glandular, but the persistent leaf bud scales (perulae), sticky branchlets and leaves that are tightly crowded at the branch tips, will key specimens from *R. longipes*.

When in bloom, the species can be quickly identified from all the other members of Subsection *Argyrophylla* by the very lax and widely spaced truss, this the result of its pedicels being half as long again as the corolla each one holds.

Though still rare in UK cultivation, *R. longipes* appears to have taken well to British gardens without any obvious or serious dislikes, proving hardy and relatively problem free if set in a dappled-shade woodland environment. As well, and to date, no concerns relating to chlorosis have been voiced.

The top two photographs opposite are of a plant growing at Glendoick, the two below of a specimen thriving at Benmore, both germinated from the C&H 7072 gathering, but with self-evident differences in leaf shape and abaxial indumentum.



R. longipes (C&H 7072)



R. longipes (C&H 7072)



R. longipes (C&H 7072)



R. longipes (C&H 7072)



R. hunnewellianum

R. hunnewellianum
Hardiness:
H5-6.
Flowering Period:
March-April.
Distribution in the wild:
C & N Sichuan, China.
Growing in thickets and woodland in valleys,
at elevations of 1,200-3,000m.

Identification:
Shrub or small tree, upright to rounded, 2 to 7.5m high;
branchlets densely through moderately, white-tomentose and short-stalked glandular;
bark greyish-brown, flaking in long oblong plates.
Leaves narrowly oblanceolate, 5 to 18cm long by 1.2 to 3cm wide,
apex acuminate, base tapered, retained 2-3 years;
upper surface dark green, moderately glossy, reticulate and rugulose,
glandular at first but soon becoming glabrous, margins sometimes recurved;
lower surface indumentum bistrate, the upper layer loose, white, persistent or detersile,
the hairs sparsely mixed with glands, the lower layer white and compacted,
midrib moderately short-stalked glandular.
Petioles 8-15mm long, sparsely through moderately white-tomentose
and often sparsely through moderately short-stalked glandular.
Inflorescence 4-10-flowered, in a loose flattened truss.
Rhachis 6-15mm long, moderately through densely, white or brown tomentose.
Pedicel 7-25mm long, stout, moderately through densely, fawn or whitish tomentose
and short-stalked glandular.
Calyx *c.* 1mm, outer surface and margins densely through sparsely ciliate-glandular,
the glands short-stalked.
Corolla 4 to 5cm long, white through pink to pale rose, spotted purple.
Stamens 10, unequal, the anthers reddish-brown; filaments puberulous at the base.
Ovary densely white, fawn or yellowish tomentose, the hairs coarse.
Style glabrous and eglandular, or sparsely ciliate-glandular at the base,
the glands short-stalked.
Capsule straight and ridged, densely through moderately brown-tomentose.

Seed Collections:

R. hunnewellianum		*R. hunnewellianum* var. *rockii*	
W 1198	1908	JN 11008	2011
W 4248	1910		
JN 12017	2012		

R. hunnewellianum was an Ernest Wilson find made on his first expedition for the Arnold Arboretum. Herbarium material and seed were collected from a population of plants discovered while he was botanising in Wenchuan County, in north-central Sichuan, during July 1908. Swiftly introduced into cultivation, the seedlings nevertheless took ten years to reach flowering size, finally blooming in 1918, with the first-flowering credit going to yet another plant grown at Borde Hill Garden in West Sussex. The species botanic description appeared in 1913, within Volume 1 of Wilson's *Plantae Wilsonianae,* this written jointly with Alfred Rehder. Their chosen epithet is an honorific for the Hunnewell family, who were major benefactors of the Arnold Arboretum, funding the conifer collection and construction of the administration building, while Horatio Hunnewell - banker, botanist, railroad baron and one of the leading horticulturalists of the day - was the first American to popularise rhododendron cultivation in the United States.

The identification key opposite only details *R. hunnewellianum* ssp. *hunnewellianum,* despite there being a second subspecies with marginally different features, although this was only introduced into UK cultivation during 2011. Named for the American explorer and collector Dr. Joseph Rock, who found the species growing in the rain forests of southern Gansu during 1925, its populace spread across a 300m altitudinal band between the 1,800 and 2,100m contours, *R. hunnewellianum* ssp. *rockii* only differs from its sister in having slightly smaller corollas - these just 3 to 4cm long - and a colour-changing indumentum, the upper layer of which turns yellowish or greyish as the leaf matures. Ernest Wilson wrote the *R. rockii* botanic description that appears within Volume 9 of the *Journal of the Arnold Arboretum,* published in 1928, while David Chamberlain reduced its ranking in 1979 (in Part 2 of the *Preliminary Synopsis* revision paper included within Volume 37 of *Notes from the Royal Botanic Garden, Edinburgh*).

Rock's 1925 collection only returned dried herbarium material to his sponsors, which meant Jens Nielsen was free to scoop up the first introduction credit eighty-six years later when he secured seed from a plant population growing in the south-east of Gansu.

On morphological differences alone, *R. rockii* should never have bested the Synonymy Aurors of the Edinburgh Revision, but its geographic distribution, extending from northern Sichuan into southern Gansu, where ssp. *hunnewellianum* is absent, proved its saving grace, though varietal status might be a more appropriate ranking.

Within the subsection, *R. hunnewellianum* most closely resembles *R. argyrophyllum,* but the two are easily identified from one another, in or out of flower, by the short-stalked glands on the branchlets and petioles of *R. hunnewellianum,* which are not present on any of the *R. argyrophyllum* subspecies. Note however, that the pedicel and calyx of both *R. hunnewellianum* and *R. argyrophyllum* ssp. *hypoglaucum* are equally, densely glandular. In addition, the *R. hunnewellianum* leaves are also distinctive, being considerably narrower, held dangling down and with a bistrate lower surface indumentum.

Although only introduced twice into UK cultivation during the 20th Century, specimens germinated from the two Wilson gatherings can be found growing happily in most of the large botanic rhododendron collections open to the general public. Mature plants top-out around the 5m mark, have proven easy to grow and are free-flowering, with young plants quite fast growers. The occasional reports of chlorotic foliage are indicative of a poor site rather than a congenital imperfection, and unlike many other rhododendrons when out of flower, those long and narrow, dark green leaves remain an interesting and striking feature all year round.

Jens Nielsen was also the plant hunter responsible for the reintroduction of *R. hunnewellianum* in late 2012, sourcing capsules from plants growing in Ernest Wilson's original stamping ground and beating the Nagoya Protocol restrictions by a whisker.



R. hunnewellianum (W 1198)



R. hunnewellianum (W 1198)

R. thayerianum

Hardiness:
H5.
Flowering Period:
June-July.
Distribution in the wild:
C & W Sichuan, China.
Growing in forests at elevations of 2,600-3,000m.

Identification:
Shrub, 1.8 to 4m high, rounded or upright, rigid; branchlets stout and thick,
white or brown floccose, and short-stalked glandular, both moderately through densely so;
bark rough, flaking and shaggy, brown.
Leaf bud scales persistent on young shoots for 2-3 or more years.
Leaves thick and stiff, crowded at the branch tips, lanceolate through narrowly
oblanceolate, 7 to 17cm long by 1.2 to 3.8cm wide, apex cuspidate, retained 2-6 years;
upper surface usually dark green, glabrous, often mottled and shiny, reticulate,
veins deeply impressed, margins recurved;
lower surface indumentum unistrate, silvery, fawn or brown, woolly, dense but plastered
and compacted, midrib hairy and moderately to densely short-stalked glandular.
Petiole 10-23mm long, stout, grooved above,
floccose and variably short-stalked glandular, becoming glabrescent.
Inflorescence 10-20-flowered, the truss compact to loose;
buds oblong-oval, crimson-purple, the lower scales with long acuminate tips,
moderately to densely floccose and densely short-stalked glandular.
Rhachis 30-40mm long, whitish-floccose and moderately to densely short-stalked glandular.
Pedicel 26-50mm long, slender,
sparsely to moderately whitish-floccose and moderately to densely short-stalked glandular.
Calyx 2-5mm long, the lobes rounded or oblong,
outer surface and margins glabrous, moderately to densely short-stalked glandular,
the margins sometimes eglandular.
Corolla 2.3 to 3cm long, white, or white tinged or deeply flushed pink on the outside,
occasionally with a darker median line along the lobes, or pink, rarely spotted crimson.
Stamens 10-12, rarely 8, unequal;
filaments with a wider base, moderately floccose along the lower half or only at the base.
Ovary densely rufous short-stalked glandular, sometimes mixed with rufous-tomentose
eglandular hairs, rarely with whitish glands or hairs.
Style densely whitish-glandular, base to tip.
Capsule ridged, glabrous, moderately through densely short-stalked glandular.

Seed Collections:

W 4273	1910

R. thayerianum was first found and collected near Moupin in October, 1910: Ernest Wilson was on his second Arnold Arboretum-sponsored expedition to China; again exploring the mountains of western Sichuan; and adding more entries to the already impressive list of rhododendrons he had discovered that were new to Western science. The species botanic description was included within Volume 1 of *Plantae Wilsonianae,* the tome he penned with Alfred Rehder, this published in 1913, and to date, the seed and herbarium specimens he gathered under W 4273 remain the only documented introduction, though it is understood that an undocumented reintroduction occurred in 1991 or shortly thereafter. However, no wild collected seed of *R. thayerianum* has ever appeared on the seed exchange lists of the American Rhododendron Society or those of the RHS's specialist Rhododendron, Camellia and Magnolia Group.

The persistent perulae and completely glandular style are unique amongst the Subsection *Argyrophylla* rhododendrons, a correct identification also assisted by the stiff and narrow foliage crowded at the branch tips, those leaves being retained for up to six years, and by the sticky branches themselves. Plants in UK cultivation grow to around the 2 or 3m mark, rarely higher, and are the hardiest rhododendrons within the subsection. They are late flowering, the buds opening towards the end of June into July, and while blooming is often profuse, the small corollas cannot be described as spectacular. The impressive foliage clusters however, more than make up for any lack of floral impact.

The species epithet is an honorific for the Thayer family of Lancaster, Massachusetts, who financially supported Ernest Wilson's Arnold Arboretum expeditions to China and also built Harvard University's Thayer Hall.



R. thayerianum



R. thayerianum



R. thayerianum

R. denudatum

Hardiness:
H5.
Flowering Period:
April-May.
Distribution in the wild:
NW Guizhou, C & SW Sichuan & NE Yunnan, China.
Growing in thickets on mountain slopes at elevations of 2,000-3,350m.

Identification:
Shrub or small tree, 3 to 6m high; branchlets stout, densely white through yellowish tomentose at first, soon glabrescent; bark somewhat rough.
Leaves oblanceolate to elliptic-lanceolate, 10 to 20.5cm long by 2.5 to 7cm wide, flat, concave or V-shaped;
upper surface olive- to deep-green, somewhat shiny,
rugose and glabrous, the margins recurved;
lower surface indumentum bistrate, woolly, the upper layer yellowish through cinnamon-brown, detersile, the lower layer whitish and compacted.
Petiole 10-20mm, densely white through yellowish tomentose.
Inflorescence 8-12-flowered.
Rhachis quite short, 5-8mm long, densely brown or whitish floccose.
Pedicel 10-20mm, stout, densely yellowish-tomentose.
Calyx *c.* 1mm, outer surface and margins moderately through densely tomentose.
Corolla 3.5 to 4cm long, pink through rose to wine-red, with deeper crimson flecks and often blotched.
Stamens 10-13; filaments glabrescent.
Ovary densely white through yellowish tomentose.
Capsule yellowish-brown tomentose.

Seed Collections:

H&M 1497	1990	EGM 294	1995
Cox 5090	1990	EGM 323	1995
AC 1087	1995	EGM 334	1995
AC 1088	1995	AC 5109	2002
AC 1103	1995	C&N 6010	2007
AC 1143	1995	C&N 6017	2007
AC 1149	1995	C&N 6176	2007
AC 1174	1995	C&N 6179	2007
C&H 7012	1995	NN 0908	2009
C&H 7085	1995	NN 0934	2009
C&H 7118	1995	JN 12291	2012

It may be a recent introduction into British gardens, but *R. denudatum* was actually discovered over a century ago in 1911 by the French missionary-collector Edouard Maire while he was out botanising at Tien Sin, in Yunnan Province. Maire's herbarium specimens were sent off to the Académie Internationale de Géographie Botanique in Paris, where Hector Léveillé, yet another of the botanist-prelate luminaries of the Société des Missions Étrangères, wrote the botanic description in 1914, his appraisal appearing in Volume 13 of *Repertorium Specierum Novarum Regni Vegetabilis*.

Morphologically, *R. denudatum* is most closely related to *R. coeloneuron* and *R. floribundum,* its characteristics lying midway between the two, though it can still be easily distinguished from both. Indumentum and tomentum hair colour are the key distinguishing features: rusty-red for *R. coeloneuron;* white for *R. floribundum;* cinnamon-brown through yellowish to white for *R. denudatum,* with a characteristic unique to the latter providing a helpful assist in that the upper layer of its bistrate abaxial leaf indumentum rubs-off over time. So a continuous cinnamon-brown through yellowish covering first becomes patchy, and is then completely lost, revealing a compacted cloak of white hairs beneath. Less reliable differences are leaf length and width - moderately enhanced in *R. denudatum* when compared with *R. floribundum;* more significantly so when the comparison is made with *R. coeloneuron* - and the relative glossiness between those three sets of leaves, although this property is far too nebulous to correctly identify an individual and should never be used on its own. Given the above, it will come as no surprise to learn that botanic opinion is currently divided on whether all three species should maintain their current ranking or be combined as subspecies or varieties.

R. denudatum was first introduced into UK cultivation during 1990, with the arrival of two separately-secured gatherings of capsules: one made on September 15th by Charles Howick and William McNamara; then a Peter Cox collection made a few weeks later, though this has been going through a dissociative identity crisis after first having been tagged in the field as *R. denudatum,* then subsequently changed to *R. floribundum,* reappraised as an affinity form of such, only to regain its original determination - at least in the eyes of some doyens and a few laser-engraved labels - though the nature and hue of the leaf abaxial indumentum would proclaim it to be firmly in the *R. floribundum* camp. Next up, the 1995 twelve-lot bonanza saw a photo finish between an expedition team whose membership included Peter Cox, Steve Hootman, Peter Hutchison and Ted Millais, and a party collecting for Muncaster Castle Gardens lead by Alan Clark, both ventures arranged under the refereeing auspices of the Kunming Institute of Botany.

As with *R. coeloneuron,* introduced into British gardens around the same time, cultivation of *R. denudatum* has so far presented few if any difficulties, with the juvenile and now mature plants proving to be fully hardy, without foliage chlorosis issues, and most importantly, flowering freely from quite a young age.



R. denudatum (EGM 294)



R. denudatum (EGM 294)



R. denudatum (C&H 7118)

R. farinosum

Hardiness:
H5.
Flowering Period:
April-May.
Distribution in the wild:
NE Yunnan, China.
Growing in thickets on steep mountain slopes and along the edges of forests,
at elevations of 2,800-3,200m.

Identification:
Shrub, 1 to 2m high, compact and dense;
branchlets densely white, grey or fawn tomentose at first, becoming glabrescent.
Leaves obovate through oblong-elliptic, 5 to 8cm long by 2 to 3cm wide,
flat, concave or V-shaped;
upper surface olive-green, shiny, bullate, glabrous, the margins recurved;
lower surface indumentum bistrate,
upper layer fawn, thick and woolly, lower layer white and compacted.
Petiole 8-10mm long, stout, densely white or fawn floccose.
Inflorescence 6-8-flowered.
Rachis very short, 4-5mm, moderately through sparsely floccose.
Pedicel 10-20mm long, densely tomentose, the hairs white through fawn to brown.
Calyx *c.* 1mm, outer surface and margins rufous-tomentose.
Corolla 3 to 3.5cm long, white.
Stamens 10; filaments pubescent at the base.
Ovary densely tomentose, the hairs fawn through brown.

Seed Collections:

NN 0904	2009
JN 11036	2011

R. farinosum was also an Edouard-Ernest Maire discovery, but made in 1913 on the slopes of Lo-Shan in eastern Yunnan. Like *R. denudatum,* it too was described by Hector Léveillé, the same edition of *Repertorium Specierum Novarum Regni Vegetabilis* featuring his text - Volume 13, published in 1914 - and until recently, that collection was the only known gathering of the species, the dried material arriving without any seed, or at least, without any that germinated.

Fast-forward to 2009, and on a trip to northeastern Yunnan, Jens Nielsen and Remi Nielsen discovered a population of plants that were identical to the Maire 1913 find, with Jens making a second collection from a nearby, but different site during 2011. Photographs published on the website of the Danish Chapter of the American Rhododendron Society show the plants cultivated from those gatherings match the type herbarium specimen, have a compact habit well-filled with moderately shiny foliage, those blades gifted a flat, concave or V-shaped profile, a 'drip-tip' at their apex, and an upper surface that is both bullate and deeply veined. The youngsters have also now flowered, opening white flushed pale pink, funnel-shaped corollas, spotted crimson-purple on the upper lobes, which are held in a compact truss of up to eight blooms.

Previously, published texts had associated *R. farinosum* with *R. floribundum,* noting a marked resemblance, though the two could easily be distinguished using their leaf shape and blade length - oblong-elliptic rather than oblong-lanceolate; to around 8cm long rather than 18cm - and flower colour - white rather than magenta-rose through purplish-lavender. The 2009/2011 field observations by Jens and Remi suggest that instead, *R. farinosum* is an intermediate between *R. denudatum* and *R. wiltonii,* and that it might be more at home if moved into Subsection *Taliensia.* DNA and phylogenetic analysis will provide a definitive answer as to its placement and hopefully its parentage, but for now, the Edinburgh Revision subsection assignment is maintained herein.

The identification bullet points opposite do not indicate the presence of glands on the leaf, petiole or pedicel, but otherwise, the botanic description of *R. farinosum* matches exactly plants that are currently known as *R. coryanum* 'Chelsea Chimes' - according to an assertion made by John McQuire and Mike Robinson in their 2009-published book *A Pocket Guide to Rhododendron Species.* The detersile nature of the leaf blade glands would, they claim, rule out their presence on the type herbarium specimen given its age. However, as the Danish Chapter photographs show, the pedicels and calyx of *R. farinosum* are densely white tomentose, while these gracing 'Chelsea Chimes' will be found to be totally devoid of any such hairs (or glands). Equally, the compact flower truss of the former is at odds with the loose and open arrangement of the latter, this the result of those same pedicels being significantly longer. Classifying the 'Chelsea Chimes' clone as *R. farinosum* is questionable therefore, despite the many apparent similarities, and it is not endorsed here.

R. coryanum

Hardiness:
H5.
Flowering Period:
April-May.
Distribution in the wild:
SE Tibet & NW Yunnan, China.
Growing in *Abies* forests, mixed woodland and rhododendron thickets,
at elevations of 2,600-4,400m.

Identification:
Shrub or small tree, 2.5 to 6m high; branchlets thin, grey-tomentose,
moderately to densely short-stalked glandular; bark rough.
Leaves oblanceolate through narrowly-elliptic, 6.8 to 17cm long by 1.8 to 4cm wide,
often V-shaped from midpoint to tip, retained 2-3 years;
upper surface dark green, glabrous, moderately shiny,
the midrib glabrous or hairy, sometimes glandular;
lower surface indumentum unistrate, silvery to fawn, becoming ash-grey,
compacted and embedded in a surface film,
the hairs intermixed, sparsely to moderately, with short-stalked glands.
Inflorescence 15-30-flowered.
Rhachis 20-30mm long, sparsely puberulent.
Corolla 2.5 to 3cm long, white, with crimson-brown spotting.
Stamens 10-12; filaments puberulous at the base.
Ovary glabrous and eglandular.
Capsule slightly curved, ridged, glabrous and eglandular.

Seed Collections:

F 20322	1921
F 20832	1921
F 21693	1922
R 11174	1923
AC 4535	2000
AC 4544	2000

George Forrest discovered *R. coryanum* in southeast Tibet on his fifth expedition to China. Seed and herbarium specimens were gathered from a population of plants found at Tsarong in September 1921 - F 20322; in October of that same year, dried material and mature capsules were secured from another nearby community - F 20832; and in June of 1922, he again acquired both integrants from a third populace - F 21693. The reason for setting out such minutiae is that in some recent botanical texts, the date of discovery has been wrongly assigned to the 1922 collection: as in David Chamberlain's 1982 Subgenus *Hymenanthes* revision (*Notes from the Royal Botanic Garden, Edinburgh,* Volume 39, Number 2); and H. H. Davidian's *The Rhododendron* Species, Volume 2, of 1989 vintage. Indeed, the latter tome - just four sentences on from the discovery boo-boo - confirms the two 1921 introductions and gives the dates, collecting locals and field numbers for both!

Working with Harry Tagg, Forrest jointly wrote the species botanic description that appears Volume 15 of *Notes,* published in 1926, the epithet they chose honouring Reginald Cory (1871-1934), a noted horticulturalist, RHS Council member, and major benefactor of the Cambridge Botanic Garden, who had jointly sponsored this and Forrest's previous 1917-1919 expedition.

Unique amongst the membership of Subsection *Argyrophylla, R. coryanum* has an ovary that is both glabrous and eglandular, plus an inflorescence holding 15-30 flowers. Out of bloom, reliance for a correct identification must be placed on the glabrous and eglandular, ridged seed capsules, and the long narrow leaves, these often V-shaped from just above the midpoint down to the tip. But note: these characteristics are not distinct enough in themselves to key out the species and specimens can easily be mistaken for *R. argyrophyllum* or even forms of *R. uvarifolium* from Subsection *Fulva*.

Post the two Forrest seed collections and a further gathering by Joseph Rock in 1923, a gap of more than seventy years ensued before the species was again encountered and collected by Western plant hunters, Alan Clark returning two seed lots from Tibet's Rong Chu valley, gathered below Chuneyma, in the autumn of the 2nd millennium's and the 20th century's last year.

A clone of *R. coryanum* - later named 'Chelsea Chimes' - was gifted an Award of Merit by the RHS in 1979, but there is a problem with its provenance: according to the records at Borde Hill, it was germinated from KW 6311. Frank Kingdon-Ward's field notes certify this as a collection of *R. uvarifolium,* which all the other munchkins keyed-out to be, though a bit of detective work concluded that a label mix-up had occurred in the dim and distant past, with the original seed number lost. That may have solved the citation contention, but doubt has also been cast over the plant's identification as a form of *R. coryanum.* For an examination will show that the leaves of 'Chelsea Chimes' are more bullate, they are also distinctly shiny, and they do not share the same grooved cross-sectional profile, though they do curve downwards towards the tip. That leaf apex is pronouncedly cucculate (a design feature allowing water to more easily drip off) and the glands on the upper surface midrib are detersile rather than persistent. Note too that the leaf abaxial indumentum is bistrate not unistrate, while the inflorescence contains just 6-9 flowers, not the usual 15-30. So whatever it is, it is not *R. coryanum.* Nor - as set out opposite - is it a specimen of *R. farinosum*.

Cultivation of the real *R. coryanum* is straightforward, with specimens proving easy to grow, being fully hardy and flowering freely once mature. In British gardens, they usually form a compact 3m high upright dome, well-filled with foliage, except along the west coast, where, if their planting site conditions approach perfection, the higher annual rainfall totals allow them to develop into rather impressive small trees, as can be seen at Benmore and in the grounds of Muncaster Castle.

R. coryanum

R. coryanum



R. haofui (GUIZ 75)

R. haofui

Hardiness:

H4-5.

Flowering Period:

May-June.

Distribution in the wild:

N Guangxi, Guizhou, S Hunan, SW Jiangxi & E Yunnan, China.
Growing in thickets and woodland in valleys at elevations of 800-1,900m.

Identification:

Shrub, 4 to 6m high; branchlets glabrous;
bark pale brown or grey, flaking in small, irregular pieces.
Leaves lanceolate through oblanceolate, 7 to 22cm long by 3 to 7cm wide,
apex acuminate; upper surface somewhat glossy, glabrous;
lower surface indumentum bistrate, floccose-pannose,
the tomentum initially thick and cinnamon, becoming thinner and ash-grey at maturity.
Petioles 15-22mm long, glabrous, upper surface almost flat.
Inflorescence 5-9-flowered.
Rhachis short, 5-10mm, white or yellowish pilose.
Pedicel 20-35mm long, white or yellowish pilose.
Calyx *c.* 1mm long, outer surface and margins villous.
Corolla 4 to 4.5cm long, white, often flushed rose and sometimes with a red basal blotch.
Stamens 18-21; filaments villous along the lower half.
Ovary densely white or pale brown floccose.
Capsule brownish-floccose.

Seed Collections:

GUIZ 75	1985

Although the Chinese botanist Ren-Chang Ching discovered and collected *R. haofui* in June 1928 on an expedition to northern Guangxi, it was not described until 1957 when a joint appraisal by Woon-Young Chun and Fang Wen-Pei appeared in *Acta Phytotaxonomica Sinica,* Volume 6. The species is unique amongst the rhododendrons allotted to Subsection *Argyrophylla* in that each corolla has between 18 and 21 stamens, so identification when in bloom is a breeze. Out of flower however, the species can be confused with *R. simiarum,* as only small differences in the foliage morphology separate the two: narrower, slightly longer blades that hang down and have a bistrate indumentum will be found on specimens of *R. haofui;* thick and stiff leaves, often upward pointing, with a clearly glossy adaxial surface and unistrate abaxial indumentum gracing the branchlets of *R. simiarum*.

R. haofui was only introduced into UK cultivation during 1985, the seed gathered from plants in the Fan Jin Shan Biosphere Reserve, this located in the east of Guizhou Province. Found by a visiting Western team that included Hans Fliegner and John Simmons from Kew, and James Russell from Castle Howard, their dried herbarium material and the germinated seedlings were initially written off as *R. ririei* affinity. Until first-flowering allowed a correct identification to be made.

In Chinese, the *R. haofui* epithet means 'good luck' and a fair smidgen of such is needed for successful cultivation, as specimens are prone to chlorotic foliage and often appear distinctly forlorn, with the leaves drooping limply as if about to be shed, their colour and poise clearly indicating a near certain and immanent demise, which in most cases, will prove illusory. To alleviate the problem, the UK's specialist nurserymen have tried growing the rhododendron in soil with a neutral pH, dosing its roots with iron chelate, or adding a top dressing of dolomitic limestone. At least, they did until Steve Hootman, the curator and executive director of the Seattle-based Rhododendron Species Foundation, writing in the 2009 Yearbook of the Scottish Rhododendron Society, succinctly stated that the species was simply 'difficult to grow well'. On the other hand, despite coming from quite low elevations, *R. haofui* seems relatively hardy, with no adverse reporting noted following the successive severe winters of 2009-10 and 2010-11.



R. haofui (GUIZ 75)



R. haofui (GUIZ 75)

R. pingianum

Hardiness:
H5-6.
Flowering Period:
May.
Distribution in the wild:
C & SW Sichuan, China.
Growing in bamboo thickets and on wooded mountain slopes
at elevations of 2,000-2,700m.

Identification:
Shrub or small tree, rounded, 4 to 8m high; branchlets stout, moderately through densely white-tomentose, sometimes sparsely short-stalked glandular;
bark grey through brownish-grey.
Leaves lanceolate through oblanceolate, 8 to 15.3cm long by 2 to 4.2cm wide,
apex acute, retained 1-3 years;
upper surface pale green, matt, glabrous, reticulate, margins sometimes recurved;
lower surface indumentum bistrate, matt, continuous, the upper layer woolly, the hairs white and short, the lower layer compacted, embedded in a surface film.
Petiole 10-20mm long, grooved above,
sparsely through moderately white-tomentose, becoming glabrescent.
Inflorescence 8-22-flowered, in a loose but dense truss.
Rhachis 10-20mm long, sparsely through moderately white-pubescent.
Pedicels 20-42mm long, slender, white-floccose,
sometimes also sparsely short-stalked glandular.
Calyx 1-2mm long, rarely to 5mm, outer surface and margins glabrous or sparsely floccose, the scale surface may also be sparsely short-stalked glandular.
Corolla 2.6 to 3.5cm long, pinkish through rose to pale purple.
Stamens 10, unequal; filaments slender, glabrous.
Ovary densely brownish or rufous tomentose.
Capsule slightly curved, ridged, glabrous.

Seed Collections:

KR 150	1980
KR 184	1980
CCH 3905	1989
CCH 3912	1989
SICH 1241	1992
EGM 304	1995
AC 4789	2001
CNC 12095	2012
CNC 12128	2012
JN 12324	2012

R. pingianum was named after a past director of the Science Society of China's Nanking Biological Laboratory, Professor Ping Chih. The species was both discovered and described by Wen-Pei Fang, respectively: in western Sichuan during May 1930; and in the 1939 edition of *Contributions from the Biological Laboratory of the Science Society of China.* The slightly wider leaf blade, with its bistrate indumentum, plus longer pedicels and a densely rufous-tomentose ovary are sufficiently distinct characteristics to key specimens of *R. pingianum* from those of its closest relative *R. argyrophyllum,* an identification further assisted by a flower truss boasting around 20 corollas, rather than a maximum of 10.

The species was originally introduced into UK cultivation during 1963, Edinburgh Botanic receiving a packet of seed from the Washington Arboretum, but only two plants were germinated. These grew to around 30cm high in four years, had the relatively thick and woolly, continuous and bistrate lower leaf surface indumentum as stipulated in the species botanic description, but unfortunately, succumbed before flowering could occur, so no check was able to be made on the ovary tomentum. A reintroduction took place in the early 1980s, Keith Rushforth encountering a population of plants on the higher slopes of Emei Shan, but a number of doyens have now begun to question whether these new arrivals are in fact *R. pingianum,* despite a specimen from each seed lot being gifted an Award of Merit by the RHS in 2009 when shown by Mr Rushforth. For the expected densely rufous-tomentose ovaries were absent. So despite their bistrate leaf indumentum, a consensus is growing to treat these plants, and those introduced subsequently, as *R. argyrophyllum* Pingianum Group. Hopefully, in the not too distant future - Nagoya constraints permitting - an expedition will re-discover Wen-Pei Fang's original source population for the type herbarium specimen, which should provide an answer to the ovary tomentum colour and thereby establish the correct status of both the species and the plants currently grown as *R. pingianum* in British gardens, though given Emei Shan's profusion of near inaccessible cliffs, that may prove a daunting task. After all, the *R. williamsianum* population has remained hidden from view on the mountain pretty much since Ernest Wilson gathered-up his sole batch of seed well over a century ago.

Those growing *R. pingianum* will find that cultivation is straightforward, presenting few if any problems, with specimens exhibiting fine foliage and proving to be especially free-flowering.



R. pingianum (KR 150)



R. pingianum (CCH 3905)



R. pingianum (KR 150)

R. argyrophyllum* ssp. *nankingense

Hardiness:
H5.
Flowering Period:
May.
Distribution in the wild:
Guizhou, China.
Growing on rocky slopes at elevations of 2,250m.

Identification:
Shrub or tree, 2 to 10m high.
Leaves coriaceous, stiff, 11 to 16cm long by 3 to 6cm wide,
oblong-lanceolate through elliptic, retained 2-3 years;
upper surface dark green, shiny, often rugulose;
lower surface indumentum unistrate, plastered, thin and compacted,
embedded in a surface film, white.
Inflorescence 8-16-flowered.
Rhachis 6-20mm long, densely through moderately,
white, dark brown or rufous tomentose, rarely glabrous.
Calyx 1-2mm, floccose.
Corolla 4 to 5.5cm long, deep pink to lilac-purple.
Stamens 11-15.
Ovary eglandular.

Seed Collections:

Steward 46	1932
GUIZ 125	1985

Albert Steward, an American botanist teaching at the University of Nanking, along with two Chinese colleagues, C. Y. Chiao and Cheo Shu-yuen, discovered *R. nankingense* in January 1931 at Lao Shan, in what was then China's Kweichow Province (now Guizhou). Steward included the collection in five packets of rhododendron seed he sent to the Royal Botanic Garden, Edinburgh, the following year, and in 1946, fourteen years after sowing, the plant flowered for the first time. John MacQueen Cowan wrote the botanic description for the new species, opting for varietal status under *R. argyrophyllum,* his text appearing in Volume 21 of *Notes from the Royal Botanic Garden, Edinburgh,* published in 1953, while the second tranche of the Edinburgh Revision's *Preliminary Synopsis* (*Notes,* Volume 37), upped the ranking to that of subspecies.

The shiny and quite stiff leaves, usually longer than those of ssp. *argyrophyllum* and certainly wider, are the features used to identify ssp. *nankingense* from its three sisters when not in flower. When in bloom, the 8-16 deeper pigmented corollas in the truss, larger, and when fully open, each at least 5cm wide, are also beautifully distinctive.

R. argyrophyllum ssp. *nankingense* is hardy, very free-flowering when mature and the easiest of the four subspecies to grow in British gardens. Specimens ultimately form a dome around 3m high, which each year is covered in tiers of deep pink flowers and remains replete with eye-catching foliage all year round, this less prone to chlorosis than its closest relatives. The award-winning 'Chinese Silver' clone will usually be the form found in most rhododendron collections and its storied rows of dazzling, deep pink flowers, will literally stop you in your tracks.

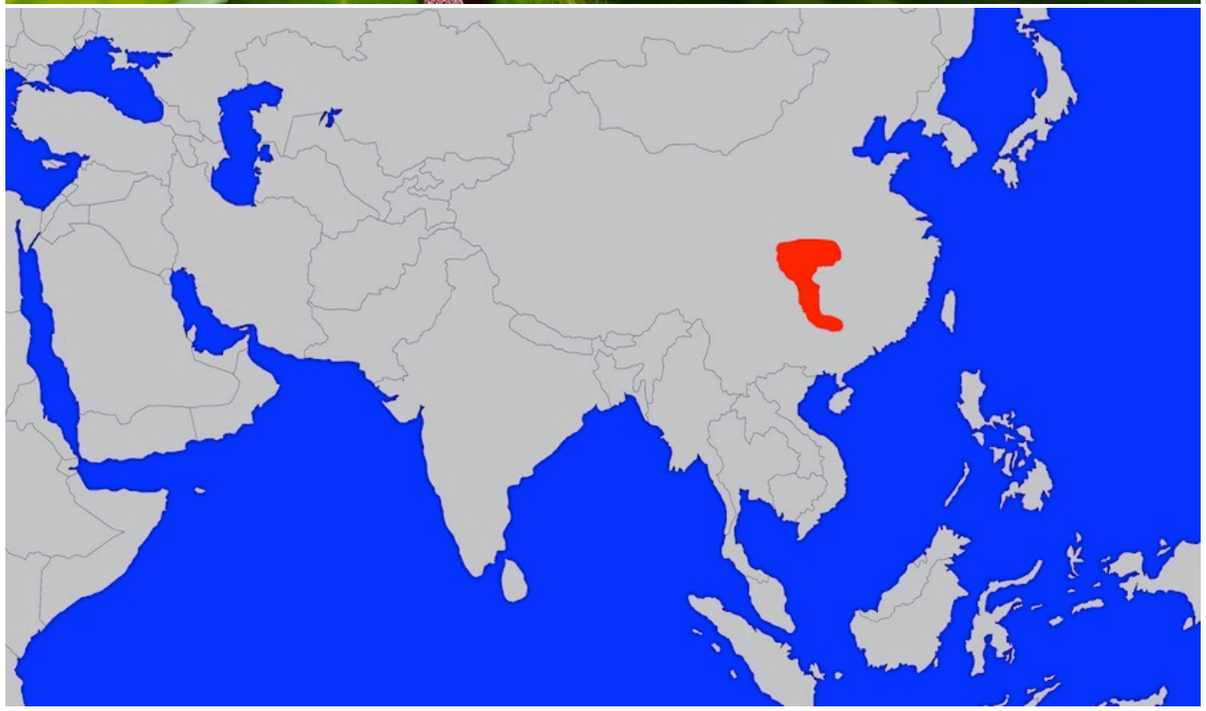


R. nankingense

R. nankingense

Subsection *Auriculata:*


R. auriculatum



Taxa:

R. auriculatum
R. chihsinianum

Taxonomic Revision:

Subsection *Auriculata* resides in Section *Leiorrhodium* as a result of cpDNA analysis.

Subsection Morphology:

Large shrubs or small trees, rounded, spreading, often umbrella-shaped if not restricted, 2 to 10m high; young shoots densely setulose- or setose-glandular, the hairs long-stalked, and sometimes tomentose, rarely eglandular; vegetative buds long, conical, the perulae tapered, narrow, acuminate and with long tips; bark rough, greenish-brown.

Leaves oblong, oblong-elliptic through oblong-lanceolate, to oblong-oblanceolate, 9.5 to 32cm long by 2.8 to 12cm wide, apex rounded and apiculate, or acuminate, base rounded, obtuse or auriculate, retained 1 or more years;
upper surface dark green, glabrous at maturity or with the vestiges of hairs and glands on the margins, the primary veins deeply impressed;
lower surface pale green, usually glandular and villous, especially on the midrib, veins and margins, the hairs scattered, flexuous and thread-like.

Leaf anatomy comprises a 2-layered upper epidermis, with the cells in both layers being of roughly equal size; the cuticle is around half as thick as the cells are deep; some water tissue is present; the lower epidermis cells are not prolonged into papillae.
Sclereid cells are absent.

Petiole 13-40mm long, rounded and grooved above,
densely glandular or glandular-setulose, the hairs long-stalked.

Inflorescence 6-15-flowered, the truss loose, the buds large and conical,
perulae tapered, acuminate, with long tips; often fragrant.

Rhachis 23-50mm long, densely glandular, the hairs short-stalked, or rufous-villous.

Pedicel 10-35mm long, densely glandular, the hairs long-stalked, or pilose.

Calyx small, the lobes 1-3mm long,
outer surface and margins glandular, the hairs short-stalked.

Corolla tubular-funnel-shaped, 7-8-lobed, 4 to 10cm long,
white to creamy-white to rose-pink, with a greenish blotch at the base of the tube that often has red flecks extending some way along the upper lobe,
the outer and inner surfaces often moderately glandular, the hairs long-stalked.

Stamens 14-16, unequal, 30-90mm long, anthers pinkish-white; filaments glabrous.

Ovary tapering into the style, densely glandular, the hairs short-stalked.

Style glandular from base to tip, stigma large.

Capsule usually oblong, terete, 13-40mm in length, straight or somewhat curved, ridged, either short-stalked glandular or with the vestiges of glands.

Seeds longer than broad, narrowly winged, both ends with appendages.

R. auriculatum

Hardiness:
H5-6.
Flowering Period:
July-August.
Distribution in the wild:
E Sichuan, W Hubei & E Guizhou, China.
Growing in woods, on high ridges, and on rocky slopes in forests,
at elevations of 500-2,300m.

Identification:
Large shrubs or small trees, 2 to 10m high.
Branchlets usually densely setose- or setulose-glandular.
Leaves 9.5 to 32cm long by 2.8 to 12cm wide,
apex acuminate, base rounded or auriculate.
Inflorescence 6-15-flowered.
Rhachis densely glandular.
Pedicel densely glandular.
Corolla 6 to 10cm long, 7-8-lobed, scented.

Seed Collections:

W 920	1901
W 3427	1907/1908
PW 50	1994

Augustine Henry discovered *R. auriculatum* during 1885.

A qualified doctor employed by the Imperial Customs Service as an Assistant Medical Officer and Customs Assistant, in 1882, the Irishman was sent from Shanghai to the remote town of Yichang, in the Chinese province of Hupeh (now Hubei). A port city located on the banks of the Yangtze River many hundreds of miles from the sea, and at the time, only recently opened up to foreign traders - by the Qing Dynasty Guangxu Emperor after the Second Opium War with Britain - it was here where Henry began his plant hunting forays that over the next fourteen years would result in more than 150,000 herbarium specimens being sent to the Royal Botanic Garden at Kew, many of these accompanied by seed, and in total, his explorations would yield 25 new-to-science genera and over 500 new species. Working from the sheets holding one of those collections, William Botting Hemsley wrote the botanical description for *R. auriculatum* in 1889, his text published in Volume 16 of the *Journal of the Linnaean Society of London (Botany).*

If seed of *R. auriculatum* accompanied the dried material, it did not germinate, so like many other Augustine Henry discoveries, this species too was introduced into cultivation by Ernest Wilson - in 1901, sixteen years after its discovery.

Wilson had consulted exhaustively with Augustine Henry before departing for Hubei as his sponsors, the pre-eminent Veitch Nurseries of Chelsea and Exeter, had put the fabled Handkerchief tree - *Davidia involucrata* - at the very top of their 'wants' list and the Irishman knew where to find it. Whether *R. auriculatum* came up in the conversations between the two plant hunters will forever remain a mystery, but Wilson either relocated or rediscovered the species, and his seed did germinate, flowering for the first time at Caerhays Castle in Cornwall, some eleven years after sowing, in the summer of 1912.

On February 6th, 1914, J. C. Williams, owner of the estate, wrote that:

> 'We have flowered *R. auriculatum* for the last two years, and it will do so again this year. I have tried hard to mature pure seed, but so far the pods have only rotted during the winter.'
>
> Quoted in *Rhododendrons and the Various Hybrids,* Volume 1, J. G. Millais, 1917.

R. auriculatum is very late-flowering, usually opening it's buds at the end of July or in early August. New growth too appears late in the season, so the species is not suitable for areas that are subject to early autumn frosts, as the young shoots will still be soft and vulnerable. Morphologically, the species is allied to the fragrant, white-flowering members of Subsection *Fortunea,* but is easily distinguished from such by the long and conical foliage and flower buds, by the large auriculate leaves, and by the isolated, sinuous and wavy, villous hairs on the leaf underside. The long, ribbon-like red bracts of the new growth are an additional, attractive feature.

The foliage and flower buds of *R. auriculatum* are comparable in shape to those found on *R. griersonianum,* so of course, the two species were previously regarded as related because of these similarities and grouped together in the old Auriculatum Series. However, the pair were rightly split apart by H. H. Davidian (in *The Rhododendron and Camellia Year Book,* 1964), and the Edinburgh Revision botanists chose to maintain this division post 1982, placing *R. griersonianum* in a monotypic subsection, while *R. auriculatum* was allied with *R. chihsinianum,* which had had its own erroneous association with *R. monosematum* and *R. strigillosum* ended at the same time.

The two members of Subsection *Auriculata* are easily separated from one another both in and out of flower, with the leaf apexes providing an obvious key: narrowly pointed for *R. auriculatum;* rounded with an apiculate tip for *R. chihsinianum*. When the plants are in bloom, glands will be found to be resident on the pedicels and rhachis of the former, with

the corollas between 6 and 10cm long; for the latter, the rhachis is villous, with brown coloured hairs, the pedicels pilose, and both are without any glands. The corollas of *R. chihsinianum* are also smaller, to around 4cm long, and in the wild, the species is also much lower growing, to just 4.5m in height, rather than 10m.

While relatively heat-tolerant, *R. auriculatum* requires shade and shelter to protect the flowers and young shoots. Specimens grow best in a position where the soil stays damp throughout the summer, thus negating any check on the development of the new shoots due to drought, which would otherwise exacerbate the potential for frost damage.

The species was reintroduced into UK cultivation in 1994 by Peter Wharton, curator of the Asian Garden at the University of British Columbia, from a plant population in China's Guizhou Province.



R. auriculatum



R. auriculatum



R. auriculatum

R. auriculatum

R. chihsinianum

Hardiness:
H5.
Flowering Period:
July.
Distribution in the wild:
N Guangxi, China; Lao Cai, Vietnam.
Growing in broad-leaved forests and on rocky slopes at elevations of 700-1,800m.

Identification:
Large shrubs or small trees, 2 to 4.5m high.
Branchlets terete, setulose-glandular and tomentose at first,
becoming glabrescent or glabrous at maturity.
Leaves 10 to 30cm long by 4.5 to 10cm wide,
apex rounded and apiculate, base obtuse or slightly cordate.
Inflorescence 7-9-flowered.
Rhachis rufous-villous.
Pedicel brownish-pilose and without glands.
Corolla *c.* 4cm long, 7-lobed, pink.
Style densely long-stalked glandular base to tip, the glands yellowish.

Seed Collections:

KR 4653	1997


R. chihsinianum (KR 4653)

R. chihsinianum was described in 1957 by Woon-Young Chun and Wen-Pei Fang - in Volume 6 of *Acta Phytotaxonomica Sinica (Chih su fen lei hsueh pao)* - from specimens that had been collected in northeastern Guangxi, not far from Guilin City, where the species was first discovered. More recently, the distribution has been provisionally extended to take in the Lao Cai Province of northwest Vietnam, which was where Keith Rushforth gathered seed and introduced the taxon into UK cultivation during 1997. Ever cautious, Edinburgh's botanists appended an affinity tag to the juveniles, deciding that until the corollas could be judged against the botanic description, a definitive identification could not be made.

Photographs of those blooms have now shown that they are indeed graced with seven lobes, but instead of being pink, their pigmentation is white, and the corollas have a pale pink stripe running down each of the lobe midribs, along with a matching flush of the same colour across the lobe outer margins. They are, moreover, much larger than the species maxima allows, so at present, the affinity status tag remains in place on the RBGE's Living Collections online database entry - Accession Number 19980431 - while their morphology is being pondered upon. Of course, the plants could still be forms of *R. chihsinianum,* but equally, they might also be a potential new species or, given the proclivity to cross-breed observed elsewhere, natural hybrids.


R. chihsinianum (KR 4653)

Subsection *Barbata:*


R. erosum



Taxa:

R. argipeplum
R. barbatum
R. erosum
R. exasperatum
R. succothii

Taxonomic Revision:

Subsection *Barbata* has been moved from Section *Ponticum* into Section *Leiorrhodium.*

Subsection Morphology:

Rounded shrubs or upright small trees, 1.2 to 9m high; young shoots setose or glandular-hairy; bark smooth, peeling, reddish-brown to plum-purple.

Leaves usually convex, often rugulose,
elliptic through elliptic-lanceolate to oblong-lanceolate, oblong or broadly obovate,
7 to 20cm long by 2.5 to 10cm wide, retained 1-2 years;
upper surface dark green, glabrous when mature;
lower surface glabrous or with coarse bristles or stalked glands,
and sometimes with a thin, continuous or discontinuous layer of dendroid hairs.

Leaf anatomy comprises a 3-layered upper epidermis, with the cells in all three layers being roughly equal in size; the cuticle is thin, around half as thick as the cells are deep; water tissue is present; the lower epidermis cells are prolonged into papillae. Sclereid cells are present in the leaf tissue of each species.

Petiole 10-30mm long, rarely 2-5mm, moderately through densely setose, setose-glandular, or without bristles or glands.

Inflorescence dense, 10-25-flowered.

Pedicel 4-16mm long, usually glabrous, sometimes floccose, the hairs often glandular, with short or long stalks.

Calyx minute to large, 5-lobed, these 1-15mm long, cupular or rounded, usually coloured, often short-stalked glandular.

Corolla 5-lobed, tubular-campanulate, with five nectar pouches at the base, fleshy, scarlet to crimson, sometimes rose.

Stamens 10, filaments glabrous.

Ovary glabrous to densely stalked-glandular, with or without a brown dendroid indumentum of branched hairs and glands.

Style glabrous.

Capsule glabrous, densely setulose-glandular, or eglandular.

Seeds elongate, narrowly winged, each end with appendages.

R. barbatum

Hardiness:
H4-5.
Flowering Period:
March-April.
Distribution in the wild:
Uttar Pradesh, Sikkim & Arunachal Pradesh, N India; Nepal; Bhutan; S Tibet.
Growing in *Abies, Tsuga* & rhododendron forests at elevations of 2,400-3,700m.

Identification:
Leaves flat, sometimes moderately convex, slightly rugulose,
elliptic through elliptic-lanceolate;
lower surface glabrous.
Petiole usually setose or setose-glandular.
Inflorescence 10-20-flowered, truss tightly compact,
bud scales persistent and sticky.
Pedicel eglandular.
Calyx large 10-15mm long, crimson, scarlet or pink, usually glabrous.

Seed Collections:

Cooper 3287	1914	BLM 325	1971	PW 79	1994
Cooper 3507	1914	Bartholomew 147	1974	DSE 19	1995
Cooper 4830	1915	Bartholomew 150	1974	Fox 30	1995
Gould 37	1937	Bartholomew 151	1974	Fox 103	1995
LS&H 17525	1949	Bartholomew 259	1974	AC 5295	2004
Polunin 427	1949	SCH 2299	1977	AC 5306	2004
Polunin 1009	1949	BMW 152	1978	AC 5309	2004
PS&W 3875	1952	SCH 2328	1978	AC 5327	2004
PS&W 4141	1952	McBeath 1236	1981	TDA 076	2011
SSW 231	1954	Hedegaard B107	1983	TDA 120	2012
SSW 4947	1954	EN 673	1984	TDA 264	2013
SSW 5785	1954	KR 931	1985	TDA 268	2013
SSW 8294	1954	KR 1087	1987	TDA 269	2013
TSS 15	1961/1962	Bowes-Lyon 12	1987/1989	TDA 270	2013
TSS 21	1961/1962	CHM 3007	1988	TDA 272	2013
TSS 30	1961/1962	DF 86039	1988	TDA 274	2013
TSS 38	1961/1962	EGM 56	1988	TDA 283	2013
TSS 40	1961/1962	AC 120	1990	TDA 294	2013
Bowes-Lyon 88	1962	C&S 1568	1990	TDA 295	2013
C&H 580	1965	Kinmouth 80	1990	TDA 956	2016
Bowes-Lyon 3012	1966	Sinclair 1725	1993	TDA 957	2016
Bowes-Lyon 3013	1966			TDA 985	2016

The official historical account reports that Nathaniel Wallich, Danish surgeon, botanist and Superintendent of the East India Company's Botanic Garden in Calcutta, discovered *R. barbatum* around 1829 on the lower slopes of a mountain he knew as Gossain Than. The species was named and first described by the collector, becoming item No. 757 in *Wallich's Catalogue,* the multi-edition listing of 20,000+ herbarium specimens he published between 1828 and 1849. That description also appeared in Volume 3 of George Don's *General History of the Dichlamydious Plants,* published in 1834.

Gossain Than - more correctly, Gosainthan - is the Nepali name for the Tibetan mountain Shishapangma. Wallich collected dozens of species from this locale - orchids, liliums, veronicas, anemones, cotoneasters, and of course rhododendrons - all the time believing himself to be in Nepal, though today, a GPS receiver would have told the plant hunter that he had actually strayed across the border into Tibet.

The unofficial historical account claims the species was first found in Sikkim during 1829, by Colonel William Henry Sykes, another employee of the East India Company, who is known to have introduced seed of *R. falconeri* into the UK during 1830, twenty years before Sir Joseph Dalton Hooker. A contribution to the first edition of *The Rhododendron Society Notes,* written by Colonel John Middleton Rogers, of Riverhill, Sevenoaks, and published in 1916, gives credence to this revision of the accepted narrative.

In UK cultivation, *R. barbatum* flowers very early in the season, 'unofficially' if the weather has been mild, during February, more usually from March into April, so despite receiving a H4-5 hardiness rating from the RHS, specimens require safeguarding from frosts that would otherwise destroy the normally abundant profusion of stunning, glowing crimson trusses. The leaves also need protection from strong winds, snapping off at the petioles if damaging gusts penetrate the shelter belt. Tick-box those two provisos however, and the species is easily grown.

R. barbatum is a near-twin to *R. argipeplum,* effectively differing only in the glabrous lower leaf surface. Both plants also have bristles on the branchlets and petioles, though for *R. barbatum* these vary in length and density, with some forms having no bristles at all. Those plants without bristles were once known as *R. imberbe,* a taxon discovered and first collected by Richard Strachey and James Winterbottom sometime before 1854, at Jhuni, in the Kumaon division of Uttarakhand, which borders eastern Nepal. The blooms of a mature specimen, long-established in the grounds of Kew Gardens, would, in 1928, inspire John Hutchinson to compose its botanic opus, this impromptu appearing in Volume 83 of the *Gardeners' Chronicle*. Subsequent field work however, has shown that non-bristly and bristly plants grow intermixed in the wild, so specific status was lost with the publication of the Edinburgh Revision and *R. imberbe* sunk into synonymy.

Rhodophiles might also wish to note that any plants still being cultivated in gardens as *R. shepherdii* are actually forms of *R. barbatum* collected in Bhutan. Moreover, as recent investigation has shown the herbarium type specimen of this species to be referable to *R. kendrickii* of Subsection *Irrorata,* they are sorely in need of new labels.

R. barbatum



R. barbatum



R. barbatum



R. barbatum

R. barbatum



R. barbatum (LS&H 17525)

R. argipeplum

Hardiness:
H3-4.
Flowering Period:
March-April.
Distribution in the wild:
Arunachal Pradesh & Sikkim, NE India; Bhutan; S Tibet.
Growing in *Abies* and rhododendron forest at elevations of 2,400-3,700m.

Identification:
Leaves rugulose and convex, oblong-lanceolate through elliptic-lanceolate,
base often cordulate;
lower surface with a thin, woolly, often continuous but loose indumentum,
white at first, becoming greyish-white through buff or rufous-brown at maturity.
Petiole setose to densely setose-glandular.
Inflorescence 10-19-25-flowered, truss extremely compact,
bud scales persistent and sticky.
Pedicel glandular.
Calyx variable, 2-10mm long, crimson or scarlet, fleshy, occasionally glandular.

Seed Collections:

Cave 6714	1914	Bowes-Lyon 6016	1970	KR 1814	1990
Cooper 3257	1914	Bowes-Lyon 6074	1970	Heasman 54	1992
Cooper 4115	1915	Bowes-Lyon 6075	1970	Sinclair 1730	1993
KW 11605	1935	KR 1135	1987	Sinclair 1738	1993
L&S 1282	1936	KR 1176	1987	KCSH 0346	2003
L&S 1304	1936	KR 1231	1987	AC 5295	2004
KW 13670	1937	KR 1243	1987	AC 5306	2004
L&S 2988	1937	KR 1310	1987	AC 5309	2004
L&S 3049	1937	CHM 3026	1988	AC 5327	2004
L&S 3096	1937	CHM 3070	1988	KR 8074a	2005
LS&T 4035	1938	CHM 3113	1988	KR 8075	2005
LS&T 6648	1938	EGM 66	1988	KR 8091	2005
LS&H 18677	1949	EGM 97	1988	KR 8184	2005
LS&H 18682	1949	AC 105	1990	KR 9340	2008
LS&H 18743	1949	C&S 1572	1990	KR 9417	2008
LS&H 20527	1949	C&S 1582	1990	TDA 496	2013
Bowes-Lyon 15073	1969	C&S 1699	1990	TDA 780	2016
Bowes-Lyon 6006	1970	Fox 43	1990	TDA 787	2016
		KR 1726	1990		

R. argipeplum was discovered, collected and introduced into UK cultivation during 1914 by two plant hunters: George Cave, working in Sikkim; and Roland Cooper, exploring nearby Bhutan. The latter gentleman, following several successful follow-up expeditions, would, in 1936, become the Curator of Edinburgh's Royal Botanic Garden. Which was where *R. argipeplum* was described by Cooper and Sir Isaac Bayley Balfour in 1916, their joint text appearing in Volume 9 of *Notes from the Royal Botanic Garden, Edinburgh*. But once again, synonymy and the nomenclature rules - and in this instance, *R. smithii* - have rather invalidated the official, previously accepted history.

R. smithii was first encountered on the northern slopes of the Lablung Pass in Bhutan by Thomas Booth, probably towards the end of 1849 or soon thereafter. It flowered for the first time in a British garden - at Rainhill, Lancashire - in 1859, which allowed Sir William Jackson Hooker to describe the new arrival later that same year in Volume 85 of *Curtis's Botanical Magazine* (Tab 5120). Yet after clocking-up a longevity of over one-hundred-and-thirty years, *R. smithii* suffered the exact same synonymic fate as *R. imberbe.* Because the discontinuous lower leaf surface indumentum, just like the lack of bristles, was judged to be morphologically insufficient to maintain its specific status. Indeed, any status; though in this case, despite a near six-decade clearly documented botanic precedence, *R. argipeplum* emerged whole from the phagocytosis.

On account of Sir William making a boo-boo with the *R. smithii* epithet.

Chosen to be an honorific within the genus for the renowned botanist and founder of the Linnean Society, Sir James Edward Smith (1759-1828), the penny finally dropped in the mid-to-late 1980s that this appellation had already been used to describe a *ponticum* x *arboreum* cross in 1831 - by Robert Sweet, in *British Flower Garden,* Series 2, Volume 1, Tab 50 - and that made Hooker's duplication illegal under the rules of the International Code of Botanical Nomenclature.

A short-lived, ICBN-compliant moniker for *R. smithii* - namely, *R. macrosmithii* - was conceived by H. H. Davidian (*The Rhododendron Species,* Volume 2, 1989) and may still be found etched on a few old garden labels, but this was subsequently overtaken by events. Because in 1996, the Edinburgh Revision botanists reacted to updated field reporting and redefined the taxon - tightening-up its morphologic description; moving those individuals with a rounded leaf profile into the *R. erosum* pigeonhole - which left the remaining plants of *R. argipeplum* with basically lanceolate-shaped foliage that has a thin, but continuous, though loose, abaxial indumentum. Effectively, all those individuals previously filed under the illegitimate *R. smithii* cognomen.

Geographically, *R. argipeplum* comes from the centre of the subsection's Himalayan range, with *R. erosum* found to the east and *R. barbatum* to the west, so the new botanic specifications reflect that on-the-ground morphological progression. Thus:

R. barbatum will have foliage 10 to 20cm in length and 2.5 to 7cm in width, with an acute to acuminate apex, and an abaxial surface that is completely glabrous.

R. argipeplum will have leaves that are 8 to 16cm in length by 2.8 to 6cm wide, these bearing a pointed apex, their lower surface showing a thin indumentum.

R. erosum will have blades between 8 and 20cm long, these 3 through 10cm wide, with a rounded or obtuse apex, and a fairly dense indumentum covering the whole abaxial leaf surface.

Given woodland protection with shelter from damaging winds and spring frosts, *R. argipeplum* is easily grown, vigorous and hardy despite the slightly lower H3-4 rating. Its early-opening, scarlet through crimson blooms are a highlight of any number of gardens open to the general public, those mature specimens seen at their best when backlit against a backcloth of darker-leaved conifers.

R. argipeplum





R. argipeplum (CHM 3113)



R. argipeplum (CHM 3113)



R. argipeplum (Cave 6714)

R. succothii

Hardiness:
H4-5.
Flowering Period:
March-April.
Distribution in the wild:
Bhutan; Arunachal Pradesh & Assam, NE India.
Growing in and at the margins of *Abies,* fir and rhododendron forests, and in mixed scrub, at elevations of 3,400-4,200m.

Identification:
Stem and branch bark red-brown or purplish-grey, smooth and flaking; branchlets glabrous.
Leaves subsessile, clustered in whorls at the branch tips, often upturned, oblong-obovate through elliptic, apex rounded, base cordate; upper surface glossy, glabrous; lower surface glabrous.
Petiole very short, 2-5mm long.
Inflorescence 10-15-flowered, the truss compact and rounded.
Calyx minute, 1mm long, glabrous.

Seed Collections:

Cooper 2487	1914	CHM 3105	1988
Cooper 2489	1914	CHM 3109	1988
Cooper 4101	1915	EGM 86	1988
KW 13666	1937	EGM 94	1988
LS&H 16101	1949	EGM 104	1988
LS&H 16351	1949	C&S 1595	1990
LS&H 19850	1949	C&S 1599	1990
LS&H 21295	1949	C&S 1667	1990
Bowes-Lyon 15042	1969	Heasman 48	1992
Bowes-Lyon 6035	1970	Sinclair 1737	993
Bowes-Lyon 6078	1970	Bowes-Lyon 10140	1994
Bartholomew 185a	1974	HECC 10016	2002
KR 813	1985	HECC 10043	2002
KR 1349	1987	HECC 10054	2002
KR 1424	1987	KR 10454	2012
CHM 3025	1988	KR 10457	2012
CHM 3079	1988	KR 10492	2012

R. succothii was the next member of the subsection to be discovered, though it spent the first five decades of its cultivated life grown and known as *R. fulgens* affinity, until H. H. Davidian gifted the plant specific status following a botanic re-appraisal, this published in *The Rhododendron And Camellia Year Book 1966*. Roland Cooper was the plant hunter who had stumbled upon the species - at Dotena Timpu, on his 1914 expedition to Bhutan - but it remained rare in cultivation and elusive in the wild, with only a single Kingdon-Ward collection arriving from Assam in 1937, and three further Bhutan seed lots - secured by Ludlow, Sherriff and Hicks - returned in 1949. When permits to explore the rhododendron-rich areas of that Himalayan Kingdom were once more being issued - the resumption kicking-off at the tail end of the 1960s - new populations and forms of the species were soon discovered by Simon Bowes-Lyon, Bruce Bartholomew, Keith Rushforth and a host of other Western teams, with the endemic distribution found to extend into Arunachal Pradesh shortly after the passing of the millennium.

The ramifications of the 1996 Edinburgh Revision saw the species transferred from its original Balfourian abode in the old Fulgens Series into Subsection *Barbata.* Here, it shares the characteristics of a smooth, red-brown bark, tight crimson trusses, and five nectar pouches around the base of the corolla with all its cohorts; a lack of an abaxial leaf indumentum with two of them; and an absence of any bristles with some forms of *R. barbatum*. It is unique amongst its new associates, however, in having upturned leaves, gathered together in whorls at the very ends of the branchlets, on extremely short leaf stalks, this morphologic disposition termed 'subsessile'. That key identifier, along with the paucity of any lower leaf surface hairs, also swiftly separated *R. succothii* from its one-time ally, *R. fulgens*.

A rounded, compact shrub in cultivation, seldom growing more than 2m high, the species is hardy in most British gardens, but with a bloom time that, like its compatriots, can often see the buds swelling in mid to late February, *R. succothii* requires the same protection from frost to save those blooms and the subsequently extending young growth from damage. That said, most clones will prove to be shy flowerers even when mature, with just a few individuals documented as annually setting a profusion of buds. And when those inflorescences do open, the corollas are often damaged by small birds seeking out the ample stores of nectar, with the flowers physically torn to pieces after a frontal attack or displaying five neat little holes at the back of the tube from more thoughtful winged thievery. An alternative theory suggests that the holes are caused by rainwater collecting in the nectar pouches, this then freezing and expanding to cause the ruptures, but personal observation through a previously owned kitchen window confirmed the avian explanation, as two chaffinches were witnessed delicately pecking into the sugary vaults.

Another annoyance, this despite the provision of near perfect growing conditions, is that virtually all the specimens in UK cultivation appear to suffer from powdery mildew infection, albeit to varying degrees.

H. H. Davidian's chosen epithet is an honorific for Sir George Ilay Campbell of Succoth (1894-1967), the 6th Baronet, and owner of what is now the National Trust for Scotland's Crarae Garden. This is home to the most spectacular planting of rhododendrons in the UK, set on either side of a steep rocky gorge, through which a wild highland burn tumbles and plunges in the closest facsimile of a Himalayan valley nature and man could create.



R. succothii (LS&H 21295)



R. succothii (LS&H 19850)



R. succothii (C&S 1595)



R. succothii (C&S 1595)

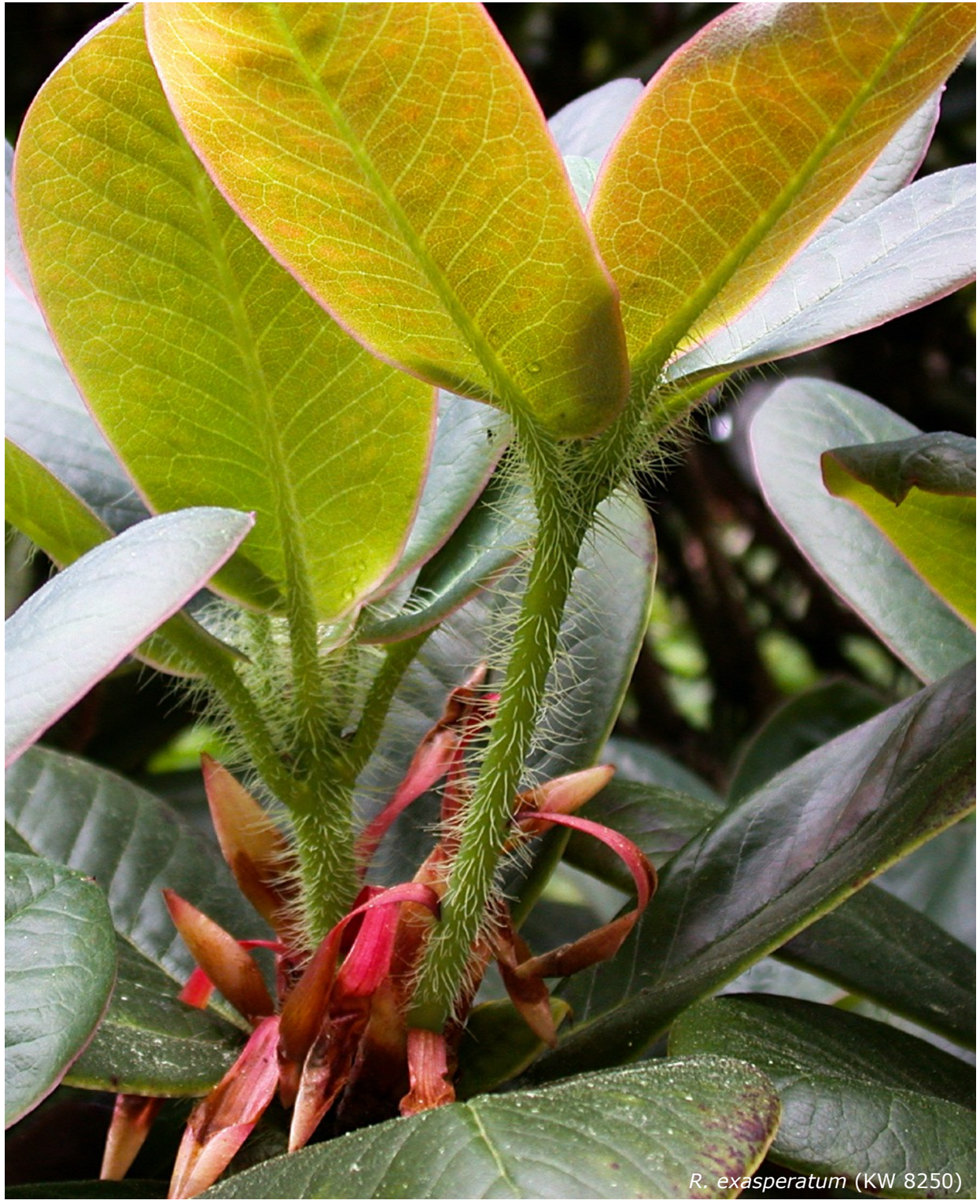
R. exasperatum

Hardiness:
H3-4.
Flowering Period:
March-April.
Distribution in the wild:
SE Tibet; Arunachal Pradesh & Assam, NE India; N Myanmar.
Growing in *Abies* forest, dense rhododendron forest and thickets,
on rocks and steep slopes where sheltered, at elevations of 2,900-3,700m.

Identification:
Branchlets densely setose-glandular;
young growth bronzy-brown to verdigris-green at first.
Leaf bud scales persistent.
Leaves convex, obovate through oval, perulae persistent, shaggy;
upper surface glabrous, the veins deeply impressed;
lower surface setulose or setulose-glandular, the bristles scattered,
those on the lower half or third of the midrib, longer and thicker.
Petiole densely setose or setose-glandular, the bristles long and stiff.
Inflorescence 10-15-flowered, the truss very compact.
Calyx 3-5mm long, the lobes red or pinkish-green,
their outer surface and margins glabrous and eglandular.
Corolla brick-red, sometimes rose-pink.

Seed Collections:

KW 6855	1926
KW 8250	1928
LS&T 3634	1938
LS&E 13595	1947
CC 7523	1996
KC 0116	2001
KC 0132	2001
HECC 10039	2002
KR 8424	2006
KR 8499	2006
KR 10627	2012
KR 10690	2012



R. exasperatum (KW 8250)

R. exasperatum (KW 8250)

Frank Kingdon-Ward came face to face with *R. exasperatum* during November 1924 while botanising in the area around Pemakochung, deep in the Tsangpo Gorge of southeast Tibet. He would find the species twice more on subsequent expeditions: in June of 1926, while exploring the wilds of Upper Burma (Myanmar), this resulting in the first introduction of seed into UK cultivation; and then, on a trek through the northeast Indian states of Arunachal Pradesh and Assam in 1928 (specifically the Lohit District of the former, which at the time was merely part of the Mishmi Hills). It would be the capsules gathered on that third encounter, under KW 8250, which would produce one of the finest rhododendrons able to be grown in British gardens - though as a foliage plant, for the flowers are rather small in comparison to the large and glossy, obovate through oval leaves.

In the wild, the species opts for dense forest and thickets located between the 2,900 and 3,700m contours, which only gives it a H3-4 hardiness rating in the UK. In concert with the late-February-into-March flowering period and early vegetative growth, this means that a well-sheltered planting site along with the overhead protection of a woodland canopy is essential for long term success, as repeated, year-on-year frosting will lead to a deformed and stunted shrub with shrivelled leaves. Yet given that required microclimate, the beetroot-red young growth will expand undamaged at the tips of bristle-clad branchlets, producing dark-green, shiny leaves that are often bigger than saucers.

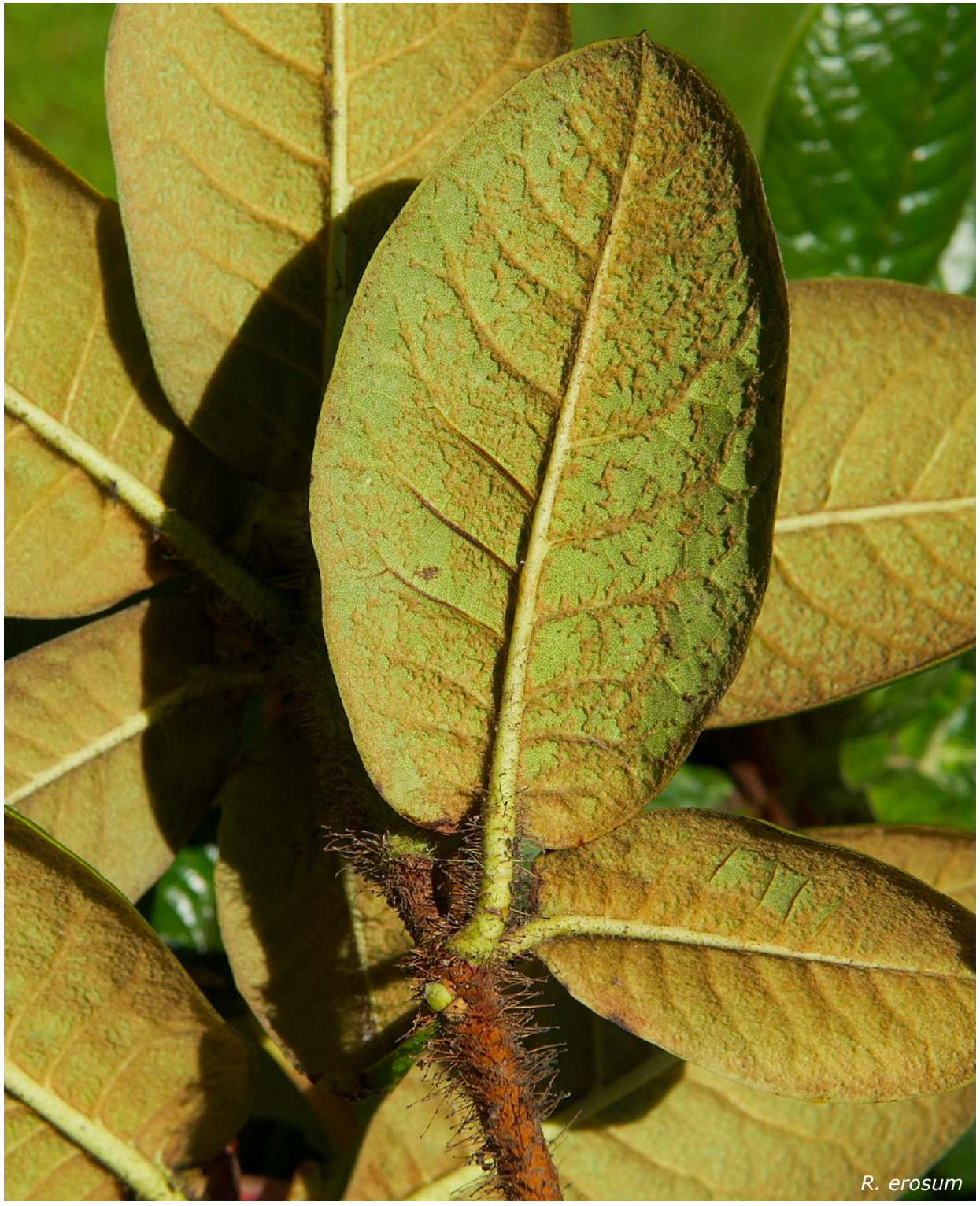
It should be noted however, that *R. exasperatum* is a slow grower, requiring many years to reach flowering size and even then, mature plants will only present a full flush of bloom every third year or so, remaining shy flowerers in the interim (another reason why so few specimens are found in British collections). But when a myriad of those pristine, brick-red, tightly-compact balls are dotted across the 2m-high dome of a well-grown plant, and lit by the slanting rays of the afternoon sun, a connoisseur's patience would have been well rewarded.

The species botanic description was written by Harry Tagg and appears in Volume 16 of *Notes from the Royal Botanic Garden, Edinburgh,* published in 1931, with the chosen epithet - 'rough' - referring to the rugulose upper surface of the leaves rather than being a tongue-in-cheek Latin comment on those horticultural difficulties.


R. exasperatum


R. exasperatum


R. exasperatum



R. erosum
Hardiness:
H3-4.
Flowering Period:
March-April.
Distribution in the wild:
E Bhutan; S Tibet; Arunachal Pradesh, India.
Growing in bamboo, birch, fir and rhododendron forests,
at elevations of 3,000-4,000m.

Identification:
Bark brown; branchlets glandular to densely setulose-glandular;
young growth beetroot coloured at first.
Leaf bud scales deciduous.
Leaves convex, obovate through oval, 1.5 to 2 times as long as broad,
with cordate bases, the perulae deciduous;
upper surface rugulose with deeply impressed veins;
lower surface with a thin, brown, continuous, woolly and glandular indumentum.
Petiole short-stalked glandular.
Inflorescence 10-15-flowered, truss very compact.
Calyx 2-5mm long, red or deep pink, outer surface glabrous.
Corolla rose-pink to crimson.

Seed Collections:

KW 12438	1935
L&S 1387	1936
L&S 1396	1936
L&S 1541	1936
L&S 1629	1936
L&S 2755	1936
CER 9928	1999
KR 8303	2005
KR 8329	2005
KR 8366	2005

Prior to 1996's game of botanical musical chairs, Frank Ludlow and George Sherriff were credited with being the first Western plant hunters to encounter the fifth and currently final member of the subsection, *R. erosum.* That meeting took place at Chayul Chu, Lung, in southern Tibet, during April 1936, and the type herbarium specimen, as well as viable seed capsules, were gathered under the field number L&S 2755. John MacQueen Cowan was the author of a swiftly penned species botanic description, his text appearing within Volume 19 of *Notes from the Royal Botanic Garden, Edinburgh,* this published in 1937, but six decades later, the taxonomic shuffle of the classification revision rewrote history.

Because one aspect of those rearrangements resulted in the forms of *R. argipeplum* with rounded leaves being transferred into the modified ambit of *R. erosum.*

Which in consequence, led to a Frank Kingdon-Ward 1935 gathering made under the field number KW 12438 supplanting the Ludlow and Sherriff 2755 collection in the highly competitive premier introduction stakes.

Those 20th-century gatherings of *R. erosum* showed that the species was endemic across the eastern Himalaya, with a range extending from eastern Bhutan into southern Tibet. Post the millennium, that distribution has also been found to take in the Indian state of Arunachal Pradesh, Keith Rushforth garnering three batches of capsules in 2005, Alan Clark having stumbled upon an affinity form a year earlier.

Mature specimens of *R. erosum* are often mistaken for those of *R. exasperatum,* but a check of the branchlets will find an often less dense population of sticky bristles, with none on the lower leaf surface - where instead, a sparse to thin, semi-continuous, pale brown floccose indumentum resides - while a glance at the extending leaf buds will reveal their scales to be deciduous rather than persistent.

In UK cultivation, as with the other members of the subsection, the early flowering period, followed swiftly by the onset of new growth, necessitates a protected, ideally frost-free niche from March onwards. This is especially pertinent for *R. erosum,* as being a fine foliage plant, damage to the leaves will visually, be more detrimental. Those extending blades are decidedly ornamental, their hue at first a bronzy-brown to plum-copper colour, this slowly changing to a glossy olive-green as the leaf matures. Yet despite these qualities, and displaying flowers that are as equally fine as any of its compatriots, just as in the wild, the species remains a rare find in Britain's woodland gardens.


R. erosum (CER 9928)


R. erosum


R. erosum

R. erosum (L&S 1396)

R. erosum

Subsection *Campanulata:*



R. aeruginosum



Taxa:

R. campanulatum
- *R. campanulatum* ssp. *aeruginosum*
- *R. campanulatum* ssp. *campanulatum*

R. wallichii

Taxonomic Revision:

The subsection has been transferred into Section *Leiorrhodium* from Section *Ponticum.*

Subsection Morphology:

Shrubs or small trees, 0.3 to 11m high;
young shoots glabrous, glaucous or occasionally whitish-floccose;
bark grey, fawn or pinkish-brown, striate or flaking, smooth or becoming rough with age.

Leaves coriaceous, broadly elliptic through ovate and obovate to oblong-elliptic,
5 to 18cm long by 2 to 9cm wide, base rounded to cordate, retained 1-2 years;
upper surface shiny to glaucous or matt, usually glabrous when mature, midrib grooved,
veins deeply impressed, margins sometimes recurved;
lower surface covered with a dense fawn to rusty-brown dendroid indumentum,
unistrate or bistrate, or a loose, scattered indumentum, or more rarely glabrous.

Leaf anatomy comprises a 3-layered upper epidermis, with the cells in all three layers being roughly equal in size; the cuticle is thin to around half as thick as the cells are deep; water tissue is absent; the lower epidermis cells are not prolonged into papillae. Sclereid cells are present in the leaf tissue of the two *R. campanulatum* subspecies, but not in the leaves of *R. wallichii*.

Petiole 8-35mm long, grooved above, glabrous or hairy.

Inflorescence terminal, 5-18-flowered, lax or compact.

Rhachis 5-34mm long, glabrous or hairy.

Pedicel 9-43mm long, glabrous or hairy.

Calyx minute, 0.5-3mm long, 5-lobed, outer surface sparsely tomentose to glabrous, margins occasionally ciliate.

Corolla 5-lobed, 2.5 to 5cm long, open- to funnel-campanulate, white through cream to pink, purplish-red to rose-purple, or lavender-blue, with or without spots, with or without a darker-coloured basal blotch; outer surface sometimes hairy at the base (rarely).

Stamens 10, unequal, the anthers darkly coloured;
filaments usually puberulous at the base.

Ovary usually glabrous, occasionally with a few hairs.

Style glabrous.

Capsule cylindric through oblong, 14-38mm long, moderately curved, usually grooved, usually glabrous, occasionally with a few hairs.

Seeds elongate, narrowly winged, each end with appendages,
these sometimes very unequal in size.

R. campanulatum* ssp. *campanulatum

Hardiness:
H4-5.
Flowering Period:
March-May.
Distribution in the wild:
Nepal; Kashmir through Sikkim, N India; Bhutan.
Growing in deciduous, evergreen and mixed forest, in thickets and scrub,
on cliffs, and in the Alpine Zone amongst rocks,
at elevations between 2,900-4,100m.

Identification:
Large shrubs to small trees, 2 to 11m high.
Leaves ovate to broadly elliptic, 9.5 to 18cm long by 2.5 to 9cm wide;
upper surface dark green, somewhat shiny;
lower surface indumentum unistrate, fawn through brown to rusty-brown,
continuous, thin and suede-like,
the tomentum composed of capitellate through ramiform hairs.
Petiole purple.
Inflorescence 6-12-flowered in a loose to fairly compact truss;
the buds spherical to fusiform, green or reddish,
the scales broad, cuspidate or pointed,
the outer surface sparsely white-hairy,
the margins with white or white and brown hairs.
Corolla open-campanulate,
white, lavender-blue, mauve through rose to rosy-purple,
often with deeper purple or red spotting,
outer surface occasionally hairy at the base.
Stamen anthers brown through dark brown to near black.

Seed Collections:

Cooper 2592	1914	PS&W 2047	1952	Bowes-Lyon 3225	1966
Cooper 3480	1914	PS&W 4071	1952	Bowes-Lyon 15027	1969
Cooper 5768	1916	PS&W 4113	1952	Bowes-Lyon 15040	1969
Cooper 5926	1916	PS&W 4142	1952	BH 85	1970
L&S 605	1934	PS&W 5943	1952	BH 124	1970
L&S 616	1934	PS&W 5944	1952	BLM 327	1971
L&S 619	1934	PS&W 5945	1952	BLM 344	1971
L&S 622	1934	PS&W 5947	1952	BLM 344	1971
L&S 624	1934	SSW 235	1954	Beer 643	1975
L&S 1082	1934	SSW 845	1954	Hruby 3	1975
L&S 1085	1934	SSW 928	1954	Hruby 14	1975
KW 14314	1937	SSW 2601	1954	Kumar 738	1975
L&S 3087	1937	SSW 2607	1954	CHM 2024	1985
L&S 7385	1939	SSW 2609	1954	DF 86050	1986
L&S 8134	1940	SSW 5096	1954	DF 86099	1986
LS&H 16250	1949	SSW 8239	1954	C&M 321	1990
LS&H 16339	1949	SSW 9106	1954	H&M 1805	1993
LS&H 16349	1949	SSW 9107	1954	H&M 1837	1993
LS&H 16443	1949	Stainton 226	1956	H&M 1854	1993
LS&H 16472	1949	Stainton 273	1956	Pes 2588	1994
LS&H 17449	1949	TSS 7	1961/1962	Pes 2590	1994
LS&H 18945	1949	TSS 8	1961/1962	DSE 32	1995
LS&H 19102	1949	TSS 11	1961/1962	TDA 491	2013
LS&H 21298	1949	TSS 14	1961/1962	TDA 493	2013
Polunin 176	1949	TSS 41	1961/1962	TDA 497	2013
Polunin 1202	1949	TSS 44	1961/1962	TDA 503	2013
PS&W 959	1952	Bowes-Lyon 84	1962	TDA 709	2014

R. campanulatum

R. campanulatum has a David Don 1821-penned botanic description that can be found in Volume 3 of *Memoirs of the Wernerian Natural History Society,* while Nathaniel Wallich is credited with introducing the species into British gardens during 1825 and the Upton and Newton Nursery near Chester lays claim to the first UK flowering in April 1839, fourteen years after sowing, those pale rose blooms illustrated in Volume 66 of *Curtis's Botanical Magazine* (Plate 3759, though Walter Hood Fitch's lithograph was drawn post the pigmentation fade). Yet who discovered the rhododendron remains a mystery.

The species is now known to have a widespread distribution across much of the Himalaya, from Kashmir in the west to Bhutan in the east, those populations established across an altitudinal range that spans some 1200m from the 2,900m-contour upwards. In consequence, the morphological characteristics of *R. campanulatum* will naturally vary, leaf size, stature, the flowers, and of course, an individual clone's hardiness, all reflecting where within that geographic spread, the seed was gathered. And as the collections table makes clear, a lot of capsules have been gathered and returned over the last two centuries.

Forms with the largest leaves and the best flowers come from western areas, as evidenced by the award clones - 'Knaphill', 'Roland Cooper' and 'Waxen Bell', which have each received an Award of Merit from the RHS in, respectively, 1925, 1964 and 1965. Plants from central Nepal have medium-sized leaves, smaller white to pale mauve flowers, and are a little more tender, while a variant from Bhutan, collected close to the upper altitudinal limit, can be seen in its native environs covering vast tracts of open hillside, but is a dwarf shrub, growing only to around 0.5m in height.

A visual check of the lower leaf surface indumentum is the fastest way to reveal which of the three rhododendrons assigned to Subsection *Campanulata* is to hand: thick, continuous and bistrate will denote *R. aeruginosum,* now assigned subspecies status under *R. campanulatum* by the Edinburgh Revision botanists; thin, continuous and unistrate, *R. campanulatum* itself; a patchwork of discontinuous tufts or no hairs at all, *R. wallichii*. A trio of additional traits also identify ssp. *campanulatum* from ssp. *aeruginosum* - stature, usually larger leaves, and the lack of a glaucous bloom on the young foliage.

Common in cultivation, fine specimens of *R. campanulatum* can be found in woodland gardens across the whole of the country, these reflecting the many forms introduced. The award clones are outstanding when covered in bloom, and with their large, indumented leaves, also eye-catching as foliage plants - especially when a gust of wind lifts the blades in tiers, suddenly exposing their fawn-brown undersides - but selected specimens from the collections of Adam Stainton, William Sykes and John Williams, or those of Tom Spring-Smythe, or Len Beer, Roy Lancaster and David Morris can be equally spectacular.

So too is a a pleasing affectation that occurs when cold and frosty conditions prevail: the leaves roll tightly up into tubes and droop downwards.



R. campanulatum 'Knaphill'



R. campanulatum (TSS 11)



R. campanulatum (BL&M 283)



R. campanulatum ‘Roland Cooper’



R. campanulatum (SS&W 9107)



R. campanulatum ‘Waxen Bell’



R. campanulatum

R. campanulatum ssp. *aeruginosum*

Hardiness:
H6.
Flowering Period:
April-May.
Distribution in the wild:
E Nepal; Sikkim, India; Bhutan.
Growing at the upper margins of fir forest or above the tree line,
in thickets on mountain slopes and spurs, and on peaty rocky moorland,
at elevations of 3,700-4,500m.

Identification:
Shrub, low and spreading to rounded and bushy, often slow-growing,
0.3 to 2.8m high, rarely a small tree to 6m; branchlets glaucous.
Leaves ovate to broadly elliptic, 5 to 11cm long by 3 to 5.5cm wide;
upper surface bluish-green, often convex, somewhat shiny, with a glaucous metallic bloom,
the lustre sometimes partially persistent, margins often recurved;
lower surface indumentum bistrate, buff through rusty-brown, continuous,
dense and smooth, somewhat silky,
the tomentum upper layer composed of dendroid hairs, the lower layer of rosulate.
Petiole pale green.
Inflorescence 8-18-flowered in a loose to fairly compact truss;
the buds spherical to fusiform, green or reddish,
the scales broad, cuspidate or pointed,
the outer surface sparsely white-hairy, the margins with white or white and brown hairs.
Corolla campanulate,
pink, lilac, rose to deep plum-purple,
often with deeper purple spotting or a purplish-black blotch at the base, sometimes both.
Stamen anthers brown through dark brown to near black.
Style rose-pink, or reddish through purple.

Seed Collections:

Cooper 155	1914	Hedegaard B103	1983	BE 05-45	2005
Cooper 2217	1914	S&L 5220	1984	BE 05-46	2005
Cooper 3233	1914	KR 862	1985	BE 05-48	2005
Cooper 3528	1914	KR 870	1985	BE 05-49	2005
Gould 2a	1937	CHM 3090	1988	BE 05-53	2005
L&S 3244	1937	EGM 68	1988	BE 05-54	2005
LS&H 17526	1949	EGM 69	1988	TDA 879	2016
Bowes-Lyon 3155	1966	BE 05-42	2005	TDA 881	2016
Bowes-Lyon 5089a	1967	BE 05-43	2005	TDA 885	2016
Hedegaard B102	1983			TDA 1052	2016

R. wallichii

Hardiness:
H4-5.
Flowering Period:
March-May.
Distribution in the wild:
E Nepal; S & SE Tibet; Bengal, Sikkim, Arunachal Pradesh & Assam, India; Bhutan.
Growing in and at the margins of conifer, rhododendron and mixed forests,
with other shrubs above the tree line on hillsides or bare slopes,
and in the Alpine Zone at elevations of 2,700-4,300m.

Identification:
Shrub or small tree, rounded and bushy to upright, 1 to 6m high;
branchlets white-floccose at first.
Leaves elliptic through ovate to near orbicular, 5 to 14cm long by 2.2 to 6.5cm wide;
upper surface dark through pale green, often shiny;
lower surface pale green, glabrous or with discontinuous patches or tufts of ferruginous,
dark brown or black fasciculate hairs, these rough to the touch.
Petiole often tinged red or reddish-purple.
Inflorescence 5-10-flowered, in a lax through compact truss;
the buds fusiform or elongate-fusiform,
the outer scales brownish, the inner green through whitish-green,
cuspidate and hairy, the hairs brown across the surface but whitish near the tip.
Corolla funnel-campanulate,
white through pale mauve to lilac, pink or rosy-purple,
often spotted darker purple or brown, sometimes purple-blotched.
Stamen anthers purple-brown.
Ovary slender.

Seed Collections:

Cooper 2147	1914	LS&T 6659	1938	Stainton 272	1956	AC 5407	2004
Cooper 2149	1914	LS&E 12470	1946/1947	TSS 17	1961/1962	AC 5412	2004
Cooper 3238	1914	LS&H 16090	1949	Bowes-Lyon 3226	1966	AC 5421	2004
Cooper 3492	1914	LS&H 16121	1949	Hruby 16	1975	AC 5422	2004
L&S 19	1933	LS&H 16128	1949	SCH 2172	1976	AC 5432	2004
L&S 20	1933	LS&H 16136	1949	McBeath 1235	1981	AC 5470	2004
L&S 22	1933	LS&H 16140	1949	KR 850	1985	AC 5495	2004
KW 11612	1935	LS&H 16248	1949	KR 882	1985	AC 5603	2004
L&S 1296	1936	LS&H 17448	1949	P&L 39	1986	KR 8227	2005
L&S 1302	1936	LS&H 17478	1949	KR 1051	1987	KR 8549	2006
L&S 1306	1936	LS&H 17512	1949	CHM 3089	1988	KR 8584	2006
L&S 2895	1936	LS&H 17527	1949	C&S 1634	1990	TDA 988	2016
KW 13705	1937	LS&H 18898	1949	C&S 1637	1990		
L&S 3578	1937	LS&H 18961	1949	DSE 144	995		
LS&T 6424	1938	LS&H 20672	1949	KCSH 0364	2003		

Joseph Dalton Hooker was the plant hunter who discovered the two remaining members of the subsection, encountering them both on the hills of northeastern India during 1849. His description and illustration of *R. wallichii* can be found in Part One of the expedition's three-volume botanic Baedeker - *The Rhododendrons of Sikkim-Himalaya* - with *R. aeruginosum* consigned to Part Three. *R. wallichii,* named for the then recently retired Superintendent of the Calcutta Botanic Garden, flowered for the first time in cultivation during 1856, at Kew, just seven years after sowing, but if Sir Joseph gathered capsules and returned seed of *R. aeruginosum* to England, it either failed to germinate or those seedlings were subsequently lost, as four 1914 collections made in Bhutan by Roland Cooper are the first 'documented' UK introductions.

Fast-forward a hundred years from Hooker and for a time, during the latter half of the last century, Subsection *Campanulata* was augmented with a fourth member:

R. heftii was found in Nepal's Arun Valley by John Stainton in May 1956, the plants having ivory-white corollas and thick leathery leaves that are shiny above, but glabrous below. The species is named for Doctor Lothar Heft, Director of the Bremen Botanic Garden and Rhododendron Park, H. H. Davidian describing it in Volume 2 of his *The Rhododendron Species,* published in 1989. However, that specific status was short-lived because by 1996, the Edinburgh Revision botanists had reduced the taxon to a synonym, though thanks to the RHS, such plants can still be identified as *R. wallichii* Heftii Group.

R. wallichii is basically a scaled-down version of *R. campanulatum,* morphologically smaller and crucially, lacking that continuous abaxial leaf surface indumentum. The March-May flowering period and hardiness rating are the same for both species, but *R. wallichii* is found in far fewer gardens despite being quite fast growing, easy to please even when given a more challenging site, and free-flowering from a relatively young age. The reason is simple - its blooms and foliage are outshone by most *R. campanulatum* clones.

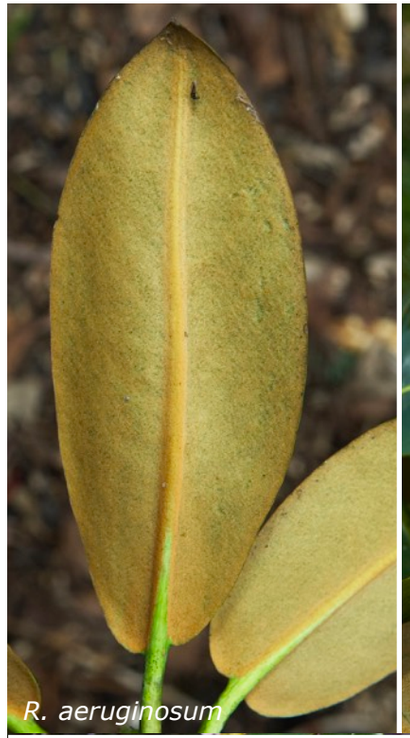
R. aeruginosum is equally rare in cultivation, yet one the best foliage plants in the entire genus, bearing convex, ovate to broadly elliptic blades that are distinctly bluish-green when young, with a metallic sheen. Out of flower, specimens are often mistaken for *R. clementinae,* an occupant of Subsection *Taliensia,* which likewise, is prone to open few blooms year-on-year. However, when buds are set, the corollas of *R. aeruginosum* will be found to have five lobes, those of *R. clementinae,* seven.

The inflorescence of *R. aeruginosum* is 8-18-flowered, the campanulate corollas held in a loose to fairly compact truss, their pigmentation pink, lilac, or rose through deep plum-purple, and in more than a few introduced specimens, the term 'avant-garde' might best sum up their hue. The H6 hardiness rating indicates that the species will succeed wherever in the UK rhododendrons can be grown, but the plants are slow growing and take many years to reach flowering-size, an accomplishment usually resulting in a season average of just one or two trusses. Two forms are in cultivation:

The one most often seen results in a bushy dome to around 1.8m high and twice that in diameter when mature, densely cloaked with beautiful foliage.

The other is low and spreading, first collected by Ludlow, Sherriff and Hicks in 1949 under the field number LS&H 17526, and is a far rarer find.

Field study evidence from eastern Nepal and adjoining Sikkim has shown some plant populations to have features intermediate between *R. campanulatum* and *R. aeruginosum,* and it was this reporting that lead to the Edinburgh Revision ranking reduction. On the ground in Bhutan, at the eastern end of the distribution, plants display thickly indumented leaves, have dark plum-purple flowers and are procumbent or rounded shrubs, but as you travel west, their stature increases, their corolla colour pales and their leaf abaxial indumentum thins - ssp. *aeruginosum* resolves into ssp. *campanulatum*.


R. aeruginosum


R. campanulatum


R. wallichii


R. wallichii (C&S 1634)

R. wallichii Heftii Group

R. wallichii



R. aeruginosum



R. aeruginosum



R. aeruginosum

R. aeruginosum

Subsection *Campylocarpa:*


R. campylocarpum



Taxa:

- *R. callimorphum*
  - *R. callimorphum* var. *callimorphum*
  - *R. callimorphum* var. *myiagrum*
- *R. campylocarpum*
  - *R. campylocarpum* ssp. *caloxanthum*
  - *R. campylocarpum* ssp. *campylocarpum*
- *R. souliei*
- *R. wardii*
  - *R. wardii* var. *puralbum*
  - *R. wardii* var. *wardii*

Taxonomic Revision:

The move into Section *Leiorrhodium* notwithstanding, Subsection *Campylocarpa* remains as outlined in the 1996 Edinburgh Revision classification.

Subsection Morphology:

Shrubs or small trees, 0.5 to 8m high; compact to open, sometimes leggy with age; young shoots usually short- or long-stalked glandular, often becoming glabrescent or eglandular with age, or glabrous; bark often flaking.

Leaves coriaceous, narrowly obovate to orbicular, 2 to 12cm long by 1.4 to 6.5cm wide, apex obtuse or rounded, apiculate, base shallowly cordate through rounded; upper surface glabrous when mature; lower surface glabrous when mature, or glaucous with minute red punctate glands, or rarely glandular at the base, the midrib occasionally glandular.

Leaf anatomy comprises a 2-layered upper epidermis, with the cells in both layers roughly equal in size; the cuticle is thin to around half as thick as the cells are deep; water tissue is absent; the lower epidermis cells are usually prolonged into papillae, these quite small on occasion.

Petiole 7-33mm long, often terete, sometimes grooved above, variably short- or long-stalked glandular, hairy or glabrous.

Inflorescence terminal, 3-15-flowered, in a usually lax truss.

Rhachis 1-7mm long, sometimes to 18mm, glandular, hairy or glabrous.

Pedicel 9-48mm long, short- or long-stalked glandular, sometimes hairy.

Calyx minute to large, 0.5-15mm long, often cupular when large, outer surface and margins usually glandular.

Corolla 5-lobed, 2-4 to 5cm long, campanulate through open-campanulate (saucer-shaped), yellow or pink through white, often spotted and with a basal blotch, without nectar pouches.

Stamens 10, unequal; filaments glabrous or puberulous at the base.

Ovary slender, oblong or conoid, 4-6mm long, densely short- or long-stalked glandular.

Style glabrous, or glandular at the base, along the lower half, or to the tip.

Capsule slender or stout, 13-36mm long, often curved, short-stalked glandular.

Seeds longer than broad, winged, sometimes narrowly so, each end with appendages.



R. wardii (FED 367)



R. souliei



R. wardii

R. campylocarpum* ssp. *campylocarpum

Hardiness:
H4-5.
Flowering Period:
April-May.
Distribution in the wild:
E Nepal; S & SE Tibet; Arunachal Pradesh, Assam & Sikkim, N India; Bhutan.
Growing abundantly in rocky valleys, on open spurs and rocky slopes,
in mixed and conifer forests, amongst bamboo, scrub and other rhododendrons,
at elevations of 2,900-4,300m.

Identification:
Shrub or small tree, rounded or spreading and bushy,
or upright and leggy with age, 1.5 to 6.5m high;
branchlets sparsely short- or long-stalked glandular, rarely hairy;
bark greyish-brown, flaking, finely striate
Leaves ovate through oblong-elliptic to elliptic, 4 to 10cm long by 2.3 to 5.4cm wide;
upper surface dark green, occasionally glaucous-green, somewhat shiny to glossy,
margins somewhat reflexed, midrib impressed;
lower surface pale glaucous-green or glaucous,
usually glabrous but occasionally sparsely reddish-glandular towards the base,
midrib prominently raised.
Petiole terete, but grooved above, 8-24mm long,
sparsely long- or short-stalked glandular, sometimes hairy.
Inflorescence 3-10-15-flowered;
the buds brownish, reddish at the top, green at the base,
the outer scales with brown and white hairs,
the inner scales cuspidate; truss lax through moderately dense.
Calyx minute, 1-3mm long, but sometimes to 5mm.
Corolla 2.5 to 4cm long, campanulate, pale or bright yellow through to sulphur-yellow,
often tinged red in bud, with or without a faint basal blotch.
Style glabrous, or glandular either at the base or along the lower half.

Seed Collections:

Cooper 15	1914	TSS 6	1961/1962	KR 6180	1999
Cooper 749	1914	TSS 12	1961/1962	TARRVS 167	2002
Cooper 2504	1914	TSS 13	1961/1962	AC 5379	2004
Cooper 3491	1914	TSS 43	1961/1962	AC 5424	2004
KW 5853	1924/1925	SCH 2169	1976	AC 5437	2004
KW 6229	1924/1925	SCH 2188	1976	AC 5445	2004
KW 6930	1926	SCH 2252	1977	KR 8213	2005
KW 7196	1926	McBeath 1254	1981	KR 8226	2005
KW 8256	1927/1928	Hedegaard B116	1983	KR 9544	2008
R 18353	1929	EN 617	1984	KR 9545	2008
KW 10530	1933	DF 86055	1986	KR 9546	2008
L&S 9	1933	KR 1053	1987	KR 9973	2010
L&S 1628	1936	KR 1235	1987	TDA 022	2011
L&S 1893	1936	KR 1237	1987	TDA 332	2013
L&S 3048	1937	KR 1245	1987	TDA 333	2013
L&S 3058	1937	Bowes-Lyon 18	1987/1989	TDA 334	2013
LS&T 3731	1938	CHM 3024	1988	TDA 335	2013
LS&T 3994	1938	CHM 3106	1988	TDA 352	2013
LS&T 4907	1938	EGM 82	1988	TDA 355	2013
LS&T 5261	1938	EGM 92	1988	TDA 356	2013
LS&T 5583	1938	EGM 95	1988	TDA 357	2013
LS&T 5783	1938	AC 106	1990	TDA 702	2014
LS&T 6602	1938	Kinmouth 83	1990	TDA 717	2014
LS&E 12484	1946/1947	KR 1768	1990	TDA 721	2014
LS&E 12526	1946/1947	Heasman 44	1992	TDA 992	2016
LS&H 16160	1949	C&S 1652	1994	TDA 996	2016
LS&H 16168	1949	C&S 1692	1994	TDA 999	2016
LS&H 16246	1949	C&S 1715	1994	TDA 1004	2016
LS&H 16366	1949	CC 7541	1996	TDA 1065	2016
LS&H 18922	1949	KR 4955	1998	TDA 1066	2016
LS&H 20626	1949	JN 1047	1999	TDA 1072	2016
Stainton 275	1956	KR 6179	1999	TDA 1075	2016

R. campylocarpum



R. campylocarpum (Rock 1a)

Joseph Hooker was the first western plant collector to find *R. campylocarpum,* making the discovery in June 1848, with the botanic description and a colour illustration included within the third part of his book, *The Rhododendrons of Sikkim-Himalaya,* published in 1851. First-flowering in UK cultivation took place at the Bagshot nursery of John Standish and Charles Noble during the spring of 1856.

Within the subsection, *R. campylocarpum* is closely related to *R. wardii,* but differs from that species in the campanulate-shaped corolla; in the style being glandular only at the base or along the lower half, or with no glands at all, and certainly never being sticky from base to tip; in having a minute calyx; and in having seed capsules that are slender and curved. The species is also distinct from its sibling, ssp. *caloxanthum,* proving to be a taller-growing plant with larger, elliptic rather than orbicular shaped leaves, and flowers of a deeper shade of yellow in a fuller truss. *R. campylocarpum* also displays a close affinity with *R. callimorphum,* but the latter's pink flowers provide a clear distinction.

The geographic distribution of the two *R. campylocarpum* subspecies - the ranking reduction and closer association made in the *Preliminary Synopsis* paper of 1978 vintage (*Notes from the Royal Botanic Garden, Edinburgh,* Volume 36) - shows intergradation taking place in southern and southeast Tibet, as well as in Arunachal Pradesh, where the species also merges with *R. wardii*.

Cultivated plants previously identified as *R. campylocarpum* var. *elatum,* but now tagged under the RHS's 'for-horticulturalists-only' Elatum Group sobriquet, are basically taller-growing forms of the species, although when in bloom, many of these shrubs display orange shading along the outer edges of the flower petals.

Amongst the yellow-flowering rhododendron species grown in British gardens, *R. campylocarpum* still remains outstanding seventeen decades on from its introduction, and though the hybridising fraternity were initially slow to incorporate the shrub into their breeding programmes, it has subsequently parented innumerable award-winning offspring. Fully hardy along the west coast and in the south, for inland or east coasts gardens a sheltered site is required for optimal growth and a free-flowering specimen. Of the two subspecies, it is the easier to grow, and will prosper even if today, the canary guano recommended to J. G. Millais by Mr Charles Nix, proves unobtainable in sufficient quantity (*Rhododendrons and the Various Hybrids,* Volume 1, 1917).

In that tome, Millais also wrote that:

> 'It is rare to find the species in good health in this country, the fault being that when it has reached a flowering age, it blooms too abundantly, and so, like most of the Sikkim species, receives a considerable shock.'

During his travels, he had seen hundreds of specimens at gardens in Scotland, Wales and in southern England, but only at a few venues were they in perfect health, as:

> 'It is not sufficient to stick it in a hole in the grass and leave the rest to nature. The plants must be put in carefully prepared beds that have been well trenched with plenty of peat and rotten leaf-mould added, and when they show signs of excessive floriferousness they should be partially disbudded. After flowering, the dead flowers should be removed and if the season is dry they should be well watered and tonics, such as well rotten cow manure or canary guano, added.'

Pertinent advice from 1917 that is still relevant today and, given the latest fad of recycling everything we would otherwise have thrown away, a potentially profitable niche for the membership of the Canary Colour Breeders Association.



R. campylocarpum (LS&H 16495)



R. campylocarpum (Sch 2169)

R. souliei

Hardiness:
H5.
Flowering Period:
May-June.
Distribution in the wild:
E Tibet; C & SW Sichuan, China.
Growing in scrub and thickets, amongst rocks and boulders,
or in oak and spruce forest on mountain slopes at elevations of 2,700-4,300m.

Identification:
Shrub or small tree, compact and rounded, often becoming leggy with age, 1 to 5m high;
branchlets glabrous or sparsely reddish short-stalked glandular; bark sometimes flaking.
Leaves 3.5 to 8.2cm long by 2 to 5cm wide,
ovate through ovate-elliptic to oblong-elliptic or near orbicular;
upper surface dark green, shiny, glaucous at first, but soon glabrous,
the midrib flat or impressed;
lower surface pale glaucous green, glabrous, the midrib prominently raised.
Petiole terete, 10-25mm long, deep purplish-green,
sparsely short-stalked glandular at first, becoming glabrescent or glabrous.
Inflorescence 3-9-flowered.
Calyx membranous, 2-8mm long, the lobes unequal.
Corolla 2.5 to 4cm long, open-campanulate (saucer-shaped),
pale rose- or purplish-pink through clear pink to white flushed or faintly tinged pink,
occasionally with a small crimson blotch at the base.
Style densely stalked-glandular, base to tip.

Seed Collections:

W 1540	1903	Cox 6144	1992
W 1222	1908	AC 4816	AC 4822
W 4274	1910	Clark, A.	2001
SICH 377	1988	AC 4837	2001
Cox 5056	1990	CNC 12058	2012
EGM 139	1990	JN 12086	2012
CEE 371	1991	JN 12297	2012
SICH 584	1991	JN 12315	2012

R. souliei was discovered in Tatsienlu County (now Kangding), in the west of Sichuan Province during July 1893. Jean-Andre Soulié, a French priest and amateur botanist, sent to China to proselytise the heathen by Missions Etrangères de Paris, made the find and as with the collections of many of his Jesuit prelate colleagues, the dried plant material was soon being examined at the Paris Museum of Natural History. Adrien Franchet wrote the botanic description that appears in Volume 9 of the *Journal de Botanique,* this published in 1895, with the choice of epithet one more honorific in the 88-strong pantheon of plants ultimately named for Soulié.

The missionary himself would later be detained, tortured and executed by rampaging Tibetan lamas - religious nutjobs rather than cuddly guanaco or vicuña; on Friday, April 14th, 1905 - such actions basically summing up how gullible humanity still is, given that even today, we regularly commit genocidal slaughter on nothing more than the whim of some frocked fictionist whose deity is on a par with poltergeists, djinns and all those other non-existent will-o'-the-wisp conceptions that work so well in Hollywood movies. Yet such deluders still hugely influence society, hold sway over governments and even rule entire countries. God protect us should one ever have his finger on a nuclear trigger…

R. cordatum was described in 1914 by Hector Léveillé writing in Volume 24 of the *Bulletin de l'Academie Internationale de Geographie Botanique,* his assessment based on specimens collected by Edouard-Ernest Marie off a western Sichuan mountain top named in the field notes as Io-Chan. On subsequent examination however, these plants proved to be identical to *R. souliei* and the Synonymy Aurors swiftly moved in to consign the taxon to posterity. The same fate would be applied to *R. longicalyx,* described by Chinese botanist Ming Yuan Fang in 1988, this a mirror of *R. souliei* apart from its elliptic-lanceolate-shaped calyx lobes that extend for some 2mm more in length. Oh, and it has slightly bigger leaves, which, after on-the-ground examination by several western experts, were also deemed to be inconsequential, though *Flora of China* is still wedded to specific status.

R. souliei can be distinguished from the varieties of *R. callimorphum,* as well as the subspecies of *R. campylocarpum,* by the wholly glandular style, which is sticky along its entire length. Corollas that are open-campanulate - basically bowl- or saucer-shaped - provide a keying backup. However, the species is most closely related to the two varieties of *R. wardii,* with the corolla colour the only key identifier: any shade of pink denoting *R. souliei;* yellow equating to var. *wardii;* and pure white without any hint of pink, singling out var. *puralbum*. At least in the wild.

How the latter distinction survived the Edinburgh Revision is mystifying, for with just the faintest blush var. *puralbum* becomes indistinguishable from those forms of *R. souliei* sporting white, albeit initially pink-tinged or flushed blooms. Future consolidation would appear inevitable therefore, unless DNA analysis or the endemic distribution come to the rescue, but given the wholesale reworking that occurred in most other subsections, the two specific taxa will almost certainly become subspecies and the variety be made synonymous.

Two additional notes:

Firstly, cultivated specimens with pure white or really deep pink corollas are the result of a selective breeding programme, where different clones of the same species are crossed and those offspring displaying a flower colour nearest to that required picked out for further interbreeding until the deepest or purest hues emerge.

Secondly, labelled plants with six-lobed corollas are not *R. souliei,* but natural hybrids with *R. vernicosum*.

Jean-Andre Soulié may have discovered the species, but the plant hunter responsible for its introduction into British gardens was Ernest Wilson, a gathering made under the field number W 1540 arriving at the Chelsea nurseries of J. Veitch & Sons in late 1903. Courtesy

of the Arnold Arboretum, two more Wilson collections were sown, one in 1908, the other in 1910, but it would be another seventy-eight years before *R. souliei* was again encountered in the wild, a joint Kew-Quarryhill-Howick-Hall expedition ending that exiguity with the rediscovery of a population in Sichuan during 1988. Historical records document that George Forrest collected the species on no less than the three occasions during his 1904-1906 expedition - F 4148, F 4150 and F 4154 - but if viable capsules were part of the bounty, their contents did not survive the ministrations of Bees Seeds Ltd. Germination to first flowering is quite quick, as the 1909 award of an RHS First Class Certificate to the Veitch nurseries indicates, this blink-of-an-eye span confirmed when plants from Wilson's 1908 collection bloomed at Kew Gardens just four years after sowing. This trait proved a lucky bonus, because vegetative propagation from cuttings or by grafting is and remains onerous, with most plants for commerce still produced by hand pollination.

Cultivation can also be problematical, for while the species is hardy and free-flowering, *R. souliei* requires absolutely exemplary drainage, protection from late spring frosts (that would otherwise damage the early young growth) and is averse to both high temperatures and over-abundant rainfall. So a woodland situation along the east coast is probably the optimal site for a specimen, with southern and west coast gardens successful locations but requiring an extra outlay of TLC.

And the floral reward?

As can be seen from the photographs that follow, only one word is required to describe a specimen of *R. souliei* in bloom: breathtaking.



R. souliei



R. souliei (CEE 371)



R. souliei (CEE 371)

R. souliei (SICH 584)

R. souliei ‘Exbury Pink’



R. souliei ‘Deep Pink’



R. souliei ‘Deep Pink’

R. puralbum (F 10616)

R. wardii* var. *puralbum

Hardiness:
H5-6.
Flowering Period:
May-June.
Distribution in the wild:
SE Tibet; SW Sichuan & NW Yunnan, China.
Growing on open slopes in meadows, scrub and thickets, and in forests,
at elevations of 3,400-4,600m.

Identification:
as var. *wardii* except:
Inflorescence 5-8-flowered.
Corolla white or ivory-white, rarely opening with a crimson basal blotch.

Seed Collections:

F 10616	1913	LS&E 13781	1946/1947	H&M 1468	1990
F 15417	1917	LS&E 13842	1946/1947	AC 1740	1996
F 20801	1921/1922	LS&E 13981	1946/1947	AC 1768	1996
LS&T 4946	1938	LS&E 15091	1946/1947	AC 1770	1996
Yu 14757	1938/1939	LS&E 15094	1946/1947	JN 739	1999

R. wardii* var. *wardii

Hardiness:
H5-6.
Flowering Period:
May-June.
Distribution in the wild:
SE Tibet; Arunachal Pradesh, India; SW Sichuan & NW Yunnan, China.
Growing on open hillsides, in thickets, amongst bamboo and in *Abies* and *Picea* forests,
at elevations of 2,700-4,300m.

Identification:
Shrub or small tree, compact and rounded, bushy or lax, to upright and open,
0.6 to 8m high; branchlets glabrous or sparsely short-stalked glandular;
bark greyish-brown, striate, sometimes flaking.
Leaves oblong through oblong-elliptic to ovate or near orbicular,
3 to 12cm long by 2 to 6.5cm wide;
upper surface dark or pale green, glaucous at first, becoming glabrous,
flat or somewhat concave, the midrib grooved, the veins deeply impressed;
lower surface pale or glaucous-green, glaucous at first, becoming glabrous,
but with minute punctulations, the midrib raised.
Petiole slender, 15-30mm long, grooved above,
glabrous, sometimes short-stalked glandular.
Inflorescence 5-15-flowered;
the buds ovoid through fusiform to near spherical, though pointed,
purplish, bloomed, glabrous; the truss lax to dense.
Calyx membranous, 4-15mm long, cupular when well developed, leaf-like at maturity.
Corolla 2.5 to 4cm long, open-campanulate, yellow through sulphur-yellow,
buds often tinged pink or orange-red,
opening with or without a variably-sized crimson or reddish-purple basal blotch.
Style stalked-glandular, base to tip.

Seed Collections:

KW 529	1913	F 25494	1924/1925	LS&E 13619	1946/1947	CNW 484	1994	CC 7514	1996
F 10428	1913	F 25534	1924/1925	LS&E 13661	1946/1947	CNW 587	1994	CC 7584	1996
F 10680	1913	F 25978	1924/1925	LS&E 13664	1946/1947	CNW 591	1994	KR 4112	1996
F 11317	1913/1914	F 25979	1924/1925	LS&E 13668	1946/1947	CNW 596	1994	KR 4131	1996
F 11466	1913/1914	KW 5736	1924/1925	LS&E 13733	1946/1947	CNW 597	1994	AC 3220	1997
F 12731	1913/1914	KW 5756a	1924/1925	LS&E 13754	1946/1947	CNW 608	1994	AC 3221	1997
F 12969	1913/1914	R 18227	1929	LS&E 15009	1946/1947	CNW 619	1994	AC 3223	1997
F 13315	1913/1914	R 18332	1929	LS&E 15010	1946/1947	CNW 625	1994	AC 3239	1997
F 14095	1917/1919	R 18333	1929	LS&E 15014	1946/1947	CNW 726	1994	AC 3286	1997
F 14128	1917/1919	R 18455	1929	LS&E 15040	1946/1947	CNW 745	1994	AC 3335	1997
F 14190	1917/1919	F 29242	1930/1931	LS&E 15055	1946/1947	CNW 748	1994	AC 3365	1997
F 15412	1917/1919	F 29305	1930/1931	LS&E 15081	1946/1947	CNW 749	1994	AC 3415	1997
F 16321	1917/1919	F 29322	1930/1931	LS&E 15087	1946/1947	CNW 792	1994	AC 3421	1997
F 16493	1917/1919	R 23314	1932	LS&E 15089	1946/1947	CNW 1091	1994	AC 3425	1997
F 16511	1917/1919	R 23408	1932	LS&E 15469	1946/1947	CNW 1177	1994	Henriksen 079	1997
F 16749	1917/1919	R 23414	1932	LS&E 15764	1946/1947	CNW 1179	1994	CHC 8503	1998
KW 4170	1921	R 24339	1932	SBLE 459	1987	AC 1177	1995	KR 4913	1998
KW 4410	1921	R 24360	1932	Cox 6108	1992	CV 9506	1995	KR 5268	1998
F 19467	1921/1922	R 24368	1932	Cox 6119	1992	CV 9548	1995	KR 5722	1998
F 19512	1921/1922	R 24487	1932	SICH 1085	1992	CV 9558	1995	CER 9920	1999
F 19743	1921/1922	R 24495	1932	SSNY 56	1992	CV 9567	1995	JN 916	1999
F 20470	1921/1922	R 25391	1932	SSNY 99	1992	FED 367	1995	AC 4579	2000
F 20834	1921/1922	R 25467	1932	SSNY 228	1992	KR 3532	1995	AC 4591	2000
F 21017	1921/1922	L&S 2085	1936	KGB 19	1993	KR 3684	1995	AC 4665	2000
F 21551	1921/1922	LS&T 3849	1938	KGB 484	1993	KR 3732	1995	AC 4817	2001
F 21954	1921/1922	LS&T 4396	1938	KGB 565	1993	AC 1517	1996	AC 4879	2001
R 10925	1923/1924	LS&T 4620	1938	KGB 692	1993	AC 1520	1996	AC 4942	2001
R 11114	1923/1924	LS&T 4747	1938	KGB 778	1993	AC 1529	1996	TARRVS 125	2002
R 11137	1923/1924	LS&T 4773	1938	CNW 126	1994	AC 1533	1996	TARRVS 167	2002
R 11145	1923/1924	LS&T 5679	1938	CNW 179	1994	AC 1534	1996	CNC 12009	2012
R 11147	1923/1924	LS&T 5868	1938	CNW 195	1994	AC 1535	1996	JN 12104	2012
R 11152	1923/1924	LS&T 6548	1938	CNW 286	1994	AC 1552	1996	JN 12272	2012
R 11247	1923/1924	LS&T 6586	1938	CNW 326	1994	AC 1577	1996	KR 10503	2012
R 11321	1923/1924	LS&T 6591	1938	CNW 350	1994	AC 1874	1996	TDA 671	2014
R 11355	1923/1924	LS&T 6599	1938	CNW 435	1994	AC 1944	1996	TDA 684	2014
R 11567	1923/1924	LS&E 13109	1946/1947	CNW 462	1994	AC 1945	1996	TDA 688	2014
R 11389	1923/1924	LS&E 13217	1946/1947	CNW 481	1994	AC 1986	1996	TDA 734	2014

R. wardii (LS&T 5679)

Credit for discovering one of the most ravishing members of Genus *Rhododendron* should once more have gone to Abbé Jean-Andre Soulié, but through a mix-up, the species was later named in honour of another great plant hunter, Frank Kingdon-Ward. Soulié made his find at Sie-La, in eastern Tibet, during June of 1895, and as usual, the dried specimens were sent to Paris for Adrien Franchet to peruse. He duly named the species *R. mussoti* and had that epithet actually been published, a stunningly beautiful plant would forever have been lumbered with a somewhat brio-lacking honorific.

But fate - thankfully - intervened. Because Franchet's botanic description and denomination were somehow overlooked, left to gather dust in a filing cabinet at the Muséum National d'Histoire Naturelle.

In 1914 therefore, William Wright Smith - working at Edinburgh Botanic on herbarium material collected by Kingdon-Ward in June 1913 and by George Forrest just a month later in July - was completely unaware that an earlier collection made by Soulié actually existed. Thus Smith's description and appellation, formally published in Volume 8 of *Notes from the Royal Botanic Garden, Edinburgh,* took precedence, and the rest is history.

Or would be, apart from a claim, published in a 1917 text, which credits the discovery to George Forrest in 1906, some seven years before the dual finds of 1913.

John Guille Millais was the author of the work in question, the classic *Rhododendrons And The Various Hybrids,* and H. H. Davidian researched the contention for the *R. wardii* entry in Volume 3 of his own über-work, *The Rhododendron Species,* published in 1992. The conclusion he reached was that the date quoted by Millais was in error because no herbarium material could be linked to a Forrest-find prior to that July 1913 collection.

But there might be an explanation for such an absence.

Millais writes that Forrest discovered the species on the eastern flank of the Lichiang mountain range in northwestern Yunnan and it is known that the collector was certainly exploring that area around the given date, not least discovering *Primula bulleyana,* the perennial named for A. K. Bulley, principal sponsor of the expedition. But much of the material collected during that first trip to China was lost when Forrest had to flee the area after the 1905 Tibetan revolt erupted. Thankfully, unlike Soulié, the Scotsman narrowly escaped capture, torture and death. On several occasions. When armed Buddhist Lamas attacked his party. So it is quite conceivable that specimens of *R. wardii* were among those waiting to be named and described in the plant hunter's field notes, but abandoned - along with his books, camera, papers and other personal belongings - over the course of the three-week-long manhunt that then ensued. Indeed, the fraught circumstances resulted in eighteen of those twenty-one days, being spent shoeless in the wilds before Forrest reached safety.

The 1906 date Millais gives therefore, could be in error by just a few months, perhaps the result of a slightly misremembered recollection given in a conversation he had with the plant hunter? In which case, the lack of any physical specimen of *R. wardii* traceable to Forrest pre-1913 is answered. Of course, all this is supposition. And even if it were an accurate account of the events that took place, it would not change the fact that Kingdon-Ward's rhododendron was actually first found by Jean-Andre Soulié.

R. mussoti is not the only epithet associated with *R. wardii* to have fallen by the wayside as several named species once gifted specific status - *R. astrocalyx, R. croceum, R. gloeoblastum, R. litiense, R. oresterum* and *R. prasinocalyx* - were later seen to be no more than slight variants on *R. wardii,* so all entered the obscurity of synonymy. One of these - *R. litiense;* the last to suffer such a demotion - had small, relatively narrow leaves, more glaucous than the type, and it was only known to grow near Li-ti-ping, in the west of Yunnan, though fieldwork had shown that merging occurred between the two populations. A consensus amongst amateur experts has allowed those plants in UK cultivation to bare *R. wardii* Litiense Group labels courtesy of the RHS's botanically-unrecognised, horticultural-only epithet compromise that in special cases, gets around the correctly applied synonymy imposed by the Edinburgh Revision.

The wider distribution of *R. wardii* takes-in southeast Tibet, Arunachal Pradesh, the southwest of Sichuan and the northwest of Yunnan, which is also where, with the exception of that northeast Indian state, the populations of *R. puralbum* will be found, though these are endemic across a narrower altitudinal band between the 3,400 and 4,600m contours.

Another George Forrest find, *R. puralbum* was discovered on the mountainous ground to the northeast of the Yangtze Bend in northwestern Yunnan, close to the area where *R. wardii* had been encountered, but a few days later in that same month, July 1913. Isaac Bayley Balfour and William Wright Smith described the species in 1916, writing in Volume 9 of *Notes,* the taxon managing to retain its specific status ranking until David Chamberlain reduced it to a variety of *R. wardii* in 1978, this set out in the preliminary synopsis paper that preceded the full revision of Subgenus *Hymenanthes*. The pure white flower colour is cited as the only disparity between the two plants and had field reporting not confirmed that their various populations were semi-disjunct, *R. wardii* Puralbum Group tags would by now be identifying all those specimens established in British gardens. The similarities with white-flowering forms of *R. souliei* have been discussed above.

On the ground, natural hybrids complicate the picture still further, as *R. wardii* is now known to interbreed with *R. vernicosum* and *R. selense*. Offspring from both crosses were first collected during Forrest's 1917-1919 expedition and named respectively as *R. chlorops* and *R. erythrocalyx,* though both epithets are now preceded by a small 'x'. Equally, where the species range overlaps with that of *R. campylocarpum* - as again mentioned above - more intergradation occurs. The glandular style, viscid from base to tip, will key true specimens of *R. wardii* from its natural hybrids, and when used in conjunction with corolla shape and colour, plus calyx length, from its subsection associates too. Seed capsule length and shape is offered as an identifier in some texts - short or long, straight or curved - but a lack of consistency across the various species negates any keying potential.

The Kingdon-Ward and Forrest gatherings of *R. wardii* were germinating in UK seed pans by the end of 1913, with further collections from the two men and a host of other plant hunters returned over the next hundred years, as the table on page 125 makes clear, the forty-year gap in arrivals, when China closed its borders to Western expeditions, barely noticed. Yet far fewer bunches of var. *puralbum* capsules have been documented - just 15 in total, compared with 185. In cultivation, both varieties have proved hardy, attaining a H5-6 rating, though forms of var. *wardii* gathered from the lowest elevations of its range require a more sheltered site, especially along the east coast. Fairly fast growing, they are free-flowering from an early age if grown from seed, but just like *R. souliei,* difficult to propagate from cuttings or grafts. Cultural requirements too match those required for *R. souliei:* very good drainage and in the south, sufficient shade to cope with that intolerance of prolonged high summer temperatures, but not so much that flower bud set is reduced.

Despite such complications, multiple specimens of *R. wardii* var. *wardii* will be found in virtually every notable UK rhododendron collection and the two named clones - 'Ellestee', shown by the horticulturally-renown, Captain Collingwood Ingram, of Benenden, Kent, in 1959; and 'Meadow Pond', exhibited by the Crown Estate Commissioners from the Valley and Savill Gardens, Windsor, in 1963 - each bearing pale yellow flowers blotched crimson at the base, are simply exquisite when covered in bloom. *R. wardii* var. *puralbum* is a far rarer find, but come upon a mature plant in full flower, and it will be just as ravishing.



R. wardii (LS&T 6586)



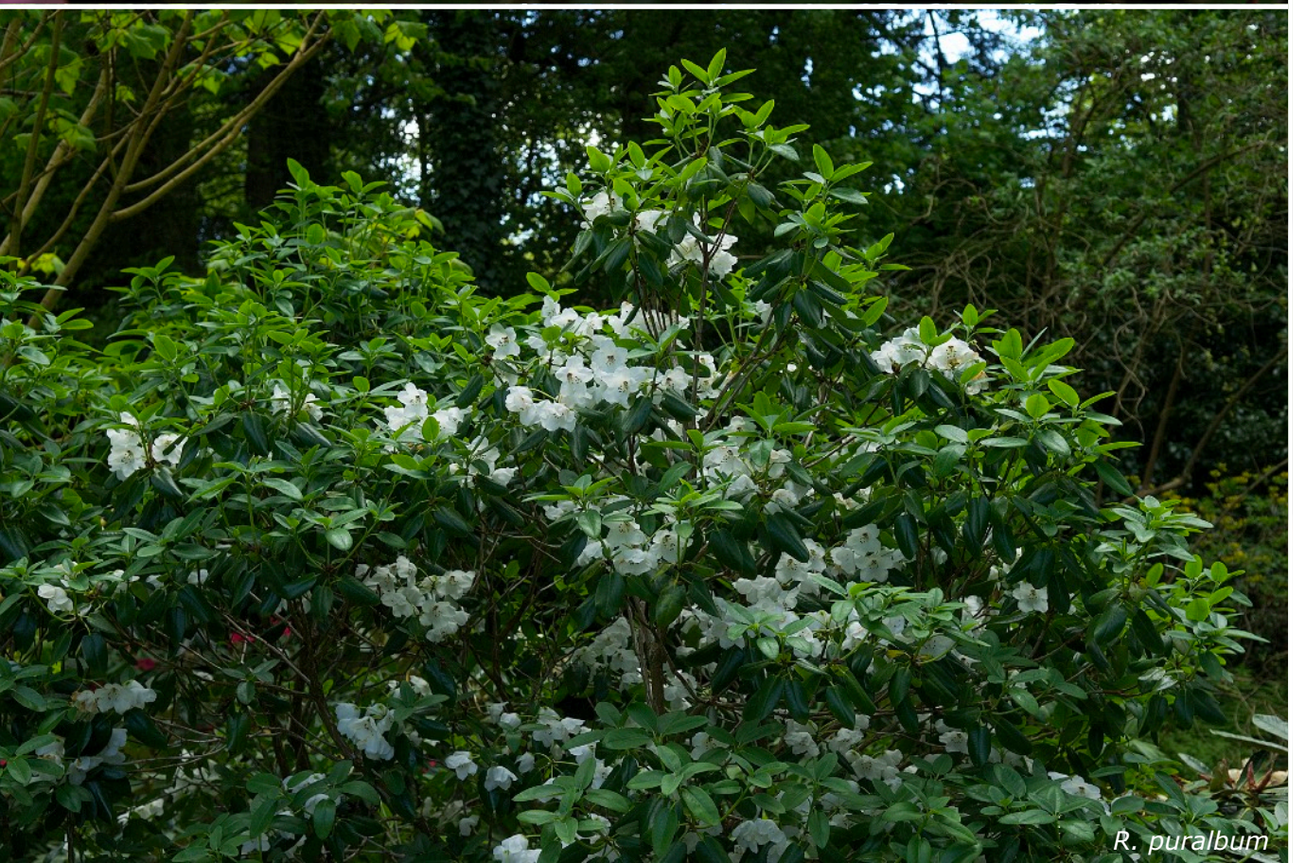
R. wardii (F 21551)



R. wardii (F 25534)



R. puralbum (H&M 1469)



R. puralbum



R. puralbum (F 10616)

R. callimorphum* var. *callimorphum

Hardiness:
H3-4.
Flowering Period:
April-May.
Distribution in the wild:
NE Upper Myanmar; W Yunnan, China.
Growing on open hillside amongst rocks, boulders, bamboo and scrub,
at the margins of rhododendron thickets, and on cliff ledges,
at elevations of 2,700-3,400.

Identification:
Shrub, rounded and dome-shaped, becoming upright and straggly with age,
0.5 to 3m high; branchlets short-stalked glandular at first,
usually becoming glabrous; bark flaking.
Leaves broadly ovate to near orbicular, 2 to 7cm long by 1.5 to 5.3cm wide;
upper surface dark green, glossy, glabrous or with the vestiges of hairs,
these widely scattered, the midrib impressed;
lower surface glaucous-green, glabrous but with a sparse through moderate covering of
minute red punctate glands, these usually without stalks or more rarely short-stalked,
the midrib raised, occasionally glandular.
Petiole terete, 7-26mm long, sparsely short-stalked glandular, hairy or glabrous.
Inflorescence 4-8-flowered.
Calyx minute, 1-3mm long.
Corolla 3 to 4.5cm long, campanulate, pink through deep rose-pink,
often spotted purple and with or without a small through large,
sometimes faint, crimson basal blotch.
Stamens 10, unequal, the anthers ovate;
filaments slender, glabrous, sometimes puberulous at the base.
Style usually glabrous, occasionally sparsely glandular at the base.
Capsule glandular.

Seed Collections:

F 15808	1917/1919
F 17651	1917/1919
F 18044	1917/1919
F 24350	1924/1925
LS&T 5584	1938
KW 252	1938/1939

R. callimorphum* var. *myiagrum

Hardiness:
H3-4.
Flowering Period:
April-May.
Distribution in the wild:
NE Upper Myanmar; W Yunnan, China.
Growing on open hillside amongst rocks, boulders, bamboo and scrub,
at the margins of rhododendron thickets, and on cliff ledges,
at elevations of 3,000-4,000m.

Identification:
as var. *callimorphum* except:
Leaves somewhat more thickly coriaceous; upper surface matt to moderately glossy.
Petiole occasionally setulose-glandular.
Calyx lobes sometimes to 6mm long.
Corolla white, often with crimson spotting,
and with or without a small through large crimson basal blotch.
Style sometimes sparsely glandular along the lower half.
Capsule glandular or with the vestiges of glands

Seed Collections:

F 27142	1924/1925
F 27488	1924/1925
KW 6962	1926
KW 6986	1926
F 29647	1930/1931

The official published histories of Genus *Rhododendron* will all proclaim that George Forrest first found *R. callimorphum* in August 1912 while collecting on the Shweli-Salwin Divide of western Yunnan and introduced the species into British gardens that same year under the field number F 9055. Later on during the expedition, F 11601 was returned, and the Scotsman's 1924-1925 plant hunting trip secured F 27389. Not to be outdone, in 1919, Frank Kingdon-Ward gathered capsules from plants in northeast Upper Myanmar under KW 3721. Except post the Edinburgh Revision redeterminations - as a side by side comparison of the 1980 and 1998 RHS *Rhododendron Handbook* seed collection listings will show - the Forrest trio were classed as affinity forms of the species, while Kingdon-Ward's contribution transformed itself into *R. caloxanthum.*

As luck would have it, Forrest retained the premier encounter kudos thanks to a June 1913 gathering - F 12019 - again made on the Shweli-Salwin Divide, and the introduction credit courtesy of three lots secured during the course of his 1917-1919 expedition. Strangely, the *R. callimorphum* botanic description is based solely on those specimens from June 1913, despite the dried material being reported as 'not abundant' and 'inadequate for a complete comparative analysis' by the text's authors, Isaac Bayley Balfour and William Wright Smith (in *Notes from the Royal Botanic Garden, Edinburgh,* Volume 10, 1917), with no mention made of the F 9055 or F 11601 collections.

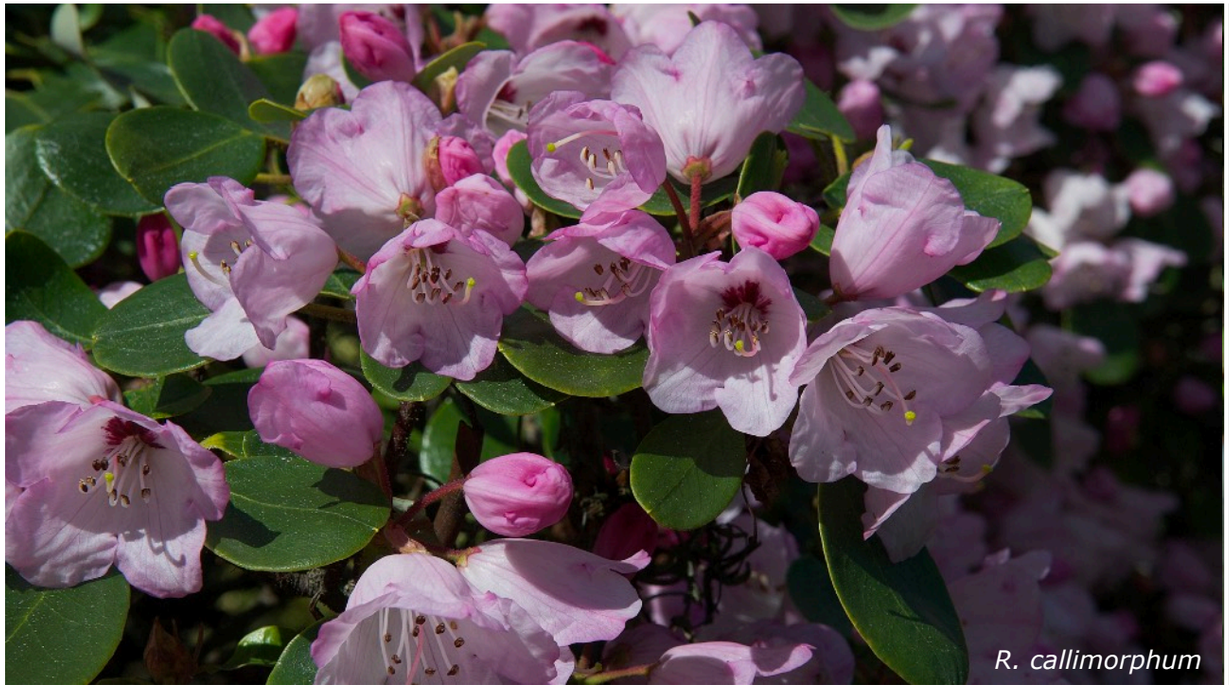
R. myiagrum was also a Forrest discovery, and like its near twin, the plant was first found growing in western Yunnan, although this time on the N'Maikha-Salwin Divide, and some six years later, in June 1919. The botanic description, a joint composition penned by Forrest and Balfour in 1920, appeared in Volume 13 of *Notes,* their chosen Latin epithet translating as "fly-catcher". This refers to the plant's very sticky pedicels, which in its native home, will often be found completely covered in small dead flies, held fast by the glandular secretions. Endemic to the same locales as *R. callimorphum,* albeit across a slightly higher altitudinal range, and with a near-matching feature set, consolidation was inevitable, this occurring with the publication of the Edinburgh Revision's *Preliminary Synopsis* paper in 1978 (*Notes,* Volume 36), varietal status selected as the new ranking, the extra go-it-alone 600m of an otherwise overlapping geographic distribution not regarded as 'niche' enough to prevent the reduction.

The species was introduced into UK cultivation in 1925, Forrest securing viable seed capsules from a population of plants found in northeast Upper Myanmar, and it should be noted that neither taxon has been encountered or reintroduced since the 1930s.

Flower colour clearly distinguishes the pair, *R. callimorphum* being pink, *R. myiagrum* white, with specimens of the latter bearing the aforementioned highly adhesive pedicels, plus larger calyx lobes, these sometimes extending to 6mm in length, and seed capsules that may only flaunt remnants of the ovary's stalked-glands when fully mature. However, those characteristics are not consistent across the populations and so cannot provide definitive keying, corolla pigmentation being the only constant.

Within the subsection, *R. callimorphum* is most closely allied to *R. caloxanthum,* the relationship with *R. souliei* more distant: flower colour and the red punctate glands on the leaf underside distinguish the species from *R. caloxanthum;* smaller leaves, a glabrous style and campanulate-shaped corollas cleave it from *R. souliei*. Equally, there is a fair degree of mirroring with one of the Subsection *Thomsonia* species, *R. selense,* though a lack of any setulose-glandular hairs on the branchlets, and usually the petioles, will quickly separate the two.

Both varieties of *R. callimorphum* are free-flowering from quite a young age, but can be a little difficult to grow well in cultivation, requiring very good drainage and protection from the hardest winter and spring frosts, as attested by the H3-4 rating, and un-cosseted plants are likely to suffer significant bark-split without the temperature uplift offered by a woodland site. However, providing such frosting does not become a regular, annual event, if established specimens are cut back after being struck down, they will often re-grow from the base. Observations over the years have shown that both varieties perform best, and live longest, in the dryer regions of the UK.


R. callimorphum


R. myiagrum

R. callimorphum

R. myiagrum


R. caloxanthum

R. campylocarpum* ssp. *caloxanthum

Hardiness:
H4-5.
Flowering Period:
April-May.
Distribution in the wild:
E & NE Upper Myanmar; NW Yunnan, China; Arunachal Pradesh, India; SE Tibet.
Growing amongst scrub and other rhododendrons, along forest margins,
on cliffs, rocky slopes and in side valleys, at elevations of 2,700-4,400m.

Identification:
Shrub or small tree, rounded, compact and bushy, becoming upright and leggy with age,
0.9 to 1.8m high; branchlets sparsely long- or short-stalked glandular, rarely eglandular;
bark greyish-brown, flaking, finely striate.
Leaves near orbicular, 3.2 to 8cm long by 2.5 to 5.6cm wide;
upper surface dark green, glaucous, usually matt,
the margins somewhat reflexed, the midrib impressed;
lower surface pale glaucous green,
usually glabrous but occasionally sparsely reddish-glandular towards the base,
the midrib prominently raised.
Petiole terete, but grooved above, 11-28mm long,
sparsely through moderately long- or short-stalked glandular, hairy,
rarely eglandular or glabrous.
Inflorescence 3-10-15-flowered;
the buds brownish, reddish at the top, green at the base, the outer scales with brown and white hairs, the inner scales cuspidate; truss lax through moderately dense.
Calyx minute, 1-3mm long, but sometimes to 5mm.
Corolla 2.5 to 4cm long, campanulate, pale or bright yellow through to sulphur-yellow,
often tinged red, rose or vermilion in bud, but rarely tinged pink in flower,
sometimes with a purple basal blotch, though often quite faint.
Style glabrous, or glandular either at the base or along the lower half.

Seed Collections:

Farrer 937	1919	F 27495	1924/1925	KW 20927	1953
KW 3408	1919	F 27574	1924/1925	KR 3516	1995
KW 3721	1919	F 27664	1924/1925	AC 3245	1997
KW 3721a	1919	KW 5718b	1924/1925	AC 3317	1997
F 20023	1921/1922	KW 6868	1926	CCHH 8080	1997
F 21755	1921/1922	KW 6965	1926	CCHH 8180	1997
F 21836	1921/1922	R 18373	1929	DGEY 295	2001
F 21875	1921/1922	R 18383	1929	APA 57	2005
F 22897	1921/1922	R 18405	1929	BE 12-15	2012
F 26985	1924/1925	L&S 1656	1936	BE 12-25	2012
F 27123	1924/1925	LS&E 15306	1946/1947	BE 12-48	2012
F 27125	1924/1925	R 1	1948/1949	KR 10458	2012

The premier encounter with *R. caloxanthum* took place on the Chimili and Hpimaw Passes of northeastern Upper Myanmar during May 1919, Reginald Farrer and Euan Cox the two plant hunters who made the discovery. The botanic description contained in Volume 13 of *Notes from the Royal Botanic Garden, Edinburgh,* published in 1922, two years after Farrer's death in the field, was completed posthumously by Sir Isaac Bayley Balfour, using the collector's field notes.

Differences in three characteristics separate *R. caloxanthum* from *R. campylocarpum:* smaller, more glaucous leaves; a lower, more compact stature; and flowers that are paler in tone with fewer corollas in the truss. The geographic distribution of the two species is also at variance, with *R. caloxanthum* endemic to the more eastern regions of the Himalayas, the melting pot where both are present and intergradation takes place, located in southern Tibet. The 1978 *Preliminary Synopsis* subspecies ranking reduction (in *Notes, V*olume 36), correctly reflects these factors.

Out of flower, *R. caloxanthum* can very easily be confused with *R. callimorphum,* but an absence of minute red punctate glands across the whole of the leaf underside should key the former from the latter. The trait is not foolproof however, as occasionally these glands will be found on the leaves of each of the *R. campylocarpum* subspecies, though when present, they are confined to an area around the base of the leaf and are never extant in quantity.

The minute calyx, with lobes rarely more than 3mm long, and a style that is never glandular from base to tip, are the morphologic attributes that separate ssp. *caloxanthum* from *R. souliei* and *R. wardii.*

R. telopeum has been placed in synonymy with *R. caloxanthum,* but is maintained horticulturally as Telopeum Group. The species was discovered by George Forrest in 1919, when collecting in the Salwin-Kiu-Chiang Divide of south-east Tibet, and its jointly-penned Forrest-Balfour botanic description can also be found in Volume 13 of *Notes,* despite being written in 1920. The creamy-white flower colour is an obvious characteristic, though the corollas can also be pale yellow, but these plants are usually identified by their very small leaves - 2 to 5cm long by 1.5 to 3.5cm wide - and the more heavily glaucous nature of that foliage, these features more pronounced in the selected, cultivated specimens, than those generally found in the wild.

In cultivation, ssp. *caloxanthum* is a degree more difficult to grow than its sister subspecies as it requires a site with impressively good drainage. It also starts into growth fairly early in the season, so requires protection from late spring frosts if the flowers and young growth are not be damaged. Coming from slightly lower elevations too, some forms can be a touch more tender. As well, the species is a slow grower, but flowers from a young age, often covering itself in bloom. The crimson through red to vermillion-coloured tints of the swelling buds are an extra bonus.


R. caloxanthum


R. caloxanthum

Subsection *Falconera:*



R. fictolacteum



Taxa:

- *R. arizelum*
  - *R. arizelum* ssp. *arizelum*
  - *R. arizelum* ssp. *heatherae*
- *R. basilicum*
- *R. coriaceum*
- *R. falconeri*
  - *R. falconeri* ssp. *eximium*
  - *R. falconeri* ssp. *falconeri*
- *R. galactinum*
- *R. hodgsonii*
- *R. preptum*
- *R. rex*
  - *R. rex* ssp. *fictolacteum*
  - *R. rex* ssp. *rex*
- *R. rothschildii*
- *R. semnoides*
- *R. sinofalconeri*
- *R. titapuriense*

Taxonomic Revision:

In addition to the Section *Ponticum-Leiorrhodium* move, two new species, *R. arizelum* ssp. *heatherae* and *R. titapuriense,* have been discovered since the 1996 Edinburgh Revision classification of Subsection *Falconera* was published.

Subsection Morphology:

Large shrubs or trees, 2.5 to 14m high, rarely to 27m;
branchlets stout, moderately through densely tomentose, the covering thin, becoming glabrescent, rarely glabrous;
bark grey or pink to red-brown, rough or smooth, flaking or peeling.

Vegetative buds large, conical, moderately through densely tomentose, the hairs usually brown or whitish, sometimes rufous, but rarely without tomentum, the bud scales deciduous, the outer usually with long acuminate tips.

Leaves evergreen, large, thick and coriaceous, 6.8 to 46cm long by 3 to 17cm wide, oblanceolate through broadly ovate, usually widest above the blade mid-point;
upper surface glabrous, or with a semi-persistent tomentum;
lower surface covered with a thick, dense and continuous white, brown or rufous, woolly or spongy, bistrate indumentum (rarely unistrate),
the upper layer of cup-shaped hairs, sometimes partially or fully detersile,
the lower layer thin, compacted and plastered, grey, whitish or fawn (occasionally absent).

Leaf anatomy comprises a 2- or 3-layered upper epidermis, with the cells similarly sized throughout; the cuticle is around half as thick or thicker than the cells are deep;
water tissue is present to a greater degree than evidenced in the members of Subsection *Grandia;* the lower epidermis cells are without papillae.
Sclereid cells are present.

Petiole 14-65mm long, moderately through densely tomentose, the covering thin, rarely glabrous, eglandular.

Inflorescence terminal, a dense and compact racemose umbel, 10-30-flowered; bud scales usually deciduous.

Rhachis 10-60mm, usually moderately through densely fawn or brown tomentose.

Pedicel 12-58mm long, moderately through densely fawn or brown tomentose, occasionally moderately through densely short-stalked glandular.

Calyx minute, the 6-8 lobes 1-3mm long,
outer surface and margins usually densely tomentose,
occasionally short-stalked glandular.

Corolla 2 to 6cm long, 5-7-10-lobed,
white, cream, pale yellow, pink or crimson, sometimes magenta to purple,
occasionally flushed or lined from a mix of colours,
with or without either or both a crimson basal blotch and spots,
ventricose- to obliquely-campanulate, without nectar pouches.

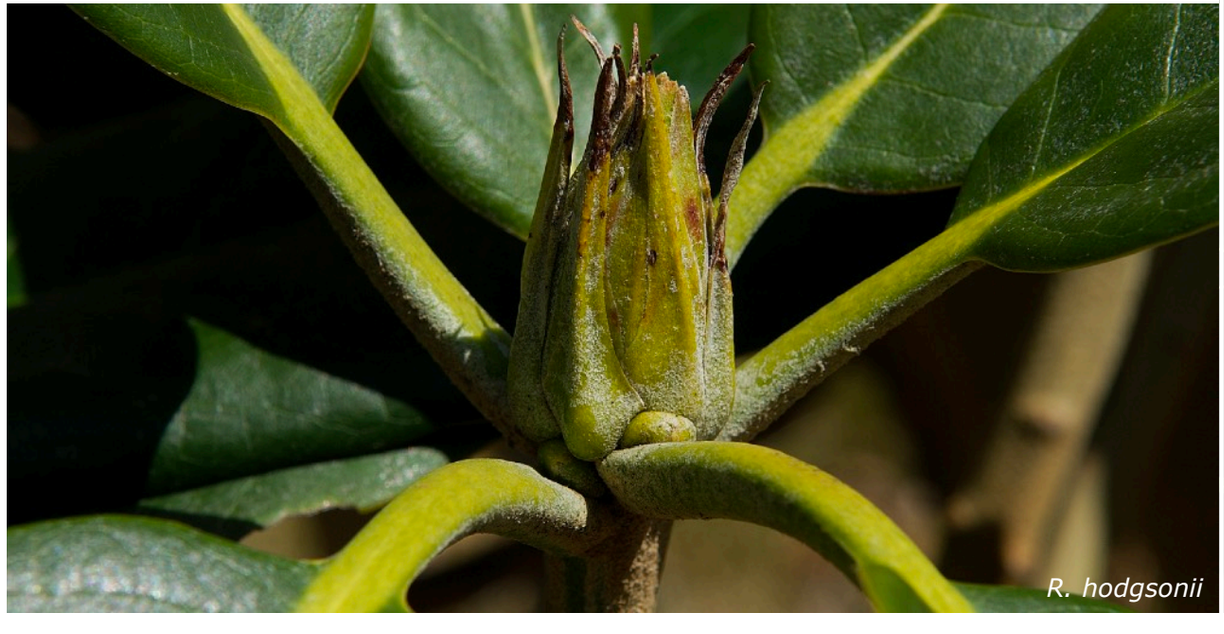
Stamens 10-12-16, rarely 18, unequal, shorter than the corolla;
filaments glabrous or puberulent at the base.

Ovary 5-11mm long, 7-18-locular, moderately through densely tomentose, occasionally moderately through densely short-stalked glandular, rarely glabrous.

Style long and glabrous, the stigma usually small and discoid.

Capsule 18-60mm long, cylindric or oblong, straight, or slightly curved, ridged, usually densely tomentose.

Seeds marginally longer than broad, with conspicuous wings and appendages, the wings occasionally somewhat narrow.



R. hodgsonii



R. basilicum

R. falconeri* ssp. *falconeri

Hardiness:
H3-4.
Flowering Period:
Late April-May.
Distribution in the wild:
Bhutan; W Arunachal Pradesh, Assam, Bengal & Sikkim, India; E Nepal.
Growing in mixed or conifer woodland at elevations of 2,700-3,400m.

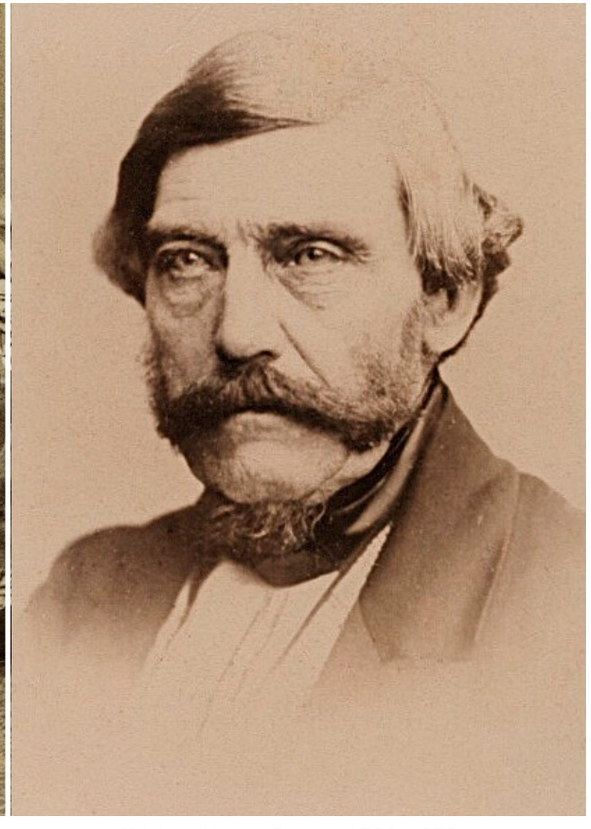
Identification:
Large shrub or tree, rounded, rounded-spreading or columnar,
3 to 12m high, occasionally to 15m;
branchlets densely fawn or whitish-fawn tomentose;
bark rough, brown and flaking, the underbark smooth, cinnamon-brown.
Vegetative buds fawn or whitish tomentose.
Leaves oblong-oval through obovate, 12.5 to 35cm long by 5 to 17cm wide,
broadest at the blade mid-point,
apex rounded, base rounded, cordulate or obtuse, retained 1-3-4 years;
upper surface dark green, rugulose, matt, glabrous, sometimes with the vestiges of a juvenile tomentum, the midrib grooved, the veins deeply impressed;
lower surface indumentum thick and woolly,
the upper layer composed of strongly fimbriate, narrowly cup-shaped hairs,
rufous through brown, the lower layer thin, compacted, white,
the midrib and veins prominent and glabrous.
Petiole 28-65mm long, cylindric and terete, slightly grooved and usually glabrous above,
moderately through densely tomentose below, the hairs fawn or whitish-fawn.
Inflorescence 12-20-flowered.
Rhachis fawn, whitish-fawn or rufous tomentose.
Pedicel 20-54mm long, moderately through densely fawn or rufous tomentose,
densely short-stalked glandular.
Calyx outer surface and margins tomentose and short-stalked glandular.
Corolla 3 to 6cm long, 8-10-lobed, obliquely campanulate, ventricose,
fleshy (heavily textured),
whitish through cream to pale yellow, with a darker pink or purple basal blotch.
Stamens 12-16.
Ovary 10-18-celled, variably tomentose,
moderately through densely short-stalked glandular, but sometimes eglandular.
Style stout, sometimes tomentose and short-stalked glandular at the base,
the stigma large.
Capsule 25-60mm long,
fawn or rufous tomentose and usually short-stalked glandular.

Seed Collections:

Cave 6712	1914	KR 1121	1987	KR 1800	1990
KW 13652	1937	KR 1128	1987	Sinclair 1741	1993
KW 13654	1937	KR 1401	1987	Bowes-Lyon 10138	1994
L&S 2983	1937	CHM 3017	1988	AC 5352	2004
L&S 3041	1937	CHM 3062	1988	TDA 080	2011
LS&H 16371	1949	EGM 103	1988	KR 10372	2012
LS&H 18719	1949	EGM 55	1988	KR 10419	2012
C&H 584	1965	C&S 1609	1990	TDA 147	2012
BMW 66	1978	C&S 1682	1990	TDA 271	2013
G&L 4475	1982	C&S 1697	1990	TDA 276	2013
S&L 5695	1984	Kinmouth 84	1990	TDA 277	2013
KR 1091a	1987			TDA 296	2013



Hugh Falconer (1808-1865).



William Henry Sykes (1790-1872).

The discovery and introduction of *R. falconeri* is another case where accepted history needs to be rewritten as most - though not all - of the previously-published accounts will report that Sir Joseph Dalton Hooker, while out and about on that famed expedition to northeast India, was the plant hunter involved in 1848's premier encounter. Those texts however, are wrong, as H. H. Davidian explains:

'It is to be noted that before Hooker's introduction, the species had been in cultivation in a few gardens, raised from seeds sent by Col. Sykes in 1830.'
The Rhododendron Species, Volume 2, 1989.

Colonel William Henry Sykes was a commissioned officer with the Honourable East India Company, an ornithologist and amateur botanist, who came across *R. falconeri* and several other rhododendron species while carrying out his duty assignments with the Indian Army. The seed he collected was sent back home to Britain and successfully germinated by its recipients, so sizeable plants were already prospering in UK cultivation when Hooker named his own find for Hugh Falconer (*The Rhododendrons of Sikkim-Himalaya,* Volume 1, 1849). Falconer was Superintendent of the Calcutta Botanical Garden at the time of Sir Joseph's yomp around Sikkim and fans of the James Clavell novel *Tai Pan* will be interested to learn that in real life, he was one of those responsible for the later widespread cultivation of cinchona trees in India, Myanmar and Sri Lanka, and indeed, that it was on his advice that the 1859 Clements Markham expedition to South America was mounted. Quinine - an alkaloid that is highly effective against malaria - can be extracted from cinchona bark and Peru had a near monopoly on the trade. At least, until Markham's team acquired a large quantity of seeds and live plants that some sources suggest were nefariously smuggled out of the country.

Back on topic, *R. falconeri* is most closely related to *R. eximium,* the latter now a subspecies of the former since publication of the second part of the Edinburgh Revision's *Preliminary Synopsis* paper in 1979 (*Notes from the Royal Botanic Garden, Edinburgh,* Volume 37), though for a short period post 1893 its status had been reduced to that of a variety. The wild distribution of the pair effectively rules out that ranking, an oft-repeated west-to-east progression, with *R. falconeri* endemic to Assam, Bengal, Sikkim and eastern Nepal, *R. eximium* to Bhutan and the Indian state of Arunachal Pradesh, this requiring the assignment of subspecies status. Morphological differences between the two reveal that *R. eximium:* is somewhat lower growing than *R. falconeri* and certainly not as 'tree-like'; that a dense rufous tomentum cloaks the upper surface of its young leaves until they are at least one year old; that the abaxial leaf surface primary veins are covered in hairs; that the ovary is absent of such, though still sticky; and that the entire circumference of the petiole is cloaked with tomentum. In bloom, the differences between the two taxa are more starkly displayed, with pink through rose corollas opening on *R. eximium,* creamy-white or yellow flowers on *R. falconeri.* Their flowering periods also differ, the latter opting for late April-May, which reduces the chance of frost damage, the former choosing March-May.

The short-stalked glands on the ovary of both species will key them from *R. arizelum,* the only other member of the subsection with which they are likely to be mistaken.

In the wild, *R. falconeri* has been found to hybridise with *R. hodgsonii,* and plants of this cross, collected in Sikkim by Charles Carmichael Lacaita during May 1913, were initially given specific status as *R. decipiens* (*Journal of the Linnaean Society,* Volume 43, 1916). However, no less a personage than Sir Isaac Bayley Balfour disputed Lacaita's description, writing in *The Rhododendron Society Notes* of 1919 - Volume 1, Number 5 - that specimens of *R. decipiens* shared the principal features of both species and that 'there would seem to be therefore constructional ground for the suggestion that we have here a natural hybrid'. Which is a somewhat strange pronouncement given that such a critique is totally at odds with the botanist's later dismissal of natural hybrid seed pan rogues (as reported by John Guille Millais in the 1924, second edition, of his *Rhododendrons and the Various Hybrids*).

Nevertheless, the *R. decipiens* specific status ranking stayed in place until the early 1980s when for once, both H. H. Davidian and the Edinburgh Revision botanists found themselves in agreement and added a leading 'x' to the epithet. Yet that status may have to be revisited as more recent field study has identified several stabilised populations in the wild where speciation is believed to be in progress.

Sticking with the subject of cross-pollination, a fact not widely reported concerns the use of *R. falconeri* as a pollen parent: more often than not, such a pairing is unsuccessful. This trait was revealed early on through the directed procreation attempts of the 19th century hybridising fraternity, as the former 'High Priest of the Rhododendron Cult' details:

'The pollen of *R. falconeri* has a most astonishing effect on some other Rhododendrons. For several years I have watched the process with increasing wonder. In about half of the time usually required, the capsules, stimulated by this pollen, swell and continue swelling until they have attained a large size. Then they ripen as rapidly as they have swelled, but generally only contain chaff, or at best, much chaff mixed with a few perfect seeds'.
James Henry Mangles, *The Gardeners' Chronicle,* August 2nd, 1879.

And as John Guille Millais also later reported:

'Mr Standish in 1869 tried to cross with the pollen of *R. falconeri.* The reason of his failure, he thought, was that the pollen-tubes of this species were too large to penetrate the ovules of smaller species'.
Rhododendrons and the Various Hybrids, 1917.

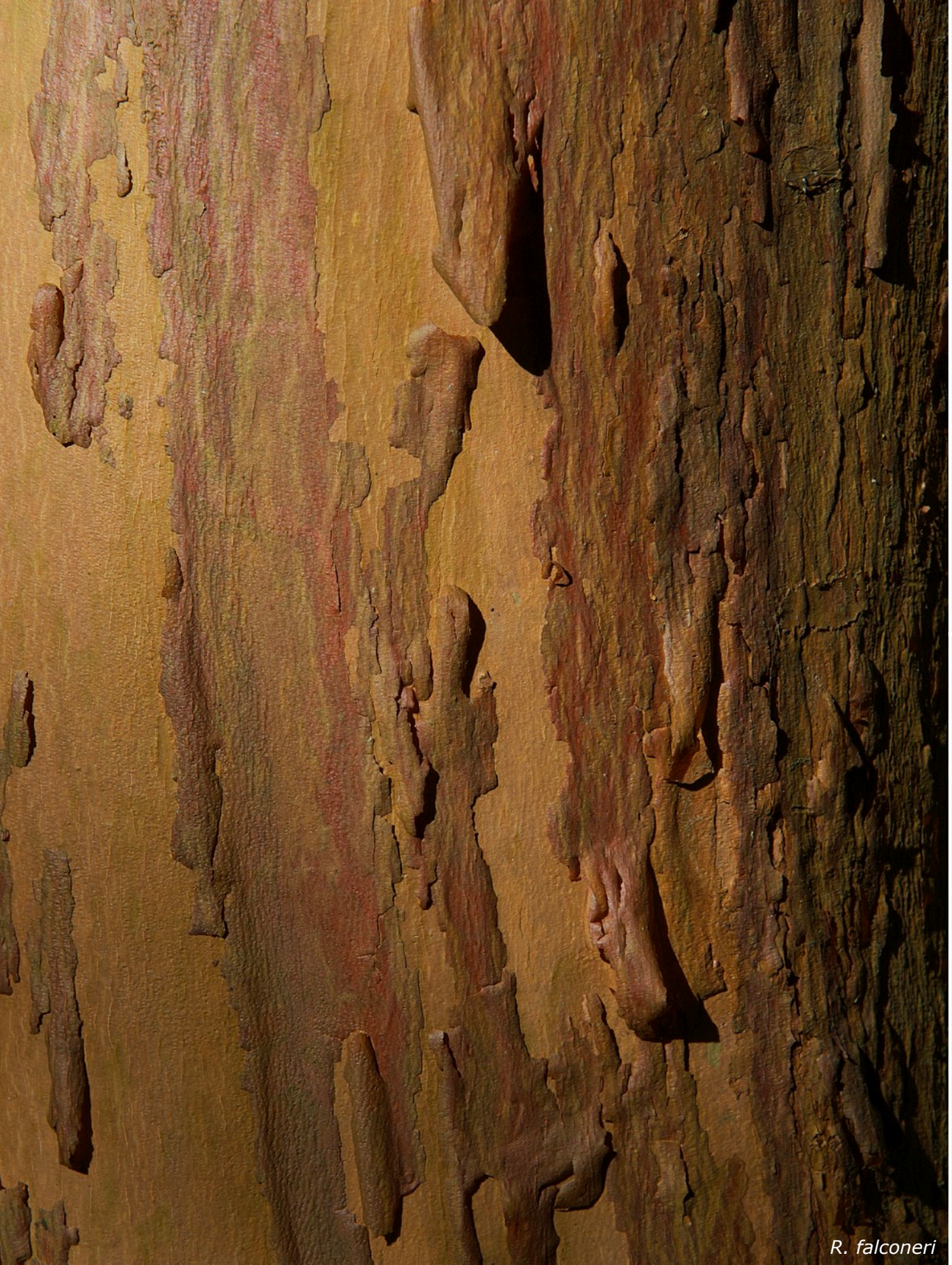
To date, no one has actually ascertained whether such a hypothesis is factually correct, but clearly some kind of explanation is needed for why only five successful pairings using this 'Monarch of the Genus' as pollen provider have been IRRC-registered - the 'Elsae' cross with *R. grande* maturing the seed; the 'Hodconeri' pairing, where *R. hodgsonii* nursed the capsules; Karl Sifferman's match with 'Van Nes Sensation' made in the late 1960s that gave 'Robert Hale'; and two 1992 pairings directed by K. Heger, one with Bambi, which resulted in 'Walter Eckel', the other with the 'Koichiro Wada' form of *R. yakushimanum,* this producing 'Pedro' and 'Stadt Lucianópolis'. Reversing the parental role has resulted in a touch more success with ten successful pairings, but even so, given the taxon's obvious appeal to the landed gentry of the last century - who had woodland gardens of sufficient size to accommodate such breeding programmes, located in areas of the country where the conditions were perfect for raising large-leaved rhododendrons - *R. falconeri* would not be found guilty of rampant profligacy.

In those sheltered sites along the UK's west coast, *R. falconeri* has found a perfect home-away-from-home, where majestic specimens easily 12m high and as much or more across can be seen, some traceable to those first introductions - Hooker's for instance, at Glenarn, near Helensburgh in Dumbartonshire, or at the Stonefield Castle Hotel in Argyll. Mature plants may be columnar or rounded with a single trunk, or rounded-spreading with multiple stems, and while not every specimen has to-die-for blooms, the fleshy texture of those corollas often allows the flowers to remain in pristine condition, illuminating the woodland, for four weeks or more. *R. falconeri* will also flourish along the east coast, providing a well-sheltered locale can take those shrubs safely through the winter months and a high canopy above, shield them from the clear-night radiation frosts of spring.



R. falconeri

R. falconeri



R. falconeri



R. falconeri (Cave 6712)



R. falconeri (CH&M 3062)



R. falconeri (G&L 4475)



R. falconeri (C&S 1697)



R. falconeri

R. hodgsonii

R. hodgsonii

Hardiness:

H4-5.

Flowering Period:

March-May

Distribution in the wild:

Nepal; S Tibet; W Arunachal Pradesh, Assam, Bengal & Sikkim, India; Bhutan.
Growing along ridges or valleys, often as the dominant species,
in thickets, rhododendron forest and conifer forest
at elevations of 2,900-4,300m.

Identification:

Large shrub or small tree, rounded or rounded-spreading, usually 3 to 7m high,
but often to 12m; branchlets densely tomentose, the hairs whitish, greyish or fawn;
bark smooth, creamy, cinnamon, reddish- or purple-brown, flaking.
Leaves obovate through oblanceolate to elliptic, 11 to 40cm long by 4.8 to 15.6cm wide,
apex rounded, more rarely obtuse, and sometimes emarginate (notched),
base broadly cuneate to rounded, retained 2-3 years;
upper surface dark green, smooth, reticulate,
with a thin, sparse, white tomentum, persistent through the first year,
this producing a metallic sheen, but becoming spotted and mica-like, then glabrous,
the midrib grooved, the veins deeply impressed;
lower surface indumentum thick,
the upper layer composed of slightly fimbriate, broadly cup-shaped hairs,
brown, cinnamon, fawn or rufous, these partly, or more usually fully detersile,
the lower layer thin, compacted, pale brown, fawn, grey or silvery,
the midrib and veins prominent, the veins often densely hairy.
Petiole 20-50mm long, cylindric and terete, convex above, with or without a slight groove,
moderately through densely tomentose at first, the hairs fawn, greyish, or whitish,
becoming glabrescent.
Inflorescence 12-25-flowered.
Corolla 3 to 5.8cm long, 7-8-lobed, but occasionally 6- or 10-lobed, tubular-campanulate,
fleshy, pink through magenta to rose, crimson-purple or deep purple,
the deeper colours usually fading quite quickly,
with or without a darker basal blotch.
Stamens 14-18, the anthers brown; filaments usually glabrous.
Ovary 9-12-celled.
Capsule 26-60mm long, whitish, fawn or rufous tomentose.

Seed Collections:

Cooper 2088	1914	TSS 9	1961/1962	Kinmouth 88	1990
Cooper 2233	1914	TSS 42	1961/1962	Kinmouth 89	1990
Cooper 2505	1914	C&H 581	1965	KR 1811	1990
Cooper 4084	1915	BLM 233	1971	Heasman 36	1992
L&S 21	1933	BLM 323	1971	Sinclair 1732	1993
L&S 613	1934	Bartholomew 207	1974	SHE 541	1997
KW 11640	1935	Beer 653	1975	KCSH 0324	2003
L&S 1385	1936	BMW 151	1978	NAPE 0123	2003
Gould 31	1937	SCH 2343	1978	AC 5364	2004
KW 13653	1937	McBeath 1243	1981	AC 5375	2004
L&S 2987	1937	AGS 547	1983	AC 5380	2004
L&S 2990	1937	Dingle 13	1984	AC 5438	2004
L&S 3047	1937	EN 514	1984	KR 8285	2005
LS&T 3643	1938	EN 548	1984	KR 8581	2006
LS&T 3646	1938	EN 614	1984	KR 8583	2006
LS&H 16120	1949	KR 1181	1987	KR 9572	2008
LS&H 16137	1949	KR 1371	1987	TDA 015	2011
LS&H 16346	1949	KR 1432	1987	TDA 016	2011
LS&H 16494	1949	KR 1483	1987	TDA 016	2011
LS&H 18801	1949	CHM 3056	1988	TDA 050	2011
LS&H 18884	1949	CHM 3077	1988	TDA 378	2013
LS&H 18930	1949	EGM 102	1988	TDA 379	2013
LS&H 19023	1949	EGM 80	1988	TDA 500	2013
LS&H 20182	1949	C&S 1576	1990	TDA 978	2016
LS&H 20267	1949	C&S 1596	1990	TDA 1007	2016
LS&H 20649	1949	C&S 1694	1990	TDA 1014	2016
LS&H 21296	1949	C&S 1698	1990	TDA 1015	2016
Stainton 227	1956	Fox 17	1990	TDA 1016	2016
Stainton 276	1956	Fox 53	1990	TDA 1078	2016



R. hodgsonii

Travelling through Bhutan on East India Company business during 1838, William Griffith, a surgeon and amateur botanist, stumbled upon the next member of Subsection *Falconera* to be discovered, finding the rhododendron that Joseph Dalton Hooker would later collect, describe and name, *R. hodgsonii.* Unlike another Griffith find - a certain *R. griffithianum,* posthumously re-named for the plant hunter after his friend, colleague and fellow botanist Doctor Robert Wight compared herbarium plates, established a match and ensured that those 1837-gathered specimens took precedence over the 1849 *R. aucklandii* collections made by Kew's alumnus - this Hooker-subsumed species managed to retain its 1851 *Rhododendrons of Sikkim-Himalaya* pedigree and epithet.

Except that *R. hodgsonii,* just like its relative *R. falconeri* and a whole host of other Himalayan rhododendrons, had actually been discovered and introduced into UK cultivation some twenty years earlier by another employee of the British East India Company, Colonel William Henry Sykes. A 1916-published contribution in *The Rhododendron Society Notes* (Volume 1, Number 1), is but one of the sources used to confirm this, Lieutenant-Colonel John Middleton Rogers, in his submission - *Notes on the Garden of Riverhill, Sevenoaks* - explaining that his grandfather had managed to acquire seed of all the Sykes introductions - 'including *falconeri, niveum, barbatum, thomsonii, lanatum, fulgens, campanulatum* of several varieties, *hodgsonii* and *arboreum*' - germinated them successfully, then planted-out those juvenile plants in the grounds of the estate.

Brian Houghton Hodgson was a civil servant, naturalist and ethnologist, formerly the East India Company's Resident to the royal court of Nepal, and enjoying his retirement in Darjeeling, when Hooker dropped in to talk all things Sikkim. The two men clearly hit it off, as Hooker's honorific dedication makes clear and an earlier letter from Hodgson to his sister Fanny eulogises, though the suggestion that she would 'derive much pleasure and profit from intercourse with the well-bred and youthful philosopher' needs to be read in the context of a verbal or written exchange of botanic information, any raincoats - be they dirty or otherwise - being left in the closet (*The Life of Brian Houghton Hodgson,* by Sir William Wilson Hunter, published in 1896). Basically, Hodgson was able to provide essential local knowledge that assisted Hooker's expedition greatly and for whatever reason, his epithet went unchallenged, though His Excellency The Right Honourable Earl of Auckland and past Governor-General of India, George Eden, lost his ericaceous hold on immortality.

A near completely detersile abaxial leaf indumentum ensures that *R. hodgsonii* is but rarely confused with any of the other Subsection *Falconera* residents, even *R. coriaceum,* the large, conical growth buds, with their long tails, plus the silvery-white metallic-bloom on the smooth upper surface of the young leaves, supplementing the keying. So too does the trunk bark on mature specimens, this smooth and peeling, cinnamon or cream-coloured, though it can also be reddish- or purple-brown. The tightly packed flower truss also aids identification, with the 20 to 25 tubular-campanulate corollas usually arranged in a racemose umbel. And then there is the colour of those blooms, varying widely, but when first open, perhaps the only species rhododendron whose pigment could be prefaced with the descriptors 'hot' or 'neon'.

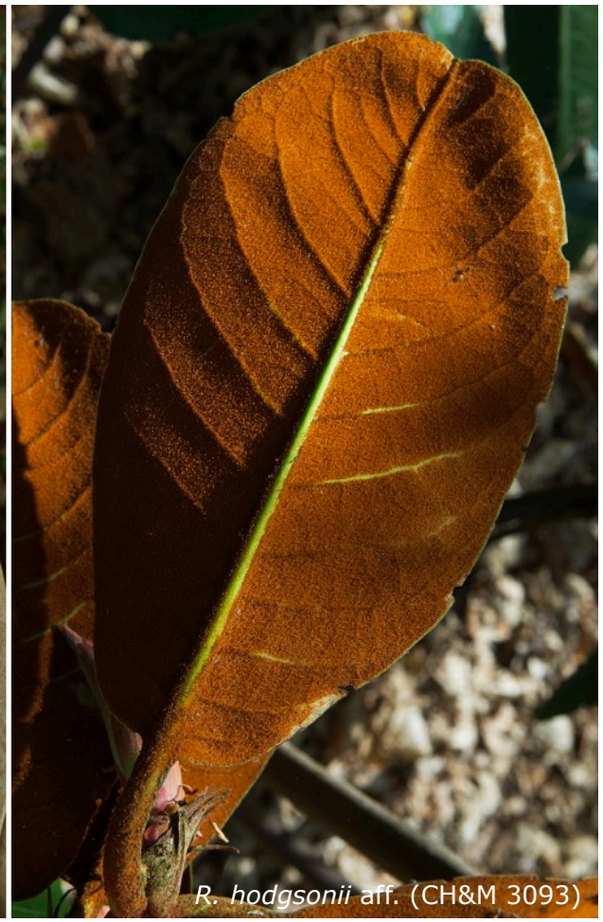
Unfortunately, where labels have been lost, the species is often confused in gardens with some of its hybrid offspring, matings with *R. niveum* being the hardest to differentiate. 'Hodconeri', a cross with *R. falconeri* ssp. *falconeri,* introduced in 1926 by the Kent-based rhododendron nursery of G. Reuthe Ltd, has lighter corollas and usually a much darker abaxial indumentum, plus a more pinkish-red bark, while the previously mentioned natural hybrid *R. x decipiens* - the reverse cross, with *R. falconeri* as the seed parent - has flowers that in cultivated forms, are even lighter, opening yellowish but fading quickly to white.

There are no records of a William Griffith seed introduction, but plants germinated from Hooker-gathered capsules, the contents of which arrived during 1850, still survive in a few British gardens, one such stately specimen able to be seen in the gardens of Stonefield Castle, Argyll, close to the shores of Loch Fyne. *R. hodgsonii* grows equally well elsewhere, well away from the balmy hug of the North Atlantic Drift, proving to be fully hardy in UK cultivation with a H4-5 rating. Flowering is from March into May, so specimens will need good frost protection when the buds begin to swell. Prior to this, if subjected to intense winter frosts, the leaves, roll-up into tight tubes, then shrivel and hang dejected, drooping from the branch tips, only to unroll and spring back-up once the weather warms. East coast gardeners however, will find that the species develops far more slowly than when sited along the western seaboard, with its more abundant rainfall.

In 1988, a collection made in Bhutan by Peter Cox, Peter Hutchison and Donald Maxwell MacDonald under the field number CH&M 3093, was assessed and classified as *R. hodgsonii* aff. These plants have a much darker, chocolate-brown abaxial indumentum, plus a leaf apex that is often bi-lobed. A number of other gatherings of this taxon have been made elsewhere in Bhutan, as well as in Arunachal Pradesh and eastern Nepal, but the CH&M 3093 population is completely isolated from any other large-leaved rhododendrons and has thus become stabilised-speciated, with hand-pollinated selfed-seedlings uniform in appearance. Ardent supporters clamouring for an upgrade in status are however, still out in campaigning mode.



R. hodgsonii



R. hodgsonii aff. (CH&M 3093)



R. hodgsonii (McBeath 1243)



R. hodgsonii (C&S 1694)



R. hodgsonii (Beer 653)

R. hodgsonii (EN 548)

R. hodgsonii (C&H 581)

R. hodgsonii (TSS 42)

R. falconeri* ssp. *eximium

Hardiness:
H3-4.
Flowering Period:
March-May.
Distribution in the wild:
Bhutan; Arunachal Pradesh, India.
Growing in forests and along ridges at elevations of 2,700-3,400m.

Identification:
Large shrub or tree, rounded, rounded-spreading or upright, 1.5 to 9.2m high;
branchlets densely rufous tomentose;
bark rough, brown and flaking, the underbark smooth, cinnamon-brown.
Vegetative buds rufous tomentose.
Leaves oval through obovate-elliptic, 12 to 45cm long by 5 to 20cm wide,
broadest at the blade mid-point,
apex rounded or obtuse and often emarginate (notched),
base rounded, cordulate or obtuse, retained 1-3-4 years;
upper surface dark green, rugulose, matt, densely rufous-brown tomentose at first,
becoming sparsely through moderately hairy after the first year,
the midrib grooved, the veins deeply impressed;
lower surface indumentum thick and woolly,
the upper layer composed of strongly fimbriate, narrowly cup-shaped hairs,
cinnamon through rusty-brown,
the lower layer thin, compacted, whitish,
the midrib and veins prominent and densely hairy.
Petiole 36-50mm long, cylindric and terete, slightly grooved above,
moderately through densely tomentose, the hairs dark brown or rufous.
Inflorescence 12-20-flowered; bud scales fully or semi-deciduous.
Rhachis rufous tomentose.
Pedicel 30-50mm long, moderately through densely fawn or whitish floccose,
densely short-stalked glandular.
Calyx outer surface and margins floccose and short-stalked glandular.
Corolla 3 to 6cm long, 8-10-lobed, obliquely campanulate, ventricose,
fleshy (heavily textured),
opening rose or cream flushed rose, then quickly fading to creamy-pink.
Stamens 10-14.
Ovary 12-16-celled, glabrous, densely short-stalked glandular.
Style stout, sometimes tomentose and short-stalked glandular at the base,
the stigma small or large.
Capsule 30-50mm long, fawn or rufous tomentose and usually short-stalked glandular.

Seed Collections:

L&S 2989	1937	KR 8079	2005
C&H 427	1965	KR 8604	2006
KCSH 0350	2003	KR 9355	2008
NAPE 0142	2003	KR 9421	2008
AC 5300	2004	KR 9445	2008
AC 5340	2004	KR 9465	2008



R. eximium

Officially, *R. eximium* was found by Thomas Booth during his Kew-sponsored 1849-51 exploration of Assam and Bhutan. Growing with *R. hookeri* on the forested ridges and spurs of the Kingdom's Oola Mountains, the plant hunter's field notes report stately trees of 10m or more emerging from the snow and ice and blizzard conditions of late December, when the species was first discovered, seed and herbarium specimens gathered, the temperature continually well below freezing. Though which December, is unknown.

The species botanic description appeared in Volume 5 of *Hooker's Journal of Botany and Kew Garden Miscellany,* published in 1853, one of twenty-two rhododendrons collected on the expedition and featured in the account written by Thomas Nuttall. One of those new finds was named for Sir William's son, Joseph Dalton - *R. hookeri* - though botanic claws were momentarily unsheathed for a subtle sideswipe at Kew's éminence grise in-waiting, when Nuttall concludes that Hooker Jr. failed to add *R. eximium* to his tally of Sikkim finds, mistaking the rhododendron for one already in the bag, *R. falconeri.*

It is an easy mistake to make as the two plants, now subspecies of that same taxon, are near mirror images of each other, especially when out of flower and seen from a distance. Differences between the two, and between them and *R arizelum,* are outlined above - on page 139 - so are not restated here.

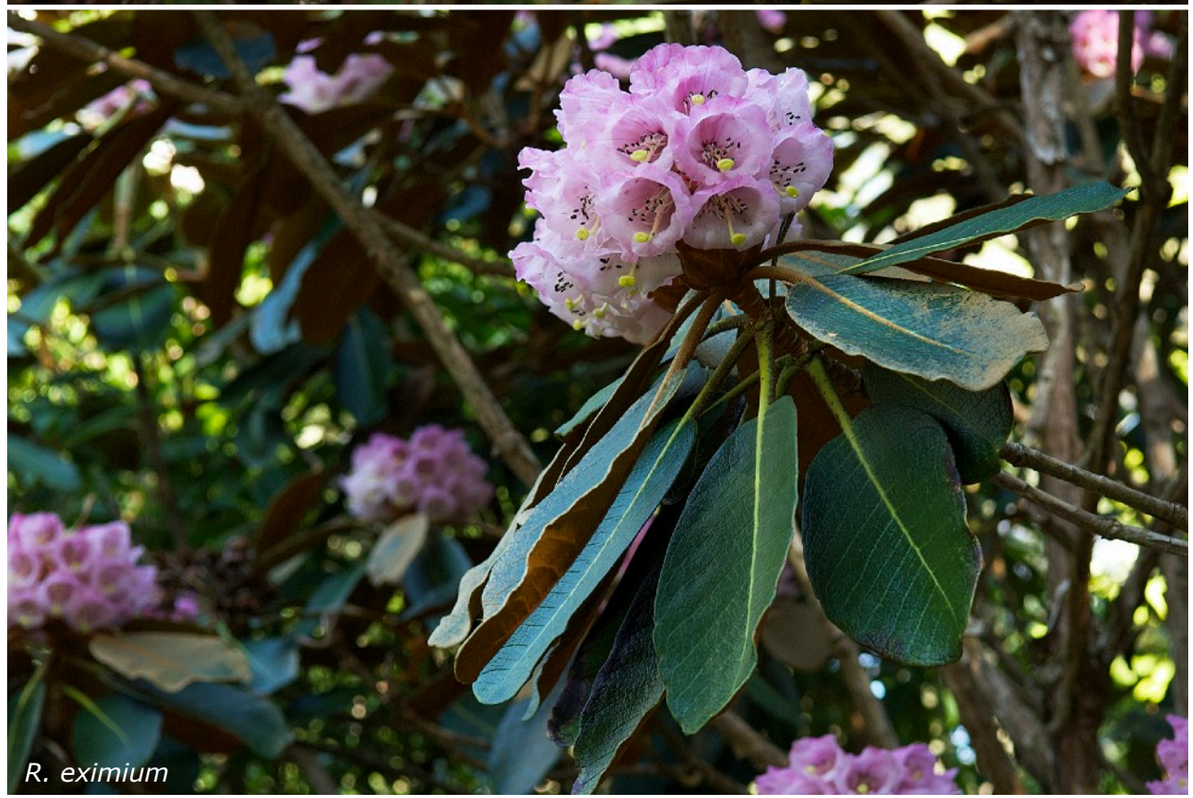
Booth's pre-Christmas gathering also included capsules containing viable seed, this designated as the first introduction of the species into UK cultivation, and some of those now 170-year-old offspring can still be seen flourishing in a few Argyll gardens today, each magnificent in flower with superlative foliage. However, just as he did with *R. falconeri* and Joseph Hooker, Colonel William Henry Sykes also unofficially trumped Booth:

> 'The largest plant I have seen in Britain is the old tree of *R. Falconeri,* var. *eximium,* at Singleton, near Swansea. It was planted about the year 1839 from seed sent from Sikkim by Col. Sykes to Edinburgh. It is still in very good health, living in boggy peat and surrounded by masses of *R. ponticum,* which, although they give shelter, are now interfering with the growth of the outside branches. It carried about 2000 trusses in 1914, but was not going to flower when I saw it in March 1915. I took the following measurements of this giant: 32 ft. high; 27 ft. across; about 40 yards in circumference (but not possible to measure correctly); 73 in. circumference at base of the trunk; 23 in. circumference of each of the tree main stems which branched near the ground.'
> J. G. Millais, *Rhododendrons and the Various Hybrids,* 1917.

R. eximium is not restricted to west coast gardens, but can also be grown along the east coast, though here, plants will require well sheltered nooks to succeed long-term and they will tend to be more compact in their habit, remaining shrubs rather than developing into small trees. They will also be less long lived. Post the Booth gathering, Frank Ludlow and George Sherriff may have introduced seed from Bhutan under L&S 2989 in 1937. This field number listing is unique to Part One of *The Rhododendron Handbook 1967,* within the 'Rhododendrons in Cultivation' section, though its accompanying dried material fell victim to one of Adolf Hitler's bombing raids when the Botany department at the British Museum was hit by the Luftwaffe on September 9th, 1940 - the herbarium, located on the top floor of the east wing, destroyed in the fires that ensued. The species was next collected - or reintroduced - during 1965, Peter Cox and Peter Hutchison, then on only their second expedition, securing capsules from the wilds of the Subsansiri Division of India's North-East Frontier Agency, now of course, Arunachal Pradesh. Yet even with the ten additional seed lots gathered this side of the Millennium, the total returned is not even a third of the batch count for ssp. *falconeri*.



R. eximium (C&H 427)



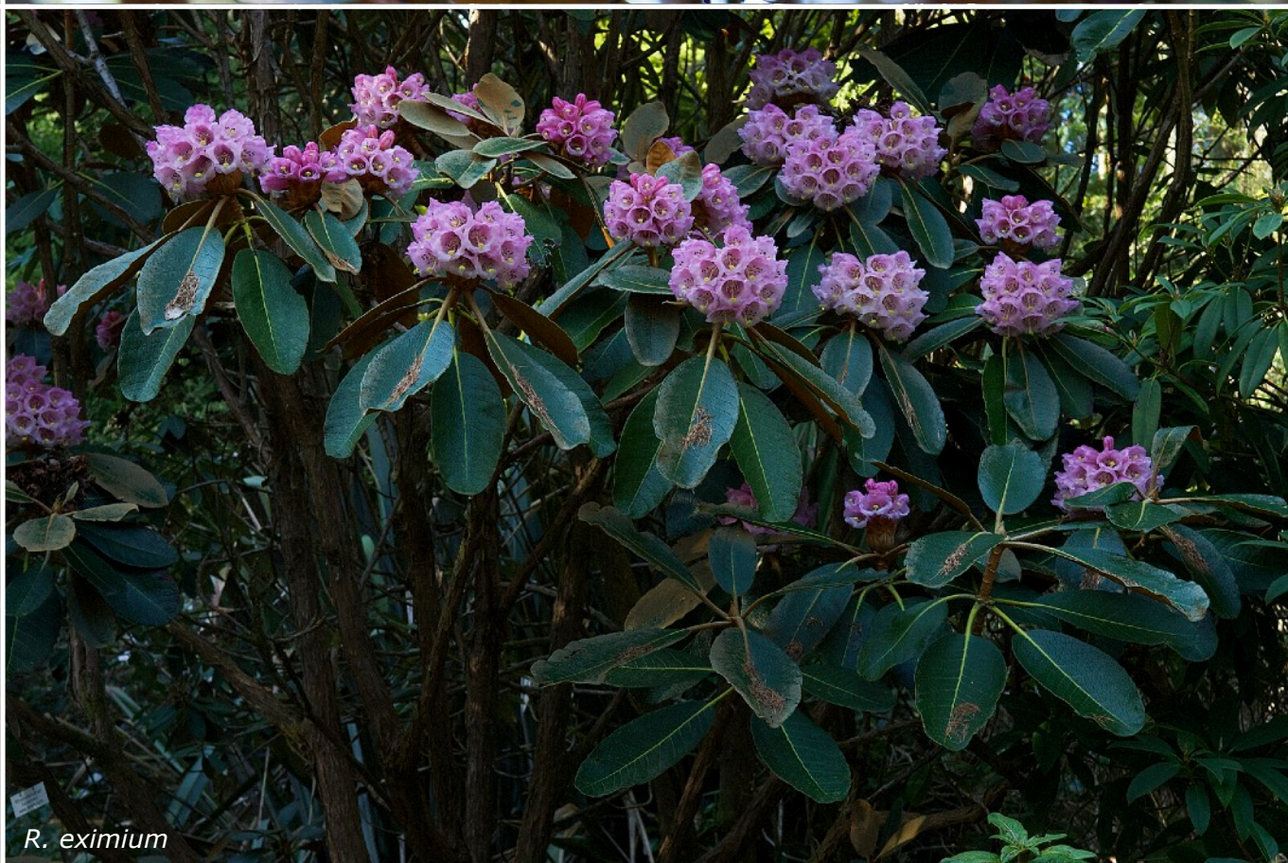
R. eximium



R. eximium



R. eximium



R. eximium

R. eximium

R. rex* ssp. *fictolacteum

Hardiness:
H4-5.
Flowering Period:
April-May.
Distribution in the wild:
NE Upper Myanmar; E & SE Tibet; SW Sichuan, NW & W Yunnan, China.
Growing in rhododendron thickets and mixed or conifer woodland,
at elevations of 2,900-4,300m.

Identification:
Large shrub or small tree, rounded-spreading or upright, 2.5 to 7m high, but often to 12m;
branchlets densely tomentose, the hairs whitish, fawn, cinnamon, brown or dark brown;
bark rough, brown or grey-brown, striate when grey-brown, peeling,
the underbark smooth, cinnamon-brown.
Vegetative buds brown, fawn or whitish tomentose.
Leaves obovate through oblanceolate, 8 to 30cm long by 3.5 to 8.5cm wide,
apex obtuse or rounded, base cuneate or rounded, retained 2-5 years;
upper surface very dark green, reticulate, somewhat rugulose, shiny, glabrous at maturity,
the midrib grooved, the veins deeply impressed;
lower surface indumentum thick and woolly, rough,
the upper layer composed of moderately fimbriate, broadly cup-shaped hairs,
dark brown through rufous, rarely cinnamon or fawn-coloured,
the lower layer thin, compacted, whitish,
the midrib and veins prominent and often densely hairy.
Petiole 16-35mm long, cylindric and terete, occasionally slightly grooved above,
densely tomentose, the hairs whitish, fawn, cinnamon through dark brown.
Inflorescence 12-20-30-flowered.
Rhachis 10-25mm long, whitish, fawn, cinnamon or brown tomentose.
Pedicel whitish, fawn, cinnamon or brown tomentose.
Calyx margins sometimes glabrous.
Corolla 3 to 5cm long, 7-8-lobed, fleshy, obliquely through regularly campanulate,
the lobes with frilled or serrated margins,
white, white flushed rose, pink, pale lilac through mauve, or crimson-rose,
usually with a crimson basal blotch and spots.
Stamens 14-16, the anthers pinkish-brown;
filaments pubescent at the base.
Ovary 7-9-celled.
Stigma sometimes swollen.
Capsule 23-40mm long.

Seed Collections:

F 5843	1910	R 11290	1923/1924	R 23586	1932	CNW 715	1994
F 10974	1912/1914	R 11378	1923/1924	R 25306	1932	CNW 720	1994
F 12948	1912/1914	R 11395	1923/1924	R 25396	1932	CNW 728	1994
F 14063	1917/1919	R 11397	1923/1924	R 25414	1932	CNW 731	1994
F 14231	1917/1919	R 11452	1923/1924	R 25418	1932	CNW 738	1994
F 15168	1917/1919	F 25512	1924/1925	R 25424	1932	CNW 791	1994
F 15977	1917/1919	F 25719	1924/1925	R 25441	1932	SICH 1473	1994
F 17205	1917/1919	F 25896	1924/1925	R 25444	1932	FED 328	1995
F 19555	1921/1922	R 18447	1929	R 25447	1932	AC 1925	1996
F 20120	1921/1922	R 18451	1929	R 25448	1932	AC 1937	1996
F 20817	1921/1922	R 18452	1929	R 25466	1932	AC 1938	1996
F 21539	1921/1922	R 18459	1929	Yu 14953	1937	AC 1942	1996
F 21771	1921/1922	F 30893	1930/1931	LS&E 13609	1946/1947	AC 1946	1996
F 21863	1921/1922	R 22021	1932	R 193	1948/1949	AC 1964	1996
F 21867	1921/1922	R 22023	1932	SBEC 160	1981	AC 1978	1996
F 21868	1921/1922	R 22025	1932	SBEC 534	1981	KR 4054	1996
F 22020	1921/1922	R 22037	1932	SBEC 897	1981	Henriksen 102	1997
F 22703	1921/1922	R 22038	1932	SBEC 957	1981	Henriksen 116	1997
F 22785	1921/1922	R 22039	1932	SBLE 437	1987	JN 330	1997
F 22890	1921/1922	R 22091	1932	CLD 1295	1990	JN 335	1997
R 6295	1923/1924	R 22117	1932	H&M 1466	1990	JN 1030	1999
R 6309	1923/1924	R 22219	1932	SSNY 90	1992	ZH-G 085	2006
R 6831	1923/1924	R 22220	1932	AC 678	1993	C&N 6086	2007
R 10921	1923/1924	R 22227	1932	AC 694	1993	C&N 6087	2007
R 11043	1923/1924	R 22231	1932	AC 695	1993	C&N 6088	2007
R 11159	1923/1924	R 22233	1932	KR 2750	1993	C&N 6095	2007
R 11187	1923/1924	R 22279	1932	KR 2763	1993	JN 12155	2012
R 11242	1923/1924	R 22307	1932	AGS 2091	1994	JN 12208	2012
R 11244	1923/1924	R 23453	1932	CNW 691	1994	FB22-2018	2018
R 11286	1923/1924	R 23555	1932	CNW 707	1994		

Since its formation in 1658, the Société des Missions Étrangères de Paris has sent out more than 4,200 secular Catholic priests to evangelise non-Christian countries through the establishment of a native clergy. Many of these French seminarians were based in the Far East and Asia, and of these, a substantial number found the fauna and flora around their mission stations to be of more immediate interest than a recruitment drive for the non-existent supernatural apparition they worshipped. Many of these individuals - Delavay, Farges, Faurie and Soulié, to mention but four - were able to range quite far afield, and it was one of these priest-botanists, Jean-Marie Delavay, who found *R. fictolacteum* on the mountains of western Yunnan during May 1886, while collecting above Lankiung, to the north-east of Dali.

Abbé Delavay despatched his herbarium specimens and seed to Paris, where Adrien Franchet penned the botanic description. Except in this case, the maestro made a boo-boo, wrongly identifying the species and naming it *R. lacteum* var. *macrophyllum* in Volume 44 of the *Bulletin de la Société Botanique de France,* which was published in 1887. William Botting Hemsley, Keeper of the Herbarium and Library at the Royal Botanic Garden, Kew, made a similar mistake in 1911, his *R. lacteum* inadvertency appearing in Volume 137 of *The Botanical Magazine*. So it was not until 1916 when Sir Isaac Bayley Balfour twigged to the fact that a new-to-science species was to hand. One, moreover, that had no association whatsoever with *R. lacteum,* but hence the tongue-in-cheek 'false' addition to the epithet, following the application of which, an accurate botanic description was finally published in Volume 59 of *The Gardeners' Chronicle*.

Back in May 1911, Édouard-Ernest Marie, another sky pilot - actually the Pro-Vicar Apostolic of Yunnan - discovered *R. rex* while exploring Mount Io-Chan (Lo-Shan) in the northeast of the Province. His specimens went to Augustin Léveillé, an MEP alumnus who had returned to France from India due to poor health - he had been Professor of Natural History at the College of Pondicherry, a French settlement in Tamil Nadu - and his 1914-published botanic description of the find resides in *Repertorium Specierum Novarum Regni Vegetabilis,* Volume 13. All of which, taken together, explains why the 1886-discovered *R. fictolacteum* did not precede 1911's *R. rex* when the Edinburgh Revision's epithet shuffle reduced their ranking to subspecies status in Part Two of the *Preliminary Synopsis* paper (*Notes from the Royal Botanic Garden, Edinburgh, V*olume 37, 1979), a change imposed because there is no clear-cut morphologic character to differentiate the two.

The leaves and flowers of *R. fictolacteum* will be found to be smaller - the blades 8 to 30cm long by 3.5 to 8.5cm wide, instead of the 8 to 37cm, and 4 to 13.5cm of *R. rex;* the corollas, 3 to 5cm long, rather than 3.8 to 7cm - while the branch and leaf indumentum are darker coloured. Viewed with a microscope capable of 50x to 125x magnification, the hairs in the upper layer of abaxial tomentum will be seen to be a touch more fimbriate (fringed), than those of *R. rex,* but the difference is hardly worth the trouble involved to prove such. Equally, the *R. rex* hairs tend to be detersile, with the upper layer usually partially shed, but never fully lost, a feature that is not characteristic of *R. fictolacteum,* where the hairs persist into maturity.

In the wild, such blurring is also apparent in the geographic boundary between the two taxa, this never black and white, but ambiguous: in the northeast of the overall distribution *R. rex* will be found - in southern Sichuan, the populations extending across the border into the northeast of Yunnan; in the west, *R. fictolacteum* - endemic to east and southeast Tibet, northwest and west Yunnan, northeast Upper Myanmar and southwest Sichuan; but where one replaces the other is anyone's guess. There is also an altitudinal difference in their range, with *R. rex* found from 2,300 to 4,300m, while *R. fictolacteum,* although sharing the same upper limit, is absent until the 2,900m contour is crossed.

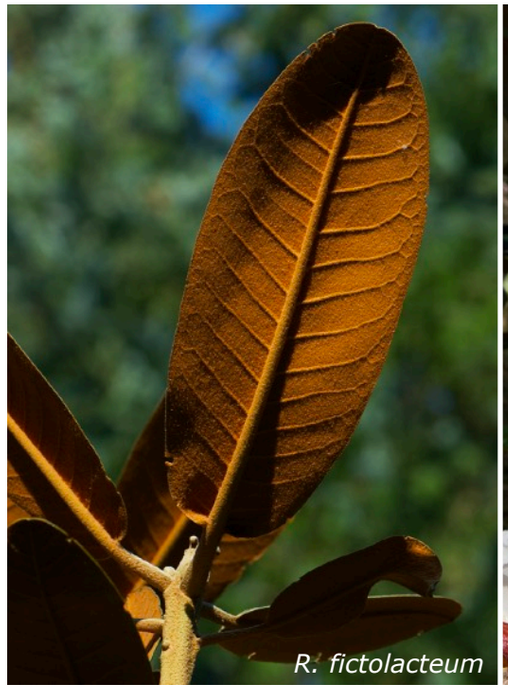
Thankfully, each subspecies is easily distinguished from all the other members of Subsection *Falconera* when the glossy dark green leaves, the fawn through rusty-red lower leaf surface indumentum - rough to the touch, not smooth - and the non-ventricose, frilly-margined corollas in shades of white or pink, are considered together.

Forms of *R. fictolacteum* with a lower stature - mature plants below 3.5m height in cultivation, or 6m in the wild - that have shorter leaves - to no more than 14cm long - and smaller corollas, were previously classified as *R. fictolacteum* var. *miniforme* by H. H. Davidian (*The Rhododendron Species,* Volume 2, 1989). First collected by George Forrest during June 1924 on the Mekong-Yangtze Divide of northwestern Yunnan, the Edinburgh Revision convolutions reduced these plants to synonymy under *ssp. fictolacteum.* However, field reports are still outstanding on whether - as suspected - there is a niche distribution at an altitude higher than the type species. If this were confirmed, a re-instatement of varietal, or upgrade to subspecies status would likely result, so the epithet is maintained in the meantime, courtesy of the RHS, as Miniforme Group.

Natural hybrids between *R. rex* ssp. *fictolacteum* and *R. arizelum* ssp. *arizelum* have been found in some regions of southeast Tibet.

Seedlings of *R. fictolacteum,* grown from Delavay's 1886 find by the propagators at the Jardin des Plantes in Paris, were sent across the Channel to Kew in 1889, with some of these then distributed onward to a number of other British gardens. The specimen growing at South Lodge, then the Sussex home of Frederick DuCaine Godman, was the first to open its blooms, flowering in the spring of 1910.

For a large-leaved rhododendron, ssp. *fictolacteum* is remarkably hardy, thriving in what are quite cold gardens along Scotland's northeastern coast, as well as at other sites a fair distance inland, though the leaves still require protection from high winds. Given that shelter, specimens can develop into stunning foliage plants around 5m or more high, these well-bedecked with large trusses of white, pink or rose coloured flowers. The young growth, initially clothed in a white woolly tomentum, is equally beguiling.


R. fictolacteum


R. rex

R. fictolacteum

R. fictolacteum (SBEC 957)

R. fictolacteum (F 25512)

R. fictolacteum (R 193)

R. coriaceum

R. coriaceum

Hardiness:
H3-4.
Flowering Period:
April.
Distribution in the wild:
SE Tibet; NW Yunnan, China; NE Myanmar.
Growing in rhododendron thickets and forest, and in conifer forest,
at elevations of 2,900-4,150m.

Identification:
Large shrub or small tree, upright, rounded-spreading or flat-topped,
2 to 7.6m high, occasionally to 10m;
branchlets somewhat thin, densely greyish-white tomentose;
bark rough, brownish-grey and flaking.
Leaves obovate-elliptic through oblanceolate, 9 to 25cm long by 3 to 8.7cm wide,
apex obtuse or rounded, and apiculate, base cuneate or tapered, rarely rounded,
retained 3-4 years;
upper surface olive-green, matt, somewhat rugulose, glabrous,
the midrib grooved and the veins deeply impressed;
lower surface indumentum thick, finely-textured, soft and smooth at first,
the upper layer composed of slightly fimbriate, broadly cup-shaped hairs, whitish or fawn,
quickly becoming foveolate and partly detersile, and often completely lost,
the lower layer thin, compacted, whitish, silvery-white or fawn,
the midrib prominent.
Petiole 14-40mm long, cylindric and terete, slightly grooved above,
variably whitish tomentose.
Inflorescence 10-20-flowered, more rarely 6-8-flowered.
Rhachis 10-20mm long, densely whitish or rusty-brown tomentose.
Pedicel stout, fawn or rusty-brown tomentose.
Calyx margins sometimes glabrous.
Corolla 2 to 4cm long, 5-7-lobed, funnel-campanulate,
white, sometimes flushed pink or rose, rarely rose,
with a crimson basal blotch and occasionally spotting.
Stamens 10-14; filaments pubescent at the base.
Ovary 7-10-celled, oblong or terete, densely rufous tomentose.
Capsule 18-40mm long, oblong or terete.

Seed Collections:

F 16361	1918	F 25784	1924/1925	R 140	1948/1949
F 16364	1918	F 25822	1924/1925	KR 2710	1993
F 21818	1921/1922	F 25872	1924/1925	CNW 577	1994
F 21843	1921/1922	R 18385	1929	Cox 6531	1994
F 21899	1921/1922	R 18407	1929	AC 1921	1996
R 10955	1923/1924	R 23589	1932	OJL 10-39	2010
R 11069	1923/1924	McLaren A 183	1932/1939	JN 12131	2012
R 11644	1923/1924	McLaren D274	1932/1939	JN 12175	2012
F 25622	1924/1925	R 120	1948/1949	BE 15-40	2015
F 25630	1924/1925			BE 15-45	2015

R. foveolatum was described and named by Ernest Wilson and Alfred Rehder in Volume 1 of *Plantae Wilsonianae,* which was published in 1913. The Latin epithet highlights the honeycombed and pitted nature of the abaxial leaf indumentum and would have been a far more descriptively useful appellation had the nomenclature precedence rules not struck and required synonymy to be imposed. For eighteen years earlier, Jean-Andre Soulié, the French missionary priest, had found *R. coriaceum* growing near Tsekou in the northwest of Yunnan during the spring of 1895 and swiftly despatched specimens back to Paris. Where, despite a three-year delay before the species botanic description was published - in the *Journal de Botanique,* Volume 12, during 1898 - Adrien Franchet still trounced Wilson and Rehder to gift the species the unprepossessing moniker - ‘leathery’.

That lower leaf surface indumentum is also one of the key identifiers separating *R. coriaceum* from its relatives. Smooth, soft and continuous when the leaves first expand, blemishes and pockmarks soon appear across the whole upper stratum, then wider gaps form as more hairs fall away or are worn off, with the entire top layer often lost, revealing the silvery-white compacted cloak beneath. This near-wholly detersile characteristic is not a feature of either subspecies of *R. rex,* to which *R. coriaceum* is most closely allied, nor is the lustreless nature of its leaves, which in both ssp. *rex* and ssp. *fictolacteum* are dark green and shiny, as opposed to olive green and matt. Those usually long and narrow, oblanceolate-shaped blades, palely indumented on relatively thin branchlets, also cleave *R. coriaceum* from Subsection *Falconera’s* remaining complement of members.

R. coriaceum was first introduced into the UK’s woodland gardens during 1918 via two seed lots gathered by George Forrest, and though the species has been in cultivation ever since, it is not widely planted, perhaps because some specimens have quite small flowers in poorly populated trusses. The best clones however, plants sourced from two of the Scotsman’s later expeditions - F 21843 and F 25872, collected in 1923 and 1925 respectively - can only be described as show stealers.

All the various introduced forms will be found to be hardy and free-flowering once mature, with beguiling white young growth.



R. coriaceum (F 25872)



R. coriaceum



R. coriaceum (F 21843)

R. sinofalconeri

Hardiness:
H3-4.
Flowering Period:
April-May.
Distribution in the wild:
SE Yunnan, China; N Vietnam.
Growing in thickets, bamboo forests and mixed woodland at elevations of 1,600-3,000m.

Identification:
Large shrub or small tree, compact and spreading, 3 to 7m high, occasionally to 10m;
branchlets densely tomentose, the hairs fawn or greyish;
bark smooth, brown, flaking.
Vegetative buds smooth and without tomentum, the scales without acuminate tips.
Leaves broadly obovate through oblong-elliptic, 14.5 to 32cm long by 8.6 to 18cm wide,
apex obtuse or rounded, base wide, cuneate or rounded, retained 1-2-3 years;
upper surface pale green, somewhat rugulose, matt, glabrous,
the midrib flat or grooved, the veins deeply impressed;
lower surface indumentum unistrate or bistrate, thick and woolly, soft and spongy,
the upper layer composed of moderately fimbriate, broadly cup-shaped,
cinnamon or pale brown hairs,
the lower layer when present thin, compacted, ash-grey or whitish,
the midrib and veins prominent, glabrous.
Petiole 15-45mm long, cylindric and terete, occasionally slightly grooved above,
sparsely fawn or whitish tomentose.
Inflorescence 10-20-flowered;
the bud scales smooth and without tomentum, the outer with quite long acuminate tips.
Corolla 3.5 to 6cm long, 8-lobed, obliquely campanulate, ventricose,
pale through deep yellow fading to white,
with or without a small crimson blotch at the base of the upper lobes.
Stamens 16; filaments pubescent at the base.
Ovary 10-17-celled, terete, densely fulvous lanate-tomentose.
Stigma large.
Capsule 30-40mm long, slightly curved.

Seed Collections:

Tran 35	1993	C&G 5684	2006
AC 1213	1995	C&G 5687	2006
C&H 7183	1995	CWT 6336	2011
KR 7342	2001	CWT 6405	2011

Although only introduced into UK cultivation in the mid 1990s, *R. sinofalconeri* was first discovered during 1898, Augustine Henry encountering a population of plants growing on the mountain summits near Mengtz (now Mengzi City), in the southeast of Yunnan, at altitudes around the 2,700m contour. A botanic description, based on Henry's herbarium specimens, was written by Sir Isaac Bayley Balfour in 1916 and appears in Volume 9 of *Notes from the Royal Botanic Garden, Edinburgh.*

The species is closely related to *R. falconeri,* but differs in having: an ovary, calyx and pedicel that are without sticky glands; an abaxial leaf indumentum that is cinnamon or pale brown, instead of rufous or dark brown; leaves that are pale rather than dark green and retained for only one or two years, rarely for three and never for four; and vegetative buds that are smooth, without tomentum, the outer scales of which lack long acuminate tips. A resemblance to *R. macabeanum* is clearly apparent in the flower colour and leaf shape, but a darker abaxial indumentum and lower, less upright habit of growth, differentiate the two, as of course does the presence of those cup-shaped hairs in the *R. sinofalconeri* bistrate, or sometimes unistrate, leaf indumentum.

In addition to the type location, *R. sinofalconeri* is now known to be resident on the mountains of neighbouring Vietnam. Here, the plants have a more acute leaf apex, darker-toned abaxial indumentum, and their growth buds are much more tapered when expanding than their Chinese equivalents, such minor feature differences expected from disjunct populations some sixty to ninety miles apart.

Seed of *R. sinofalconeri* was first collected by Tran Van On, Head of Botany at the Hanoi University of Pharmacology, in late 1993, and sent to Edinburgh Botanic along with a number of other native rhododendrons. The capsules were gathered from plants growing near Sa Pa, on Fansipan - Phan Xi Păng in Vietnamese - at 3,143m, the country's highest peak, this located in Lào Cai Province, close to the border with China, the mountain an eastern adjunct of the Himalaya. Two Western expeditions later rediscovered the Henry plant populations in adjacent southeast Yunnan and both returned seed: Peter Cox and Peter Hutchison (under the field number C&H 7183); and Alan Clark (under AC 1213).

Coming from quite low elevations, horticulturalists initially feared that the species would require frost-free conditions to prosper - indeed survive - in the UK's woodland gardens, but specimens of *R. sinofalconeri* have successfully braved the recent harsh winters at Edinburgh Botanic, and at Glendoick, near Perth, and are thriving at Benmore and many other west coast sites. The flowers proved to be just as stunning as was hoped, with the first blooms appearing around ten years from sowing, and cultivation has so far proved to be without problem.

R. sinofalconeri (C&H 7183)



R. sinofalconeri (AC 1213)



R. sinofalconeri (AC 1213)



R. sinofalconeri (AC 1213)

R. sinofalconeri (AC 1213)

R. galactinum

Hardiness:
H5.
Flowering Period:
April-May.
Distribution in the wild:
C & W Sichuan, China.
Growing in thickets and open woodland on mountain slopes,
and in wooded gorges alongside streams, at elevations of 2,300-3,500m.

Identification:
Large shrub or small tree, upright or upright-spreading, 5 to 9m high;
branchlets moderately through densely brown tomentose;
bark rough, greyish- or orange-brown, flaking.
Vegetative buds ovoid or conoid, the scales shortly acuminate.
Leaves ovate-lanceolate through oblanceolate, 11 to 22cm long by 3.8 to 8cm wide,
broadest at or above the blade mid-point,
apex rounded, obtuse or shortly acuminate, base broadly tapered, cuneate or rounded,
retained 2-4 years;
upper surface mid- to dark green, somewhat rugulose, reticulate, glabrous and smooth,
the midrib flat or grooved, the yellowish veins deeply impressed;
lower surface indumentum thick and soft, somewhat smooth,
the upper layer composed of strongly fimbriate, narrowly cup-shaped hairs,
fawn, cinnamon-brown or brown,
the lower layer thin, compacted, whitish,
the midrib and veins prominent, the veins sometimes hairy.
Petiole 14-35mm long, cylindric and terete, often slightly grooved above,
moderately through densely brown tomentose or glabrescent.
Inflorescence 9-15-flowered.
Rhachis 10-20mm long, white or brown tomentose.
Corolla 3 to 5cm long, 7-lobed, campanulate,
white through pale rose, with a crimson basal blotch and spots.
Stamens 14; filaments pubescent at the base.
Ovary 8-10-celled, glabrous, but sometimes sparsely rufous-hairy.
Capsule 21-31mm long, glabrous.

Seed Collections:

W 4254	1910	CEE 450	1991
CCH 4023	1989	EN 3537	> 1985
Cox 5101	1990	AC 5202	2002
EGM 158	1990	JN 12060	2012

R. galactinum was discovered by Ernest Wilson in October 1910 while on his second expedition to China for the Arnold Arboretum. A group of plants were found growing in woodland, at Panlan Shan to the west of Kuan Hsien (Guan Xian), in western Sichuan, and until the late 1980s, when the species was re-introduced, each and every specimen in UK cultivation had been raised from that single gathering, W 4254.

Writing in *Plantae Wilsonianae,* Wilson and his co-author, Alfred Rehder, had named the find *R. lacteum* and described it from the fruiting specimens collected. Isaac Bayley Balfour had also written a description from those herbarium plates, but wisely delayed publication until the seedlings flowered. This event took place at Caerhays Castle, Cornwall, in 1926, the juveniles raised by J. C. Williams, which meant Harry Tagg was at last able to posthumously complete Balfour's prose, coining the epithet 'milky'. The full botanic description for *R. galactinum* can therefore be found in Volume 15 of *Notes from the Royal Botanic Garden, Edinburgh,* the Wilson-Rehder epithet, duplicating one conceived by Adrien Franchet nearly three decades earlier, illegal under the nomenclature rules.

The glabrous and eglandular ovary is the key characteristic used to identify *R. galactinum* from its subsection relatives, with the large, densely tomentose vegetative buds a useful secondary validation, their rounded and shortly acuminate scales equally unique, though *R. basilicum* and *R. rothschildii* have ovate-shaped scales with short tapering tips.

Endemic to central and western Sichuan, it is therefore a geographic outlier within Subsection *Falconera,* this confirmed by the data set published in the 2010 scientific study *A Phylogeny of Rhododendron subgenus Hymenanthes based on Chloroplast DNA Markers,* which deemed it a molecular outlier too.

Written by a joint team from Edinburgh University and the Royal Botanic Garden (led by Richard Milne and David Chamberlain) the results showed that *R. galactinum* fell just outside - directly above - the clade containing all the other Subsection *Falconera* species tested. However, as the authors state, the likelihood that fimbriate cup-shaped hairs could have evolved twice, separately, and in parallel, was highly unlikely. That the species must have arisen from hybridisation is equally, a no-brainer, but unlike *R. semnoides,* the pairing that produced the now uniform, though natively rare flocks of *R. galactinum,* was not with a member of Subsection *Grandia* - whose chloroplasts placed *R. grande, R. pudorosum* and *R. macabeanum* in the exact same clade as *R. falconeri, R. rothschildii, R. semnoides* and *R. sinofalconeri* - but with another elepidote taxon. But not *R. barbatum, R. succothii* or *R. fulgens,* which were also present and correct alongside the aforementioned seven. However, given the presence of those cup-shaped hairs, the Milne-Chamberlain team decided the status quo classification of *R. galactinum* should be maintained until additional molecular examination has been completed.

David Chamberlain was also a member of the team that rediscovered the species on an expedition to Sichuan in 1989, he, Peter Cox and Peter Hutchison re-introducing seed into British gardens on their return, with six other collections made subsequently. The date of the Edward Needham gathering is unclear and it may possibly have preceded the four entries above it, in the table opposite.

Cultivated plants of *R. galactinum,* despite sometimes displaying pale leaves with a distinctly yellowish cast, are easy to grow, and with their H5 rating, the hardiest members of the subsection, indeed, they succeed in colder gardens where most other large-leaved species would turn up their toes. When mature, plants are free-flowering, forming upright shrubs around 5m tall. Clones with rose-flushed corollas are the more ornamental, but some of the recently introduced forms have a less populated and looser truss than found on the Wilson 4254 plants. Shelter from wind is still a must-have requirement however, as the *R. galactinum* blades can attain 22cm in length by 8cm in width.



R. galactinum (CC&H 4023)



R. galactinum (CEE 450)



R. galactinum (W 4254)



R. galactinum (EN 3537)

R. galactinum (W 4254)

R. rex* ssp. *rex

Hardiness:
H4-5.
Flowering Period:
April-May.
Distribution in the wild:
S Sichuan & NE Yunnan, China.
Growing in rhododendron thickets or forests, and in mixed or conifer woodland,
at elevations of 2,300-4,300m.

Identification:
Large shrub or small tree, rounded, rounded-spreading or broadly upright,
2.5 to 7m high, but often to 12m;
branchlets densely tomentose, the hairs whitish, fawn or brown;
bark rough, brown or grey-brown, striate when grey-brown, peeling,
the underbark smooth, cinnamon-brown.
Vegetative buds fawn or whitish tomentose.
Leaves obovate through oblanceolate, 8 to 37cm long by 4 to 13.5cm wide,
apex obtuse or rounded, base cuneate or rounded, retained 2-4 years;
upper surface dark green, reticulate, somewhat rugulose, shiny, glabrous at maturity,
the midrib grooved, the veins deeply impressed;
lower surface indumentum thick and woolly, rough,
the upper layer composed of slightly fimbriate, broadly cup-shaped hairs,
whitish, fawn, brown, rufous or coffee-coloured,
moderately detersile at maturity, but rarely completely lost,
the lower layer thin, compacted, whitish, silvery-white or fawn,
the midrib and veins prominent and moderately through densely hairy.
Petiole 25-45mm long, cylindric and terete, occasionally slightly grooved above,
moderately through densely tomentose, the hairs whitish, fawn or brown.
Inflorescence 12-20-30-flowered.
Rhachis fawn, cinnamon or brown tomentose.
Pedicel fawn, cinnamon or pale brown tomentose.
Calyx margins sometimes glabrous.
Corolla 3.8 to 7cm long, 7-8-lobed, fleshy, obliquely through regularly campanulate,
ventricose, the lobes with frilled or serrated margins,
white, creamy-white, white flushed pink, pink or rose, sometimes pale yellow,
usually with a purple or crimson basal blotch and spots.
Stamens 14-16, the anthers pale brown or dark purple; filaments pubescent at the base.
Ovary 8-10-celled.
Stigma sometimes swollen.
Capsule 23-50mm long, rufous tomentose.

Seed Collections:

F 16655	1917/1919	R 18234	1929	AC 901	1995
KW 4509	1921	R 22229	1932	C&H 7003	1995
F 20381	1921/1922	R 24569	1932	C&H 7034	1995
F 20498	1921/1922	R 24573	1932	EGM 295	1995
F 20821	1921/1922	SICH 1037	1992	C&N 6091	2007
F 21869	1921/1922	SICH 1134	1992	NN 0942	2009
F 22770	1921/1922	SICH 1152	1992	CDHM 14520	2010
F 22772	1921/1922	SICH 1153	1992	JN 11084	2011
F 22784	1921/1922	SICH 1154	1992	CNC 12091	2012
F 22788	1921/1922	SICH 1236	1992	JN 12254	2012
R 11640	1923/1924	CNW 945	1994	JN 12278	2012
R 11642	1923/1924	CNW 949	1994	JN 12292	2012
F 25959	1924/1925	CNW 954	1994	BE 13-23	2013

R. rex was discovered by the Pro-Vicar Apostolic of Lower Yunnan, Monseigneur Edouard Ernest Ferdinand Marie, while out botanising on Mount Io-Chan (now, Lo-Shan), near his church at Tong-tchouan, in the northeast of the province, during May 1911. It was described by Augustin Léveillé in the 1914-published Volume 13 of *Repertorium Specierum Novarum Regni Vegetabilis*.

The taxon differs from its sibling subspecies *R. fictolacteum* in having larger leaves and flowers, along with lighter coloured tomentum on the branchlets and leaf undersides. The semi-permanent upper layer of the bistrate abaxial indumentum on those blades falls away over time, revealing the thin, plastered layer of silvery-white hairs beneath. This characteristic is not repeated in ssp. *fictolacteum,* so it too can aid identification even though the covering is very rarely lost completely. On the ground in China, as explained fully on page 155, the two subspecies will be found to merge, making a correct taxonomic placement even harder.

The morphological features that identify the species from the other rhododendrons that reside within Subsection *Falconera* include the shiny dark green leaves, plus the indumentum and flower colour.

Seed collected by George Forrest in 1917 was the first introduction of *R. rex* into UK cultivation, as an earlier 1913 gathering proved to be ssp. *fictolacteum* when reassessed by the Edinburgh Revision botanists - F 16655 and F 10974, respectively. For a large-leaved rhododendron, the species is remarkably hardy, flourishing in what are quite cold gardens along Scotland’s northeastern coast and others some distance inland, though of course, the foliage still needs adequate protection from high winds. Given that shelter, specimens can develop into stunning foliage plants around 5m high, well-bedecked with large trusses of white, pink or rose flowers in April-May.



R. rex (SICH 1037)


R. rex (AC 901)


R. rex (SICH 1134)


R. rex (C&H 7003)

R. rex

R. basilicum

Hardiness:
H3-4.
Flowering Period:
March-May.
Distribution in the wild:
W Yunnan, China; NE Myanmar.
Growing in mixed or *Abies* woodland at elevations of 2,400-3,700m.

Identification:
Shrub or small tree, compact and rounded, rounded-spreading or flat-topped,
3 to 10m high; branchlets moderately through densely tomentose,
the hairs fawn, greyish, whitish, or brown; bark rough, grey-brown, flaking.
Vegetative bud scales shortly acuminate.
Leaves obovate through oblanceolate, 10 to 36cm long by 5 to 18.6cm wide,
apex rounded and apiculate, base obtuse or cuneate, decurrent on the petiole,
retained 2-3 years;
upper surface dark green, somewhat rugulose,
glabrous and shiny or with a semi-persistent tomentum,
the midrib flat or somewhat grooved, the veins deeply impressed;
lower surface indumentum thick and woolly, smooth,
the upper layer greyish-cream at first, usually becoming rufous, brown or fawn,
composed of only slightly fimbriate but broadly cup-shaped hairs, often partly detersile,
the lower layer thin, compacted, whitish,
the midrib and veins prominent.
Petiole 15-35mm long, strongly flattened, terete, winged or ridged at the margins,
moderately through densely tomentose, the hairs whitish, fawn or brown, glabrescent.
Inflorescence 10-25-flowered.
Rhachis stout, often rufous tomentose, the hairs short.
Corolla 3.5 to 5cm long, obliquely campanulate, ventricose, 8-lobed, fleshy,
white, cream or pale yellow, rarely rose, often flushed or lined pink or purple,
with or without either or both a crimson blotch and spots.
Stamens 16, rarely 18, the anthers brown; filaments usually glabrous.
Ovary 9-15-celled, densely rufous tomentose.
Stigma sometimes swollen.
Capsule 18-40mm long, rufous tomentose.

Seed Collections:

F 12078	1913	F 25100	1924/1925	KR 2657	1993
F 12109	1913	F 26043	1924/1925	AC 3009	1996
F 15764	1917/1919	F 26081	1924/1925	AC 3014	1996
F 16002	1917/1919	F 26922	1924/1925	AC 3029	1996
F 17650	1917/1919	F 27413	1924/1925	AC 3045	1996
F 17678	1917/1919	F 27459	1924/1925	AC 3048	1996
F 17927	1917/1919	R 25393	1932	DGEY 405	2001
F 18052	1917/1919	AC 609	1993	KR 7532	2002
F 18108	1917/1919	AC 610	1993	KR 7540	2002
Farrer 873	1919	AC 611	1993	KR 7609	2002
F 24139	1924/1925	AC 613	1993	C&N 5835	2007
F 24225	1924/1925	AC 616	1993	JN 11056	2011
		AC 808	1993		



R. basilicum

R. basilicum was first encountered on the Shweli-Salween Divide in western Yunnan by George Forrest during June 1913 and described jointly by Isaac Bayley Balfour and William Wright Smith in Volume 9 of *Notes from the Royal Botanic Garden, Edinburgh,* published in 1916. The key features that identify the taxon from its Subsection *Falconera* cohorts are, in combination, the usually short, flattened petioles, these winged or fairly broadly ridged along the margins, and the physical characteristics of the hairs in the upper layer of indumentum on the leaf underside. In cross section, the *R. basilicum* petiole will be seen to have a distinctly level top that is occasionally slightly grooved, and the tapering leaf base, extending down each side, forms the wings. Under magnification, the upper layer of abaxial hairs will be seen to have a short stalk, topped by a head that is shaped like a wide bowl or cup, the rim of which, is only slightly fringed - in botanical-speak, fimbriate.

With regard to its subsection associates:

R. semnoides, which is as close to a mirror image of *R. basilicum* as you can get while still retaining specific status, displays hairs that have a long, dense fringe and a much more narrowly shaped head - in effect, a goblet rather than a cup. *R. rothschildii,* on inspection, will be found to have a thin and granular two-layered indumentum, the upper layer hairs being quite small, and broadly through narrowly funnel-shaped.

R. basilicum is also a close match visually with *R. praestans,* a member of Subsection *Grandia,* which is equally blessed with flattened and winged petioles. But in this species, the indumentum on the leaf underside will be found to consist of a single layer of plastered hairs that colour change from a juvenile bronzy-brown to a mature greyish-white or fawn, these remaining consistently shiny. And of course, they are not cup-shaped.

A later Forrest discovery, christened *R. megaphyllum,* along with a Frank Kingdon-Ward gathering denominated *R. regale,* were long ago consigned to synonymy, but a much more recent introduction, *R. gratum,* has had China's rhododendron-savvy botanists in a bit of a spin. First described by Tien Lu Ming in 1981 - *Acta Botanica Yunnanica,* Volume 3 - the taxon was given specific status and in consequence, a ravishing three-page photographic spread in Volume One of *Rhododendrons of China* (edited by Feng Guomei and published in 1988). But following a reappraisal by Ming Yuan Fang in Volume 12 of the *Harbin Bulletin of Botanical Research,* which rolled off the presses in 1992, its ranking was reduced to subspecies status. But not under *R. basilicum.* Under *R. rex.* Technically, this still remains the position, except for a small addendum added to the online entry on the *Flora of China* website:

> 'Field observations at the type locality suggest that subsp. *gratum* is a form of *Rhododendron basilicum* with only slightly winged petioles; this fits reasonably well with the distribution of the latter species.'

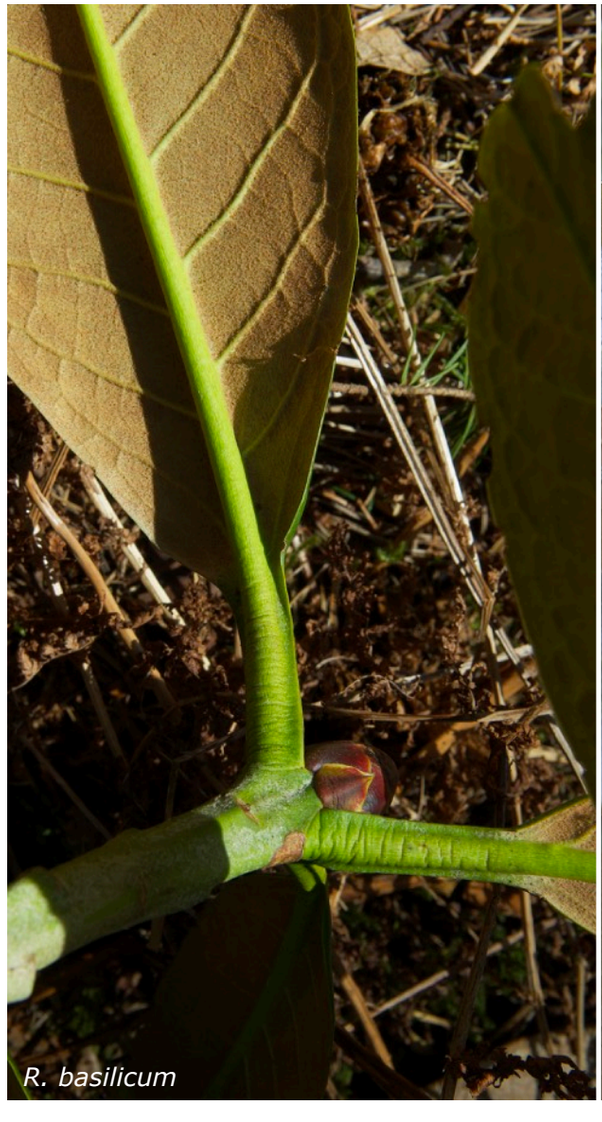
And with the original Western postulation, as set out in the Edinburgh Revision, which treated the taxon as yet another synonym of *R. basilicum,* those less than distinctive wings on the leaf stalks notwithstanding.

The natural distribution of *R. gratum* is restricted, being very localised in western Yunnan, and these plants could be intermediates between *R. basilicum* and either *R. rex* or *R. arizelum* that have formed a stable, speciated population, as Peter and Kenneth Cox detail in their 1997-published *Encyclopedia of Rhododendron Species*. However, they too conclude that synonymy under *R. basilicum* is the likely best approach, with RHS group status preserving the epithet if so desired.

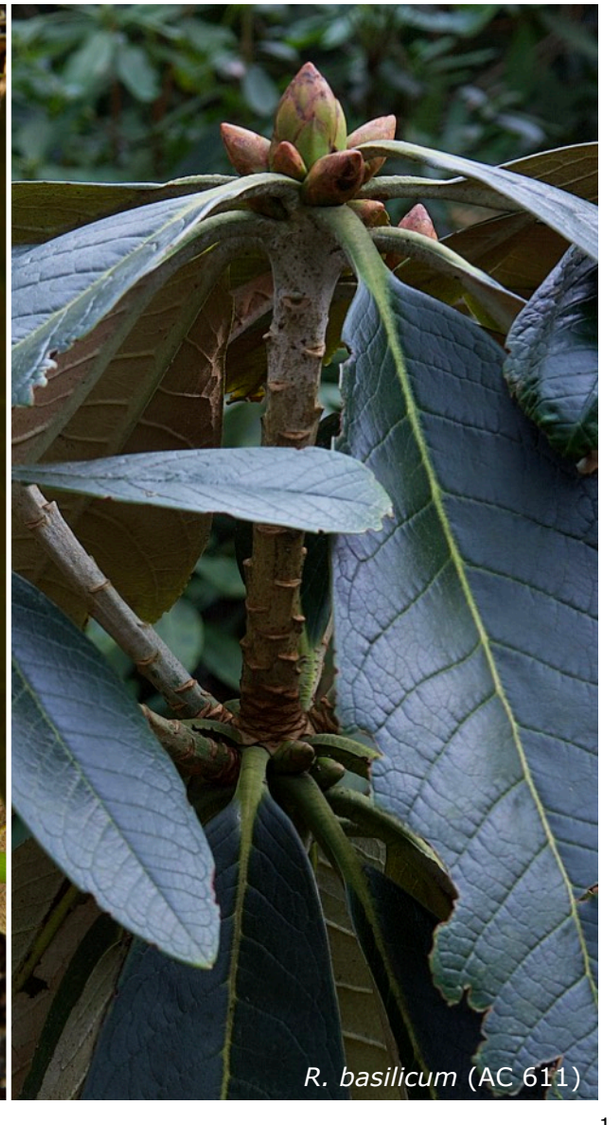
Young plants of *R. basilicum* 'Gratum Group', grown from seed collected by Alan Clark on a 1993 expedition to Yunnan - AC 611 - can be found in the woodland garden at Muncaster Castle in Cumbria and they opened their first blooms in 2015. All exhibit more marginally winged petioles than the type specimens of *R. basilicum*, but otherwise precisely fit within the accepted botanic description.

Forrest's 1913 gathering became the first of many introductions of the species into British gardens, though an initial flurry of lots was followed by a sixty-one year gap until Alan Clark re-introduced seed under two field numbers, AC 609 and AC 610. All the other AC seed lots in the table opposite, plus the Clark and Shelagh Newman collection C&N 5835, can have 'Gratum Group' appended to their labels.

Hardiness in UK cultivation is given as H3-4, the flowering period March-May, so like all large-leaved rhododendrons, *R. basilicum* requires a west coast woodland site to thrive, but will prosper along the east coast if the usual provisos relating to frost and wind are taken into account. The emerging young growth is highly ornamental, with mature specimens absolutely outstanding foliage plants, yet freedom of flowering amongst those champions is decidedly varied, some clones awash with bloom, others shy and exiguous.



R. basilicum



R. basilicum (AC 611)



R. basilicum (F 24139)



R. basilicum (AC 609)



R. basilicum (AC 611)



R. basilicum

R. arizelum* ssp. *arizelum

Hardiness:
H3-4.
Flowering Period:
March-May.
Distribution in the wild:
SE Tibet; Arunachal Pradesh & Assam, India; W Yunnan, China; NW & NE Myanmar.
Growing in conifer or rhododendron woodland,
amongst scrub and bamboo on rocky hillsides, at elevations of 2,450-4,400m.

Identification:
Large shrub or small tree, rounded, rounded-spreading or flat-topped,
2 to 8m high, occasionally to 12m;
branchlets densely tomentose, the hairs pale brown, cinnamon or whitish;
bark rough, pink to reddish-brown, rarely smooth, flaking.
Leaves obovate through oblanceolate, 6.8 to 25cm long by 3 to 12cm wide,
apex rounded and emarginate (notched) or retuse, base cuneate,
retained 1-4 years;
upper surface dark green, often rugulose,
glabrous and shiny or with a semi-persistent tomentum,
the midrib flat or somewhat grooved, the veins deeply impressed;
lower surface indumentum thick and woolly, smooth,
the upper layer composed of strongly fimbriate, narrowly cup-shaped hairs,
brown or red-brown,
the lower layer thin, compacted, grey,
the midrib prominent and the veins hairy.
Petiole 20-40mm long, cylindric and terete, occasionally slightly grooved above,
moderately through densely tomentose, the hairs whitish, cinnamon or brown,
becoming glabrescent.
Inflorescence 12-25-flowered.
Corolla 3 to 4.5cm long, 7-8-lobed, obliquely through regularly campanulate, ventricose,
white through creamy-white to yellow, apricot, pink, rose, crimson or carmine,
with or without a darker crimson basal blotch.
Stamens 14-16.
Ovary 12-15-celled, terete, brown or rufous tomentose.
Capsule 20-40mm long, whitish or red-brown tomentose.

Seed Collections:

F 15898	1917	KW 5877	1924/1925	HECC 10044	2002
F 18028	1917/1919	KW 6818	1926	HECC 10068	2002
F 18045	1917/1919	KW 8163	1927/1928	AC 5362	2004
Farrer 863	1919	R 18336	1929	AC 5363	2004
KW 3101	1919	R 18337	1929	AC 5365	2004
F 20306	1921/1922	F 29785	1930/1931	AC 5378	2004
F 20365	1921/1922	KW 9260	1931	AC 5406a	2004
F 21861	1921/1922	KW 9397	1931	AC 5408	2004
F 21862	1921/1922	KW 9544	1931	KR 8183	2005
F 21864	1921/1922	R 22024	1932	KR 8186	2005
F 21865	1921/1922	R 22094	1932	KR 8407	2006
F 21866	1921/1922	R 22108	1932	KR 8423	2006
F 21871	1921/1922	R 22110	1932	KR 8445	2006
F 22771	1921/1922	R 22232	1932	KR 8446	2006
F 22786	1921/1922	L&S 1358	1936	KR 8509	2006
F 22787	1921/1922	L&S 1380	1936	BE 09-06	2009
KW 5438	1922	L&S 2753	1936	BE 09-11	2009
KW 5438a	1922	KW 14342	1937	KR 9851	2010
R 11165	1923/1924	Yu 20744	1937	KR 9869	2010
R 11207	1923/1924	Yu 20971	1937	KR 9875	2010
R 11223	1923/1924	Yu 22954	1937	KR 9891	2010
F 24193	1924/1925	LS&T 3674	1938	KR 9944	2010
F 24740	1924/1925	LS&T 3749	1938	KR 10074	2010
F 25608	1924/1925	KW 236	1938/1939	KR 10093	2010
F 25627	1924/1925	R 14	1948/1949	OJL 10-48	2010
F 25782	1924/1925	R 16	1948/1949	OJL 10-50	2010
F 25841	1924/1925	R 25	1948/1949	BE 12-06	2012
F 26935	1924/1925	R 51a	1948/1949	TDA 615	2014
F 27067	1924/1925	R 97	1948/1949	TDA 616	2014
F 27108	1924/1925	KW 20922	1953	TDA 629	2014
F 27616	1924/1925	Cox 6512	1994	TDA 636	2014
F 27624	1924/1925	CCHH 8140	1997	TDA 650	2014
F 27792	1924/1925	KR 6189	1999	MH 369-06	2018
F 27794	1924/1925	DGEY 034	2001	MH 369-07	2018
		BASE 9580	2000		

R. arizelum was discovered in the Shweli-Salween Divide of western Yunnan during June 1917, George Forrest making the find and in concert with Sir Isaac Bayley Balfour, writing the botanic description, this published in *Notes from the Royal Botanic Garden, Edinburgh,* Volume 12, 1920. Within the subsection, the species is most closely related to the two *R. falconeri* subspecies and is often thought their eastern equivalent, though it can quickly be identified from either by a lack of sticky glands on the pedicel, calyx and ovary. Cylindrical petioles without wings and the usually deeper-coloured, smooth indumentum present on the abaxial leaf surface, distinguish the taxon from all the other members of the troupe - *R. basilicum, R. preptum* and *R. rothschildii,* for instance - with but one exception: *R. heatherae*.

Pragmatism dictates a jump along the discovery timeline to October 1999, which was when Keith Rushforth encountered the species on the southwest side of the Showa La, in southeast Tibet, securing herbarium specimens and two batches of capsules containing viable seed. He described the taxon in Volume 8, Issue 4, of the *New Plantsman,* published by the Royal Horticultural Society in December 2001, choosing to name the find for his wife. The identification bullet points left and right clearly show - to cries of delight from the Synonymy Aurors - that *R. heatherae* is a very close match with *R. arizelum.*

Apart from its petiole.

Which is short, at around 20mm, rather than extending to 40mm in length; has a flattened, not cylindric-terete profile; and is winged instead of being wingless.

That morphologic feature is absent from each and every seedling germinated from the 103 documented introductions of *R. arizelum* and the array of dried material stored in herbaria across the globe. With just a single exception: a Frank Kingdon-Ward gathering made in 1924 under the field number KW 5877.

In their *Pocket Guide to Rhododendron Species* (Kew, 2009), John McQuire and Mike Robinson reported that H. H. Davidian placed all the herbarium specimens of plants that resembled *R. arizelum,* but had shortly winged petioles, under the *R. preptum* taxon except for the KW 5877 collection - dried material and living plants - which remained classified as *R. arizelum*. This assessment was duplicated in David Chamberlain's 1982 reappraisal of Subgenus *Hymenanthes* (*Notes,* Volume 39, No. 2), confirmed in the Revision's concluding 1996-published text - *The Genus Rhododendron: Its Classification & Synonymy* - and later reaffirmed in the lists of Collectors' Numbers contained inside the 1998 RHS *Rhododendron Handbook,* where KW 5877 remains designated as *R. arizelum*.

Kingdon-Ward found those plants at the base of the Showa La ridge, at an altitude of 3,700m. They have an oblanceolate-shaped leaf held on a near cylindrical, winged petiole, though these extensions are less well defined than those found on *R. heatherae,* which is the dominant rhododendron present along the next 2.5km of that ascending mountain spur, forming extensive thickets in the wooded surrounds, with mature trees reaching 8m in height. Other elepidote members of the genus are also present: *R. caloxanthum, R. hirtipes* and *R. wardii* are scattered about throughout the forest; higher up the ridge, *R. dignabile* and *R. tsariense* take over above the 3,950m contour, where the *R. heatherae* population peters-out; at and around its foot, *R. arizelum, R. cerasinum, R. exasperatum, R. faucium* and *R. phaedropum* are all established; while immediately preceding the *R. heatherae* zone, populations of *R. fulvum* and *R. fulvoides* are resident, as is a stand of *R. montroseanum* at around 3,125m. But no other member of Subsection *Falconera,* apart from *R. arizelum,* is present on, or in the immediate vicinity of the ridge. Which means the strongly fimbriated cup-shaped hairs that compose the upper layer of the *R. heatherae* bistrate abaxial leaf surface indumentum could only have come from that one unique source: *R. arizelum*.

R. arizelum* ssp. *heatherae

Hardiness:
H4.
Flowering Period:
April-May.
Distribution in the wild:
Showa La, SE Tibet.
Growing in fir forest and rhododendron thickets along an ascending ridge
between the elevations of 3,700-3,950m.

Identification:
Large shrub or small tree, rounded, rounded-spreading or flat-topped,
5 to 8m high;
branchlets densely tomentose, the hairs pale brown or cinnamon;
bark rough, pink to reddish-brown, rarely smooth, flaking.
Leaves narrowly oblanceolate, 15 to 30cm long by 5 to 10cm wide,
apex rounded and emarginate (notched), base narrowly cuneate, decurrent on the petiole,
retained 1-3 years;
upper surface dark green, somewhat rugulose,
glabrous and shiny or with a semi-persistent tomentum,
the midrib flat or somewhat grooved, the veins impressed;
lower surface indumentum thick and woolly, smooth,
the upper layer composed of strongly fimbriate, narrowly cup-shaped hairs,
fawn or red-brown,
the lower layer thin, compacted, grey,
the midrib prominent and the veins hairy.
Petiole c. 20mm long, flattened, winged to near the base, slightly grooved above,
moderately through densely tomentose, the hairs cinnamon or brown,
becoming glabrescent or glabrous.
Inflorescence 12-25-flowered.
Corolla c. 3cm long, 7-8-lobed, funnel-campanulate, ventricose,
white, pink, or rose,
with or without a darker crimson basal blotch.
Stamens 14-16.
Ovary 12-15-celled, terete, brown or rufous tomentose.
Capsule 10-25mm long, red-brown tomentose.

Seed Collections:

KR 6158	1999
KR 6160	1999

R. arizelum

A potential spoke-in-the-wheel - convergent evolution - cannot be completely ruled out, but logic dictates that the *R. heatherae* population on Showa La evolved from a plant both Balfourian and Slumerian botanists classify as a form of *R. arizelum,* which over time, adapted to meet the tougher environmental challenges experienced higher up the ridge, with its much shorter, flattened and winged petioles one of those modifications, the more narrowly oblanceolate leaf shape, another.

Keith Rushforth has reported that the population of *R. heatherae* is both stable and uniform along its 2.5km run, and genetic analysis will, at some stage, reveal if any third party input occurred early-on in the colonisation process to aid the remodelling, although this appears unlikely. Reclassifying the taxon as a subspecies of *R. arizelum* would more accurately reflect the situation on the ground, comply fully with the nomenclature rules and is therefore promulgated herein.

The granular and discontinuous nature of the leaf abaxial indumentum found on *R. rothschildii* will serve to key out specimens of that species from *R. arizelum* ssp. *heatherae,* at which point any confusion will be limited to *R. basilicum, R. preptum* and *R. semnoides*. Distinguishing these from ssp. *heatherae* without resort to a microscope - to check on whether the cup-shaped hairs are broad or narrow, or strongly or weakly fimbriate - relies on the short petiole and the length-to-width ratio of the leaves. For ssp. *heatherae* this is never less than 3:1 and could be as high as 5:1. For the troika of lookalikes, the correlation will range from 2:1 to a little less than 3:1.

Returning to ssp. *arizelum,* in 1923, the Austrian-American explorer and plant hunter, Dr. Joseph Rock, found what was later described as *R. arizelum* var. *rubicosum* on Mount Kenyichunpo - Kawakabu - the highest peak of the Gaoligong mountain range in the Champutong region of the Salween-Irrawaddy Divide of southeastern Tibet. Viable seed was introduced into cultivation that very same year and a little over three decades later, a truss of Rock 11207 was sent to Edinburgh Botanic from the gardens at Castle Kennedy, Stranraer, this prompting a jointly-penned botanic description by John MacQueen Cowan and H. H. Davidian to appear in the *Rhododendron and Camellia Year Book* of 1954. As the chosen epithet implies - and the head gardener at Lochinch, Robert W. Rye, enthusiastically proclaimed in his accompanying letter - the corolla colour was bright crimson. Yet no other discernable differences distinguished it from the species and the wild populations were later found to be bereft of a niche geographic distribution. So the variety was easy meat for the synonymists, though plant labels can be supplemented with the moniker 'Rubicosum Group' courtesy of the RHS (as they can for the only other documented gatherings, Rock 22024 and Rock 22110, both collected during 1932).

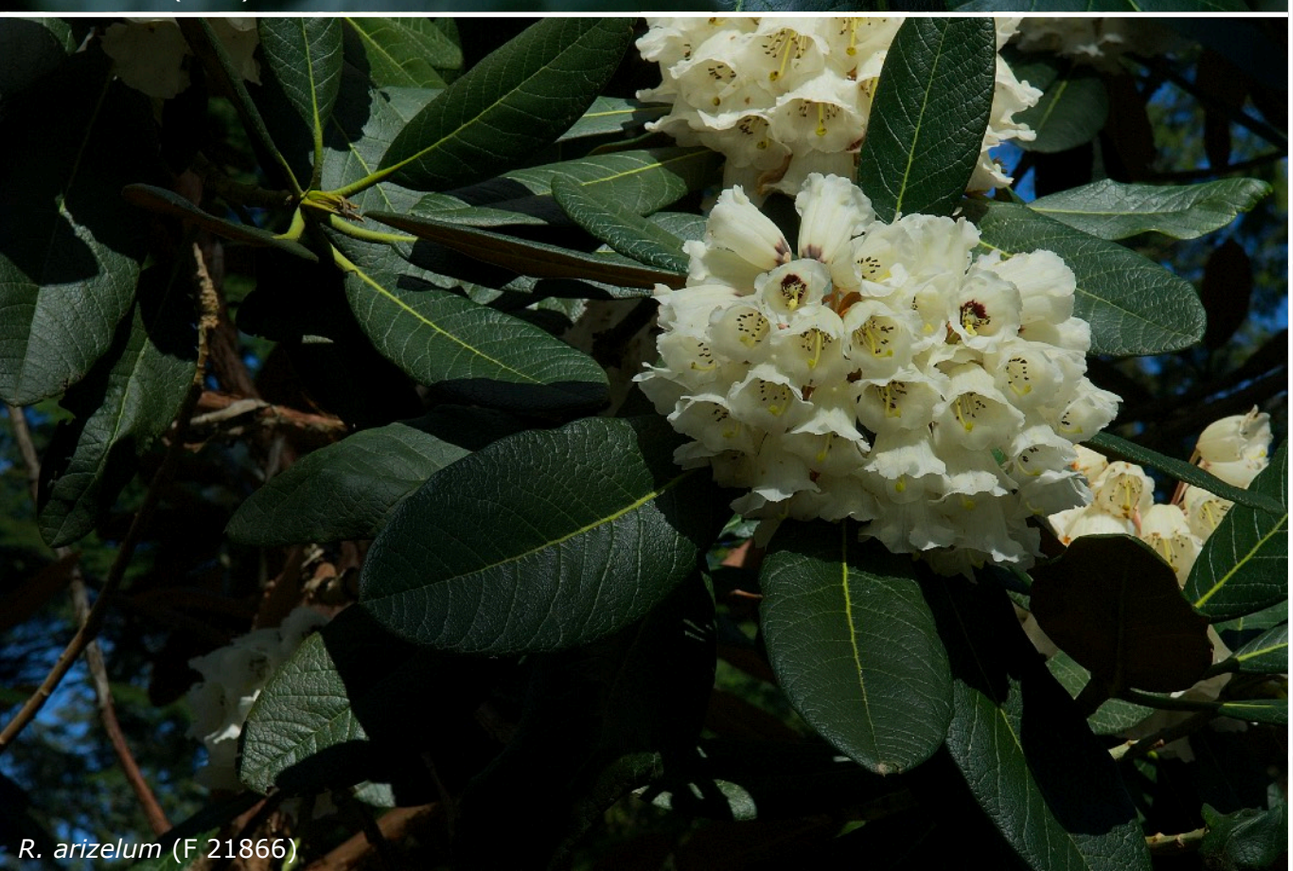
R. arizelum is fully hardy in UK cultivation and mature, tree-like specimens from that ton of individual introductions will be found in all the major collections open to the general public. A sheltered woodland site is of course, still required to protect the large leaves from the ravages any unfiltered squalls of wind might inflict, but a gentled breeze, lifting up the leaves to expose their rufous undersides, demonstrates the primacy of this species as a foliage plant when out of flower. Creamy-white, pink, yellow and the crimson of Rubicosum Group are the colour forms most often seen in gardens, with any one of those free-flowering mature specimens an absolutely eye-catching stunner when in bloom. The most magnificent examples of the species can be seen at gardens such as Muncaster Castle in Cumbria, Brodick Castle on the Isle of Arran, or Benmore Botanic north of Dunoon, where the near-perfect conditions for large-leaved rhododendrons have enabled these plants to achieve their full potential. Cultivation in southern gardens and in sheltered arboretums along the east coast can also be successful, but a lack of adequate rainfall, unless supplemented, will check their development.



R. arizelum



R. arizelum (R 97)



R. arizelum (F 21866)



R. arizelum (Rock 11207) ‘Rubicosum Group’


R. arizelum (KW 5877)


R. arizelum (KW 5877)


R. arizelum (F 25608)

R. arizelum


R. arizelum

R. preptum

Hardiness:
H4.
Flowering Period:
April-May.
Distribution in the wild:
NW Yunnan, China; NE Upper Myanmar.
Growing in mixed woodland and rhododendron thickets at elevations of 3,200-3,950m.

Identification:
Large shrub or small tree, rounded or rounded-spreading, 2.5 to 9m high;
branchlets densely tomentose, the hairs brown, fawn, greyish or whitish,
becoming glabrous; bark rough, flaking.
Vegetative buds with moderately acuminate tips.
Leaves oblanceolate through obovate-elliptic to elliptic,
11 to 20cm long by 4 to 10cm wide, more rarely to 30cm in length,
apex obtuse or rounded, apiculate or emarginate,
base cuneate and slightly decurrent on the petiole,
retained 2-4 years;
upper surface olive green, matt, rugulose, glabrous,
the midrib grooved, the veins deeply impressed;
lower surface indumentum bistrate, thick or thin, woolly,
the upper layer composed of strongly or slightly fimbriate, cup-shaped hairs,
dark brown, red-brown, fawn or buff,
the lower layer thin, compacted, whitish,
the midrib and veins prominent and often densely hairy.
Petiole 15-38mm long, near cylindric but flat above and slightly grooved, terete,
the margins slightly winged or ridged,
moderately through densely tomentose, the hairs red-brown, whitish or fawn,
becoming glabrescent.
Inflorescence 10-22-flowered.
Rhachis stout, whitish, fawn or brown tomentose.
Corolla 3.5 to 4.6cm long, 6-7-8-lobed, obliquely campanulate, ventricose,
pale yellow, yellowish-white, white or creamy-white, sometimes flushed pink,
with a purple or crimson basal blotch.
Stamens 10-14-16; filaments pubescent at the base.
Ovary 10-13-celled, brown or red-brown tomentose.
Stigma sometimes swollen.
Capsule 20-23mm long, red-brown tomentose.

Seed Collections:

F 25064	1924

R. preptum was discovered by George Forrest in May 1919 while he was exploring the N'Maikha-Salween Divide, though no seed was recovered so early in the season. Five years later in 1924, the Scott returned to Myanmar and mature capsules were gathered from plants found on the nearby Hpimaw Pass, with the species introduced into British gardens under the field number F 25064. During the same expedition, but several months later, the species was also encountered on the Salween-Kiu Chiang Divide in northwestern Yunnan, but like the first find, there was no viable seed to collect. The taxon's botanic description, jointly written by Forrest and Isaac Bayley Balfour, appears in Volume 12 of *Notes from the Royal Botanic Garden, Edinburgh,* which was published during 1920.

The wedge-shaped leaf base, tapering slightly onto the flattened petiole as a short wing or ridge along each margin, is the chief distinction between *R. preptum* and *R. arizelum,* which it otherwise closely resembles. Equally minor differences aid identification: generally narrower leaves, matt and olive-green above, instead of shiny and dark-green; and a petiole the upper surface of which is somewhat flat and slightly grooved, compared with a fully rounded circumference that is usually bereft of any furrow.

Dr. Joseph Rock is the only other Western plant hunter to have collected and introduced seed of *R. preptum,* a 1932 find under the field number R 25272, made in northwest Yunnan. However, these plants were given an affinity tag by the experts, who considered them related to *R. preptum,* but not exactly matching the previously described species. Jump forward to the present and modern-day cognoscenti, having discovered the plethora of natural hybrids and intermediates that populate most Chinese hillsides, now believe *R. preptum* to be a stabilised and speciated hybrid of *R. coriaceum* crossed with either *R arizelum* or with *R. rex* ssp. *fictolacteum.* Probably. Given that the populations have not, to date, been relocated or sampled.

Fairly hardy, with a H4 rating and an April-May flowering period, good protective shelter allows *R. preptum* to be successfully grown in east coast gardens, but it is a very rare find in even the extensive, west-coast-sited rhododendron collections. Mature plants have proven to be free-flowering, those with up to 22 pure white corollas in each truss, the most ornamental.


R. preptum (F 25064)


R. preptum (F 25064)


R. preptum

R. semnoides

Hardiness:
H3-4.
Flowering Period:
March-May.
Distribution in the wild:
SE Tibet; NW Yunnan, China.
Growing in conifer, rhododendron or mixed woodland at elevations of 3,500-4,000m.

Identification:
Large shrub or small tree, rounded to upright, 2.5 to 6m high;
branchlets rough, densely tomentose, the hairs whitish, fawn or brown; bark rough.
Leaves obovate through oblanceolate, 10 to 26.5cm long by 4 to 11.5cm wide,
apex rounded, apiculate (sharply pointed) or emarginate (notched),
base cuneate, sometimes auricled, decurrent on the petiole,
retained 1-4 years;
upper surface dark or olive-green, reticulate, somewhat rugulose, matt or shiny,
glabrous or with the remnants of a juvenile tomentum,
the midrib flat or grooved, the veins deeply impressed;
lower surface indumentum bistrate, thin or thick, usually woolly,
the upper layer loose, composed of strongly fimbriate, narrowly cup-shaped hairs,
whitish, buff, fawn, brown or rufous,
the lower layer thin, compacted, fawn or whitish,
the midrib and veins prominent and often hairy.
Petiole short, 10-30mm long,
the top moderately flattened and occasionally slightly grooved,
the margins narrowly winged, moderately through densely fawn or whitish tomentose.
Inflorescence 12-20-flowered;
the bud scales deciduous or semi-persistent.
Rhachis stout, brown or rufous tomentose.
Pedicel stout, whitish, fawn or brown tomentose.
Corolla 3.5 to 5cm long, mostly 8-lobed, fleshy, obliquely campanulate, ventricose,
white, white flushed rose, or pink, with a crimson or purple basal blotch.
Stamens 16.
Ovary 9-14-celled, densely brown tomentose.
Style straight, the stigma small or large.
Capsule 20-35mm long, whitish or red-brown tomentose.

Seed Collections:

F 21870	1922	R 18396	1929
F 25639	1924/1925	R 18397	1929
F 25830	1924/1925	R 25389	1932
R 18338	1929	R 25394	1932
R 18390	1929	AC 614	1993

George Forrest was again the first Western plant hunter to encounter *R. semnoides,* gathering viable capsules and herbarium specimens in June 1922, with the seed introduced under F 21870 and the matching dried material covered by the Type number, F 22738. The collection locale was to the west of Chematong in southeastern Tibet, on the mountains dividing the Salween and the Kiu Chiang rivers, with Volume 15 of *Notes from the Royal Botanic Garden, Edinburgh,* published in 1926, home to the botanic description. This was penned by Forrest and Harry Tagg, and their choice of Latin epithet, whether deliberate or inadvertent, was certainly prescient, the translation - resembling *R. semnun* - spot on, given that this taxon has been placed in synonymy under *R. praestans*.

For *R. semnoides,* like its near twin *R. rothschildii,* is almost certainly the result of multi-generational pairings between *R. arizelum* and *R. praestans,* with additional input from the natural hybrid offspring those crosses produced. To date however, and unlike *R. rothschildii,* no stable populations of *R. semnoides* have been found on the ground in China, with both wild collected or hand pollinated seed producing a markedly non-uniform pan of seedlings. Re-classification as an unspeciated natural hybrid, with a small 'x' preceding the epithet, would seem appropriate therefore, but the botanists are maintaining the currently assigned specific ranking until definitive field study reporting is on hand to decide the case. Mystifyingly, despite the passage of fifty years since those Tibetan and Chinese hillsides re-opened to a plethora of plant hunting Western botanists and horticulturalists, anything resembling *R. semnoides* has remained annoyingly elusive, with just one seed gathering made since the last Joseph Rock collection of 1932 and Alan Clark's 1993 Yunnan find under the field number AC 614 - the capsules gathered-up amongst all those *R. basilicum* Gratum Group collections - is yet to receive formal authentication.

Strongly fimbriate, narrowly cup-shaped hairs populate the upper layer of the abaxial leaf surface indumentum, these requiring *R. semnoides* to be pigeonholed in Subsection *Falconera*. The fully winged petioles separate it from most of the true species, with short wings keying out *R. preptum,* only slightly fimbriate but broadly cup-shaped hairs doing the same for *R. basilicum,* and the granular indumentum working wonders for *R. rothschildii*.

Nine authenticated seed lots have been introduced into UK cultivation, with an additional 1932 Rock collection - R 25388 - gifted an affinity tag, which, if nothing else, is proof positive that even botanists have a sense of humour.

R. semnoides is fully hardy in UK cultivation, quite fast growing, and clones bearing large, creamy-white flowers, make the most impressive specimens.

R. semnoides (AC 614)

R. semnoides (F 21870)

R. rothschildii

Hardiness:
H3-4.
Flowering Period:
April-May.
Distribution in the wild:
NW Yunnan, China.
Growing in mixed woodland at elevations of 3,700-4,000m.

Identification:
Large shrub or small tree, rounded, 2.75 to 6m high;
branchlets rough, moderately through densely tomentose,
the hairs fawn through grey-brown to brown; bark rough.
Vegetative buds deep crimson-purple, densely fawn tomentose.
Leaves obovate through oblanceolate, 20 to 36cm long by 6 to 14cm wide,
apex rounded or obtuse, apiculate, base cuneate, decurrent on the petiole,
retained 1-2 years;
upper surface green, reticulate, somewhat rugulose, glabrous and shiny,
the midrib flat or grooved, the veins deeply impressed;
lower surface indumentum thin, bistrate,
the upper layer agglutinated and granular, discontinuous,
composed of strongly fimbriate, cup-shaped hairs,
often yellowish-brown at first, fawn, brown or red-brown at maturity,
the lower layer thin, compacted, yellowish, greyish or fawn,
the midrib and veins prominent and often hairy.
Petiole 10-30mm long,
flattened above and occasionally slightly grooved, markedly winged along the margins,
moderately through densely fawn or brown tomentose.
Inflorescence 12-17-flowered; the bud hue deep crimson-purple.
Rhachis 15-20mm long, stout, red-brown tomentose.
Corolla 3.5 to 4.5cm long, 8-lobed, obliquely campanulate, ventricose,
creamy-white, pale yellow through pale pink,
with or without a crimson or purple basal blotch.
Stamens 13-16; filaments pubescent at the base.
Ovary 10-14-celled.
Capsule 20-25mm long, red-brown tomentose.

Seed Collections:

F 25717	1924/1925	JN 293	1999
F 25947	1924/1925	JN 295	1999
R 18433	1929	JN 297	1999
F 30528	1930/1931	JN 486	1999
R 167	1948	JN 760	1999
AC 1868	1996		

R. rothschildii has a very restricted distribution in the wild, the plant populations only found between Wei-Hsi (Weixi) and the Mekong River, on Ta-pao Shan, a mountainous area in the top north-western corner of Yunnan. Historically, Joseph Rock is credited for finding the species in the autumn of 1929, but a George Forrest gathering of 1924-1925 vintage spent seven decades masquerading as *R. praestans,* while another from his 1930-1931 expedition suffered a forty-year transmogrification as *R. basilicum.* Equally, Rock's own 1948 collection also served time under a wrongly-assigned affinity tag. H. H. Davidian wrote the species botanic description that features in *Rhododendrons,* the 1972 yearbook of what is now the RHS Rhododendron, Camellia & Magnolia Group, and the epithet he chose for the species honours Lionel de Rothschild:

Who created the exquisite rhododendron fairyland at Exbury, in Hampshire.

Sponsored several Forrest and Kingdon-Ward plant hunting expeditions.

Founded the Rhododendron Society, which would ultimately morph into the RCMG.

And who was simply the most accomplished hybridiser ever to have worked within the genus, producing an array of azaleodendrons, deciduous and evergreen azaleas, lepidotes and elepidotes that continue to delight the eye.

The fact that it took until 1972, some thirty years after his death, for this posthumous honorific to finally be gifted, defies reason.

The distinguishing features of *R. rothschildii* include its crimson-purple-hued flower and growth buds; the thin abaxial indumentum, the upper layer of which is patchy, granular and agglutinated - the hairs look as if they have been glued together - and often yellowish-brown when young; and the flattened petiole, with the leaf base extending along its sides as wings. Most experts agree that the species is likely to have originated as a hybrid between *R. arizelum* and an occupant of Subsection *Grandia,* namely the aforementioned *R. praestans,* but as the Ta-pao Shan population is isolated, it has been able to stabilise and speciate, though there is still a wide variation in corolla colour amongst the established plants.



R. rothschildii (F 30528)

R. rothschildii



R. rothschildii (F 25717)



R. rothschildii (F 30528)



'Titapuriense at Yungchak' by Michael Blooman

R. titapuriense

Hardiness:
H5.
Flowering Period:
March-April.
Distribution in the wild:
Siang Valley, Arunachal Pradesh, India.
Growing in broad-leaved, temperate, evergreen forest at elevations of 2,300-2,500m.

Identification:
Tree, broadly-upright, 5 to 27m high;
bark rough.
Leaves broadly elliptic-obovate, 5 to 20cm long by 3.5 to 12cm wide,
apex acute or rounded, base cuneate or rounded,
retained 1-2 years;
upper surface dark green, very rugose, matt, glabrous,
the midrib grooved, the veins impressed;
lower surface indumentum thick and woolly, smooth,
the upper layer composed of slightly fimbriate, cup-shaped hairs,
cinnamon or red-brown,
the lower layer thin, compacted, grey,
the midrib and veins prominent, hairy.
Petiole 10-30mm long, cylindric and terete, unwinged,
moderately through densely tomentose, the hairs cinnamon or brown.
Inflorescence up to 16-flowered.
Corolla c. 2.5cm long, campanulate, white.
Stamens 18; filaments glabrous.
Ovary brown or rufous tomentose.

Seed Collections:

APA 14	2005
APA 128	2005

The most recent addition to Subsection *Falconera, R. titapuriense,* was discovered in the northeast Indian state of Arunachal Pradesh. Kenneth Cox, the son of Peter and grandson of Euan, burnished his family's plant hunting credentials still further when in October 2001, above the village of Kugging, in the Yang Sang valley of the Upper Siang river system, he noticed that a dense forest of broad-leaved evergreen trees was providing shelter for a group of rhododendrons each around 10m high. These had distinctive rugose leaves, thickly cloaked with a cinnamon indumentum below, though none had set flower buds and bloomed that year.

Seed capsules were secured just four years later when in the autumn of 2005, Ken Cox returned to the region as a member of the Arunachal Pradesh-Abroka Expedition, the team also including Steve Hootman of the Seattle-based Rhododendron Species Foundation and Tom Hudson of Tregrehan Garden in Cornwall. And in addition to viable seed, a second population of *R. titapuriense* was discovered on the southern side of the Yang Sang valley, near the village of Singa.

Steve Hootman takes up the story:

> 'In a deep ravine, at around 2,400m, stood a widely scattered grove of several gigantic trees of this extraordinary species. The largest specimens were easily over 24m and likely over 30m in height, rivalling, if not surpassing, the massive trees of *R. protistum* observed in the forests along the Salween River in western Yunnan'.
> Quoted in *Big Leaf Rhododendrons,* by Glyn Church and Graham Smith, 2015.

But no one had yet seen this mastodon in flower.
That was remedied in April 2010 when the artist Michael Blooman, whose watercolour painting 'Titapuriense at Yungchak' is featured opposite, was trekking through Upper Siang, close to the border with Tibet.

He wrote of the encounter in *Rhododendrons, Camellias & Magnolias 2014:*

> 'A remarkable sight met us when we arrived at the next camp at Yungchak, around 2,500m. There was a group of colossal tree rhododendrons, one of which had formed an arch framing the tiny shelter below. The trees were massed with flowers high in the canopy but one of the crew was quick to climb up and bring a sample branch down for inspection. The flowers were white, and the leaves broadly elliptic-obovate, dark green with a rich cinnamon indumentum'.

Herbarium material was gathered in May of the following year by Doctor Ashiho Mao of the Botanical Survey of India, under the field number Mao 20340, and lodged at the Central National Herbarium in Calcutta. At the same time, one of the rhododendrons in the grove was accurately measured and confirmed to be 27m tall.

As the original 2001 discovery had been made en route to Titapuri, this was chosen to be the epithet for the new species in a botanic description jointly written by Doctor Mao, Kenneth Cox and David Chamberlain (*The New Plantsman,* Volume 12, Number 1, 2013).

The cup-shaped, fimbriate hairs that form the upper layer of the abaxial indumentum on the *R. titapuriense* leaf require the species to be included within Subsection *Falconera, y*et within that grouping, it has no obvious close relatives. However, Doctor Chamberlain believes an affinity exists with *R. rex* ssp. *rex,* which grows in Yunnan and Sichuan. The cylindric, unwinged petioles, non-ventricose corollas and a lack of glandular hairs on the pedicel, calyx and ovary reflect this relationship and begin the keying process, which the dark green but matt, adaxial surface of the leaves, along with the given total of 18 stamens with glabrous filaments, conclude, cleaving *R. titapuriense* from the two subspecies of *R. rex,* as well as from *R. coriaceum, R. galactinum* and *R. hodgsonii.*

Subsection *Fortunea:*



R. glanduliferum (AC 1206)



Taxa:

- *R. davidii*
- *R. decorum*
  - *R. decorum* ssp. *decorum*
  - *R. decorum* ssp. *diaprepes*
- *R. fortunei*
  - *R. fortunei* ssp. *discolor*
  - *R. fortunei* ssp. *fortunei*
- *R. glanduliferum*
- *R. griffithianum*
- *R. hemsleyanum*
- *R. huanum*
- *R. magniflorum*
- *R. maoerense*
- *R. orbiculare*
  - *R. orbiculare* ssp. *cardiobasis*
  - *R. orbiculare* ssp. *orbiculare*
- *R. oreodoxa*
  - *R. oreodoxa* var. *fargesii*
  - *R. oreodoxa* var. *oreodoxa*
  - *R. oreodoxa* var. *shensiense*
- *R. platypodum*
- *R. serotinum*
- *R. vernicosum*
- *R. yuefengense*

Taxonomic Revision:

Subsection *Fortunea,* like each of the seven previously described repositories, has been transferred into Section *Leiorrhodium* from Section *Ponticum* on account of the 2010-published Milne-Chamberlain molecular study, *A Phylogeny of Rhododendron subgenus Hymenanthes based on Chloroplast DNA Markers.* However, *R. asterochnoum,* the three *R. calophytum* varieties, *R. praevernum* and *R. sutchuenense* remain within Section *Ponticum* even though only two of these species - *R. calophytum* and *R. praevernum* - were tested and shown to reside in that clade. This choice reflects their geographic distribution and the wide set of shared morphologic characteristics, which clearly indicate a very close alliance between all four, but especially between *R. asterochnoum* and *R. calophytum,* and between *R. praevernum* and *R. sutchuenense*.

With regard to the subsection's overall endemicity, it remains vast, even with the loss of those six species: stretching from eastern Nepal in the west right across to Zhejiang in the east; from Gansu in the north to the uppermost cantons of Laos and next-door Vietnam in the south; missing not a single Chinese province on either leg - Shaanxi, Henan, Sichuan, Chongqing, Hubei, Anhui, Yunnan, Guizhou, Hunan, Jiangxi, Fujian, Guangxi and Guangdong; plus it encompasses the south of once-independent Tibet, and takes in Sikkim, Bhutan, Arunachal Pradesh, Bengal and northeastern Upper Myanmar.

R. yuefengense was discovered post-publication of the 1996 Edinburgh Revision.

Subsection Morphology:

Shrubs or trees, rounded or upright, 1.5 to 18m high; young shoots often with a white through grey thin tomentum at first, but soon becoming glabrescent; bark rough, reddish-brown through grey, often flaking or cracking, but rarely peeling.

Leaves large, coriaceous, oblong-elliptic, elliptic through oblanceolate to orbicular, 4 to 36cm long by 1.8 to 12.5cm wide; upper surface dark green, matt, glabrous when mature, the midrib grooved and the veins deeply impressed; lower surface pale green, usually glabrous when mature, occasionally with a fluffy tomentum on the midrib, or more rarely with a sparse covering of stellate hairs on the lamina, the midrib and veins prominent.

Leaf anatomy comprises a 2-layered upper epidermis, with the cells in each layer approximately equal in size; the cuticle varies between half and as thick as the cells are deep; water tissue is present; the lower epidermis cells are either not prolonged into papillae or these are very small.
Sclereid cells are present in the tissue of a few of the species.

Petiole 7-60mm long.

Inflorescence often lax, 3-30-flowered, frequently fragrant.

Rhachis usually 10-50mm long, but sometimes well-developed to 80mm, more rarely less than 10mm long.

Pedicel 5-80mm long.

Calyx usually small, the 5-7 lobes 0.5-7mm long, rarely well-developed to 20mm.

Corolla 5-8-lobed, campanulate, tubular- or funnel-campanulate, through to openly-campanulate, rarely with nectar pouches, white through pink to rose or purple, with or without a large greenish, crimson or dark purple blotch at the base, and with or without greenish, crimson or purple spots; the outer surface often stipitate-glandular, the lobes usually emarginate and sometimes deeply so.

Stamens 12-25, but occasionally 10, unequal and shorter than the corolla; filaments glabrous or variably pubescent at the base.

Ovary conoid through ovoid, 4-10mm long, rarely to 14mm, 6-16 locular, glabrous or densely stipitate-glandular, sometimes setose and occasionally eglandular.

Capsule 13-65mm long, glabrous, or moderately through densely stipitate-glandular.

Seeds marginally longer than broad, conspicuously winged, each end with large appendages.



R. yuefengense

R. griffithianum

Hardiness:
H2-3.
Flowering Period:
April-May.
Distribution in the wild:
Bhutan; Arunachal Pradesh, Bengal & Sikkim, India; S Tibet; E Nepal.
Growing in rain forest, mixed and broad-leaved woodland and rhododendron thickets,
on steep hillsides, rocky slopes and cliffs, at elevations of 1,800-2,900m.

Identification:
Shrub or small tree, broadly upright, bushy or lax, 1.3 to 10m high, sometimes to 15m;
young shoots stout, glabrous; bark multi-coloured, smooth and peeling.
Leaves oblong through oblong-elliptic to oblong-ovate,
10 to 19cm long by 4 to 7.5cm wide,
sometimes up to 30cm long and 12cm wide,
apex acute through rounded, apiculate, base rounded or subcordate,
sometimes slightly decurrent on the petiole, retained 1-2 years;
upper surface dark or bright green, smooth.
Petiole 20-50mm long, stout, pale green,
occasionally with very narrow wings along the margins, glabrous.
Inflorescence 3-6-flowered; sometimes fragrant.
Rhachis 32-80mm long, stout, glabrous, sometimes sparsely short-stalked glandular,
the hairs almost sessile.
Pedicel 25-50mm long, glabrous, sometimes sparsely short-stalked glandular,
the hairs almost sessile.
Calyx large, 7-20mm long, an undulate rim, rounded or cup-shaped, pink or green tinged,
the outer surface and margins glabrous or sometimes sparsely short-stalked glandular,
the hairs almost sessile.
Corolla 3 to 8.3cm long, 5-lobed, fleshy, open-campanulate,
pale pink fading to white, white, or white with a green base,
sometimes spotted green, occasionally veined or tinged pink through rose-pink;
the outer surface glabrous,
the inner surface sometimes pubescent at the base of the tube.
Stamens 12-18; filaments glabrous.
Ovary densely short-stalked glandular, the hairs almost sessile.
Style short-stalked glandular base to tip, the hairs almost sessile.
Capsule cylindric, 15-40mm long, straight, ridged, sometimes short-stalked glandular.

Seed Collections:

Cooper 2315	1914	Fox 12	1990
Cooper 3615	1914	KR 1821	1990
Cooper 3939	1915	Sinclair 1728	1993
KW 6215	1924/1925	Sinclair 1748	1993
L&S 2835	1936	SHE 501	1997
L&S 3026	1937	KC 101	2001
LS&H 16068	1949	KCSH 0390	2003
LS&H 18720	1949	AC 5397	2004
LS&H 18776	1949	AC 5597	2004
LS&H 20220	1949	KR 8009	2005
LS&H 21483	1949	KR 8547	2006
C&H 389	1965	KR 8664	2006
Bowes-Lyon 3197	1966	KR 10075	2010
CHM 2006	1985	KR 10082	2010
P&L 29	1986	KR 10092	2010
Bowes-Lyon 31	1987/1989	TDA 090	2012
CHM 3060	1988	TDA 213	2013
EGM 101	1988	TDA 215	2013
C&S 1703	1990	TDA 1095	2016

R. griffithianum



R. griffithianum

R. griffithianum was the first constituent of Subsection *Fortunea* to be discovered, William Griffith, a doctor employed by the East India Company - who was also a naturalist and botanist - finding a population of plants in Bhutan while assigned to Major Robert Boileau Pemberton's diplomatic mission to that Himalayan state in 1837. He thus trumped Sir Joseph Dalton Hooker, whose wanderings around Sikkim in 1849 merely contributed a far superior form, in both foliage and flower, plus seed of such. The first reference to *R. griffithianum,* written by Robert Wight - a fellow doctor and surgeon once employed by the East India Company, but later a professional botanist, collector and expert on Himalayan flora, and friend of Griffith - appeared in an article, *Notes on Indian Botany*, published in the *Calcutta Journal of Natural History* - specifically page 176 of Volume 8 - in 1847, two years after Griffith had succumbed to parasitic liver disease. A full botanic description of the species can be found in the six-volume treatise *Icones Plantarum Indiae Orientalis*, the Latin text and accompanying illustration (Plate 1203) appearing in the fourth volume of such, published during 1850 and Wight, the author of the work, made sure the entry caught Sir William Jackson Hooker's attention, thereby consigning Hooker Jr.'s *R. aucklandii* to the wastelands of synonymy, while Wight's *R. griffithianum* went on to populate the woodland gardens of Great Britain and ultimately, the world.

Sir Joseph's 1851-published description of *R. aucklandii* - in the second part of *The Rhododendrons of Sikkim-Himalaya* - had, by 1858, become *R. griffithianum* var. *aucklandii* in Volume 84 of the *Botanical Magazine,* before being totally sunk. Yet even today, there remain a few acolytes who still argue for some form of separate identity, maintaining that Hooker's Sikkim plants are in a completely different league to those found in Bhutan, elsewhere in Sikkim and throughout the rest of the distribution, with foliage and flowers of a far higher calibre. Unfortunately - and despite being right - those plants offer botanists no hook to hang varietal or any other status on, nor is Aucklandii Group a likely future prospect. Hooker's seed, which arrived during 1850, was however the premier introduction of the species into UK cultivation and first flowering occurred just eight years later, in May 1858, at the Wandsworth nursery of one Mr. Gaines. Invited members of the hybridising fraternity took one look at those blooms, went gaga and the rest is history, with well over 3500 hybrids of the species to be found within the pages of the 2004-published Second Edition of the *International Rhododendron Register and Checklist,* and even more listed in its many yearly supplements, amateur and professional hybridisers conceiving a myriad of directed pollinations that overcame the H2-3 hardiness rating.

Crossing *R. griffithianum* with hardier partners was a de facto necessity because the species hails from relatively low altitudes - 1,800 to 2,900m - though specimens will thrive outdoors in sheltered venues along the west coast and in the south, often attaining tree-like proportions. Along the east coast, as well as inland, the species is unlikely to succeed unless a cool greenhouse can be wheeled into place, within which it can overwinter, or a local microclimate be established, such as that at Blackhills, near Elgin, in Morayshire. Provenance too should be checked before a youngster is purchased, as although plants collected by Cooper, Hooker, and Ludlow and Sherriff have large scented flowers and fine leaves - Cooper 2315, L&S 2835, plus of course "Hooker's Form" - others have far smaller flowers, without scent and much poorer foliage.

R. griffithianum is easily identified from all the other Subsection *Fortunea* species by its large pink or green calyx, the 5-lobed and fleshy corollas, plus the flaking, brownish-red smooth bark on the branches and trunk. Less decisive keying is provided by the petioles and the stout rhachis. The saucer-shaped calyx has an irregular, undulate rim - a wavy upper margin - that is never divided into deeply cleft or deflexed lobes, and the corollas are without nectar pouches. Labelled plants displaying such are not the true species.

R. griffithianum



R. fortunei

R. fortunei* ssp. *fortunei

Hardiness:
H5-6.
Flowering Period:
May-June.
Distribution in the wild:
Anhui, Fujian, Guangdong, Guangxi, Guizhou, Henan, Hubei, Hunan,
Jiangxi, E Sichuan, NE Yunnan & Zhejiang, China.
Growing in woodland at elevations of 600-2,000m.

Identification:
Shrub or small tree, upright, or upright and spreading, 2 to 9m high, occasionally to 12m;
young shoots often short-stalked glandular at first, becoming glabrescent or glabrous.
Leaves broadly obovate through oblong, 7 to 18cm long by 2.5 to 9.2cm wide,
apex obtuse through rounded, rarely acute,
base rounded, obtuse or truncate, more rarely cordulate, retained 1-2 years;
upper surface dark or olive-green, somewhat shiny;
lower surface with persistent punctulate hair bases
(these only confirmed using a magnifying lens).
Petiole 15-50mm long, cylindric, purple, sparsely glandular at first.
Inflorescence 5-12-flowered, the truss loose and often pendulous; fragrant.
Rhachis 20-50mm long, sparsely through moderately short-stalked glandular,
the hairs often near sessile.
Pedicel 15-30mm long, moderately through densely short-stalked glandular,
the hairs often near sessile.
Calyx minute, the 6-7 lobes 1mm long,
outer surface and margins usually sparsely through moderately short-stalked glandular,
the hairs often near sessile.
Corolla 4 to 7cm long, 7-lobed, open- through funnel-campanulate,
pale rose, lilac or pink, often fading to pure white;
the outer surface, especially at the base of the tube, usually short-stalked glandular,
the hairs often near sessile, the lobes undulate.
Stamens 14-16; filaments glabrous.
Ovary densely short-stalked glandular, the hairs often near sessile.
Style moderately through densely stalked-glandular base to tip,
the glands white or yellowish.
Capsule oblong, 16-40mm long, straight or slightly curved, ridged,
sometimes with the vestiges of glands.

Seed Collections:

W 887b	1900	EN 6228	> 1985
W 1077a	1900	AC 5083	2002
W 1686	1907	AC 5093	2002

In the autumn of 1855, Robert Glendinning, author of *Practical Hints on the Culture of Pineapples* and owner of the Chiswick Nursery, a horticultural emporium located in the then bucolic outskirts of west London, received the fruits of Robert Fortune's third plant hunting expedition to China. Those finds were gathered on the mountains west of Ningpo, a port city in Chekiang Province - now of course, Ningbo and Zhejiang - and they included seeds of the first hardy Chinese rhododendron to be introduced into British gardens. John Lindley named the species for its collector and discoverer when he described *R. fortunei* in an edition of *The Gardeners' Chronicle* published at the end of October 1859, his short account accompanied by a note from Fortune himself:

> "When on one of my long journeys in the province of Chekiang, I accidentally met with this fine species amongst the mountains, about 3,000 feet above the level of the sea. The discovery was most unexpected, for although the lower parts of the mountain are covered with the allied genus Azalea, no Rhododendron had been known to exist in this part of China. The specimens I met were of all sizes, from one year's seedlings to full-grown plants, the latter being 10 to 12 feet in height. The large plants had been covered with flower a short time before, and the ground under the branches was now strewed with decayed blossoms, but not in a fit state for examination. I was told on all sides by the natives that the plants were most beautiful objects when in full bloom. When I returned to the same place in autumn I found an abundance of ripe seed, which has vegetated freely in Mr Glendinning's nursery."

In spite of that 914m-high collection site and the associated benefits of a humid, subtropical climate, the species confounded Victorian era horticulturalists by surviving the UK's meteorological extremes and thriving outdoors, and it took those seedlings just eleven years to reach flowering size, May 1866 being the date the first blooms opened at Coombe Royal, in Kingsbridge, Devon, the abode of an up-till-then nascent rhododendron hybridiser, Mr John Luscombe. An obovate through oblong, instead of oblanceolate through oblong-obovate leaf shape, and the purple rather than pale green colour of the petioles, are the two main features that key *R. fortunei* from its now subspecies sister *R. discolor,* with the scented corollas, minute calyx lobes and punctulate hair bases on the abaxial leaf surface providing further keys to aid identification. *R. houlstonii,* presently synonymous under *R. discolor,* but maintained as Houlstonii Group, is variably midway between the two on leaf shape, has purple petioles but non-scented corollas, and may or may not have punctulate hairs and glands. Cultivated forms usually flower in May, earlier in the season than ssp. *discolor,* but concurrent with ssp. *fortunei*.

The wild distribution of both subspecies takes in most of southern and southeastern China - west to east, the provinces of Yunnan, Sichuan, Guizhou, Chongqing, Shaanxi, Guangxi, Hubei, Hunan, Jiangxi, Anhui and Zhejiang - with *R. fortunei* adding Guangdong, Henan and Fujian to that list, so it was a near predestined inevitability that the Edinburgh Revision botanists would regard the two as sisters and reduce their status accordingly. However, such a ranking reduction was not duplicated by Chinese botanists, who maintain the two rhododendrons as separate, distinct entities, this mirroring the view of H. H. Davidian as set out in Volume 2 of his *The Rhododendron Species*.

In combination, the leaf shape, the glabrous stamens, the white or yellowish hue of the glands on the style, and the short-stalked, near sessile glands on the pedicel, calyx and corolla readily distinguish both subspecies from *R. decorum, R. glanduliferum* and *R. vernicosum,* their closest relatives within the subsection.

Amazingly, given that vast endemicity, apart from Ernest Wilson, who secured two seeds lots in 1900 and another in 1907 - all sourced from plants in western Hubei - no other collector is documented as having returned seed of *R. fortunei* before Edward Needham and Alan Clark made separate gatherings on either side of the Millennium - from Sichuan, and the Lu Shan Botanic Garden in Jiangxi Province, respectively - the latter plant hunter having also made an affinity form gathering in Yunnan during 1993 (under the field number AC 744). Yet despite these introductions, and being heat tolerant in southern England, frost tolerant in northern Scotland, and hardier in UK cultivation than either *R. decorum* or *R. vernicosum, R. fortunei* will prove to be a rare find in British gardens today. This could be due to the young growth extending just before the flowers open, so vitiating the display, or maybe, because hybrid seedlings such as 'Sir Charles Butler' - aka 'Mrs Charles Butler' or simply 'Mrs Butler' - have proven better plants than those introduced by Fortune or Wilson. Yet if the genuine article is missing, very few rhododendron collections will be without a plant where the genes of *R. fortunei* are not to the fore, and indeed, the slew of hybrids posing as the true species is nigh endemic. One of these, grandiloquently titled *R. fortunei* Rubrum, or worse, *R. fortunei* var. *rubrum,* is unknown in the wild and likely began life as a rogue in a seed pan.



R. fortunei

R. fortunei

R. fortunei

R. orbiculare ssp. *orbiculare*

Hardiness:
H5.
Flowering Period:
April-May.
Distribution in the wild:
SW Sichuan, China.
Growing in forests, thickets, and on or amongst rocks, at elevations of 1,400-4,000m.

Identification:
Shrub or small tree, compact, rounded and dense, but leggy in shade,
1.5 to 4m high, occasionally to 15m;
young shoots pale green, glaucous and glabrous.
Leaves orbicular through ovate-orbicular, 4 to 11.5cm long by 4 to 10.5cm wide,
apex obtuse or rounded, base deeply cordate, usually with overlapping auricles;
upper surface bright green;
lower surface with minute punctulate glands (only confirmed using a magnifying lens).
Petiole 30-70mm long, pale green, sometimes with a reddish-purple flush, glabrous.
Inflorescence 7-17-flowered.
Rhachis 15-30mm long, short-stalked glandular.
Pedicel 25-60mm long, puberulent and sparsely through moderately short-stalked glandular, the hairs often near sessile.
Calyx minute, an undulate rim or with 7 lobes 0.5-1.5mm long,
their outer surface glabrous, the margins short-stalked glandular,
these hairs often near sessile.
Corolla 3.2 to 5cm long, 7-lobed, rarely with 6 or 8 lobes,
campanulate through open-campanulate, with a broad base,
deep rose-pink through purplish-pink or purplish-rose;
the outer surface glabrous,
the inner surface sometimes densely puberulous at the base of the tube.
Stamens 14; filaments glabrous.
Ovary densely short-stalked glandular.
Style glabrous.
Capsule cylindric, 15-30mm long, straight or curved, ridged, short-stalked glandular.

Seed Collections:

W 1519	1904	EGM 110	1990
W 1810	1904	CEE 230	1991
W 3418	1906/1909	AC 4793	2001
McLaren 38/025	1938	C&N 6175	2007
CCH 4016	1989	JN 12077	2012
Cox 5015	1990		

R. orbiculare ssp. *cardiobasis*

Hardiness:
H5.
Flowering Period:
May.
Distribution in the wild:
NE Guangxi.
Growing in forests at elevations of 1,500-2,200m.

Identification:
Shrub or small tree, rounded through upright,
1.5 to 4m high, occasionally to 15m;
young shoots pale green, glaucous and glabrous.
Leaves ovate-orbicular through ovate-elliptic, 8 to 12.5cm long by 5 to 9cm wide,
apex obtuse or rounded, base subcordate through rounded,
only slightly auricled (if at all) and without overlapping lobes;
upper surface bright green;
lower surface with minute punctulate glands (only confirmed using a magnifying lens).
Petiole 30-70mm long, pale green, sometimes with a reddish-purple flush, glabrous.
Inflorescence 7-13-flowered.
Rhachis 15-30mm long, short-stalked glandular.
Pedicel 25-60mm long, puberulent and sparsely through moderately short-stalked glandular, the hairs often near sessile.
Calyx minute, an undulate rim or with 7 lobes 0.5-1.5mm long, outer surface glabrous,
the margins short-stalked glandular, the hairs often near sessile.
Corolla 3.2 to 5cm long, 7-lobed, rarely with 6 or 8 lobes,
campanulate through open-campanulate, with a narrow base,
deep rose-pink through purplish-pink or purplish-rose;
the outer surface glabrous,
the inner surface sometimes densely puberulous at the base of the tube.
Stamens 12-14; filaments glabrous.
Ovary densely short-stalked glandular.
Style glandular, base to tip.
Capsule cylindric, 15-30mm long, straight or curved, ridged, short-stalked glandular.

Seed Collections:

AC 2015	1996	C&W 6665	2014
AC 5220	2002	C&W 6677	2014
AC 5226	2002	C&W 6679	2014

Fourteen years after *R. fortunei* was discovered, Jean-Pierre Armand David stumbled upon *R. orbiculare,* adding the shrub to the long list of finds he had made at Moupin, in southwest Sichuan, during 1869. The new species was originally described by Père David himself, whose Wikipedia entry lists his occupation as 'biologist' rather than 'Vincentian missionary priest', however:

> 'In the midst of his work as a naturalist Father David did not neglect his missionary labours, and was noted for his careful devotion to his religious duties and for his obedience to every detail of his rules.'
> James Joseph Walsh, *Catholic Encyclopedia,* Volume 4, 1913.

All well and good then, though given the 200 species of wild animals he collected during his stay in China, not to mention the 807 species of birds, 52 new-to-science species of rhododendron, 40 of primula, and god alone knows how many species of gentian, one has to wonder when, if ever, he had the time for such catechisms? His botanic text appears in Volume 7 of the *Journal of the North China Branch of the Royal Asiatic Society,* and designates *R. rotundifolium* as the taxon's epithet, but even in 1873 that appellation was 'nomen nudum' and declared to be so by the professional botanists of the time, which allowed one of them, Joseph Decaisne, to replace it with the far more insightful and equally tongue-friendly, *R. orbiculare* (*Flore des Serres et des Jardins de L'Europe,* Volume 22, 1877). Whether such sacrilege booked him a place in hell is currently unknown.

A sister species, *R. cardiobasis,* was later described by Hermann Sleumer during 1935 (*Notizblatt des Botanischen Gartens und Museums zu Berlin-Dahlem,* Volume 12), the German-Dutch botanist working from specimens collected in May 1929 on Yao Shan, a mountain near Guilin in the northeast of Guangxi Province, by S. S. Sin, of the Institute of Agriculture and Forestry, Sun Yatsen University, which is now known as the South China Institute of Botany. The leaves of *R. cardiobasis* tend to be slightly longer and less orbicular - 8 to 12.5cm long rather than 4 to 11cm, and 5 to 9cm wide instead of 4 to 10.5cm - and though their base might appear to be slightly auricled, the 'ears' never overlap. Habit is more upright, although both species attain 4m in height as standard, 15m on occasion, and when in flower, the *R. cardiobasis* styles are sticky from top to bottom, unlike those of *R. orbiculare,* which are without any glands.

The Edinburgh Revision botanists reduced *R. cardiobasis* to a subspecies of *R. orbiculare,* confirming the clear relationship that exists between the two even though they are disjunct in the wild, with no overlap in their distributions. Both plants can also be easily distinguished from the recently introduced *R. platypodum* as neither subspecies bear leaves that are markedly decurrent on the petiole - their bases extending along each margin as a broad wing.

Chinese botanists hair-split the Guangxi plant population into three subspecies taxa, highlighting ssp. *maolingense* as having an even narrower leaf blade (6 to 16cm long by 4 to 7cm wide), a 7cm long corolla with 15 to 16 stamens instead of 12-14, and a bigger seed capsule, while ssp. *oblongum* has - prepare yourselves! - oblong shaped leaves with a cordate base and a puberulent lower surface, plus a 6-lobed corolla with only 11 stamens. Both were introduced into UK cultivation at the end of 2014 by Alan Clark and Hannah Wilson - the former under the field number C&W 6665, the latter under C&W 6677 and 6679 - but as they are clearly no more than altitudinal or clinal variations on a theme, synonymic pre-emption is adopted herein.

Apart from *R. cardiobasis* and *R. platypodum, R. orbiculare* has no close morphologic ties to any of the other occupants of Subsection *Fortunea,* with the near circular leaves more reflective of species in Subsection *Thomsonii, R. cyanocarpum, R. viscidifolium* and *R.*



R. orbiculare

R. orbiculare

R. orbiculare

thomsonii itself, for instance, plus the monotypic taxon, *R. williamsianum,* despite these having 5- or 6-lobed corollas with just 10 stamens. H. H. Davidian remarks that *R. orbiculare* doesn't really fit well with any of the major species groupings, declaring it an aberrant within its current cubbyhole even if morphologically, that is where congruency is best (*The Rhododendron Species,* Volume 2, 1989). The Milne-Chamberlain chloroplast DNA analysis supported this view, with the phylogeny dataset showing a close association with *R. decorum* and *R. vernicosum.*

R. orbiculare was introduced into British gardens during 1904 by Ernest Wilson, a gathering made on his second Veitch-sponsored expedition to China, and the species has been widely grown in cultivation ever since. A near-ironclad H5 constitution, along with a propensity to bloom from a young age, the corolla colour, populous truss and visually appealing foliage have seen it given a prime position in many a rhododendron collection. To get a compact, perfectly rounded, dome-shaped specimen, however, a sunny site needs to be provided, but note: some of the introduced forms have flower trusses that are decidedly lax, while others bear corollas whose colour palette might best be described as somewhat jarring, so provenance should be checked before purchase. The Bodnant and Sandling Park clones both have deep, rose-pink flowers, in tight trusses, and are often available from the specialist nurseries.

Officially, until quite recently, *R. cardiobasis* was absent from the ranks, Alan Clark's 1996 and twin 2002 gatherings being the first and so far only documented seed lots to find their way into British gardens apart from the more recent C&W trio. This was because no wild origin provenance could be traced to some long established plants, bearing equally old labels, which were thought - in the main - to be hybrids of ssp. *orbiculare*. Spots or a blotch would be a sure-fire sign of such, but neither feature on the specimen growing in the woodland at Exbury Gardens in Hampshire, which ticks all the other botanical description boxes as well. Mr Lionel or Mr Eddy clearly magicked the plant from somewhere, but any hope of pinning down a 'from whom' or a 'from where' - or likewise, a 'when' - is probably forlorn. H. H. Davidian certainly believed the Rothschild plant to be the bona fide, genuine article (*The Rhododendron Species,* Volume 2) and independent confirmation of this was provided by Geoffrey Gorer, of Sunte House, Haywards Heath, who was able 'to purchase three small and unflowered seedlings from Exbury in 1959'. One of these later succumbed, but the remaining two began flowering in 1967, allowing him to report that:

> 'Its kinship to *R. orbiculare* is clear, particularly in the rather harsh pink of its flowers (the Handbook speaks of white flowers, but both mine are pink); to my mind it is a somewhat more elegant plant. The large elliptical leaves are, I consider, superior to those of any forms of *R. orbiculare* I know when the plants are out of flower; I also prefer the loose trusses of funnel-campanulate flowers to the tight truss of campanulate flowers of *R. orbiculare*. This is clearly a matter of personal taste, but I consider it at least as good as *R. orbiculare* and of easier cultivation, though its colour is somewhat difficult to place. My bigger plant is now about 6 feet x 4 feet; the rate of growth similar to that of *R. orbiculare*'.
> *The Rhododendron and Camellia Year Book 1971,* p. 101.

A well-respected, albeit amateur, rhododendron expert, Gorer clearly believed that his specimens of ssp. *cardiobasis* were the real McCoy, though again, where they originated prior to germination at Exbury, will likely remain forever an unsolved mystery.

One for Rian and Benoit then?


R. cardiobasis


R. cardiobasis

R. oreodoxa* var. *oreodoxa

Hardiness:
H5-6.
Flowering Period:
Late February-April.
Distribution in the wild:
S Gansu, W Hubei & Sichuan, China.
Growing in forests and thickets at elevations of 2,100-3,800m.

Identification:
Shrub or small tree, upright or rounded-spreading, 1.3 to 8m high,
occasionally to 12m; branchlets thin.
Leaves oblong through obovate-elliptic, 4.5 to 10.5cm long by 1.8 to 4cm wide,
apex obtuse or rounded, apiculate, base rounded, retained 1 year;
lower surface with persistent punctulate hair bases
(only confirmed using a magnifying lens).
Petiole 7-25mm long, pale green or purplish, often short-stalked glandular at first.
Inflorescence 5-12-flowered.
Rhachis 3-6mm long, short-stalked glandular and tomentose.
Pedicel 5-15mm long, purple, variably short-stalked glandular.
Calyx minute, the 6-7 lobes 1-3mm long,
the outer surface and margins moderately through densely short-stalked glandular,
rarely glabrous or eglandular.
Corolla 2.6 to 4.8cm long, 7-8-lobed, campanulate through open-campanulate,
white, white flushed lilac, pink or rose,
with or without purple spots and rarely with a darker basal blotch;
the outer and inner surfaces glabrous.
Stamens 14; filaments glabrous or pubescent at the base.
Ovary glabrous.
Style glabrous.
Capsule cylindric, 13-32mm long, straight or slightly curved, ridged.

Seed Collections:

W 1531	1904	McLaren 38/030	1932/1939	AC 4065	1998
W 1541	1904	McLaren AH 307	1932/1939	AC 4771	2001
W 1211	1906/1909	CCH 3951	1989	AC 4954	2001
W 4245	1910/1911	SICH 832	1991	C&N 6148	2007
W 4247	1910/1911	SICH 1648	1994	C&N 6151	2007
W 4260	1910/1911	EFH&M S 1648	1995	JN 12023	2012
W 4271	1910/1911	AC 3953	1998	JN 12041	2012
Farrer 63	1914			JN 12281	2012

R. oreodoxa* var. *fargesii

Hardiness:
H5-6.
Flowering Period:
Late February-April.
Distribution in the wild:
S Gansu, W Hubei, S Shaanxi, Sichuan & NW Yunnan, China.
Growing in forests and thickets at elevations of 1,800-3,500m.

Identification:
as var. *oreodoxa* except:
Leaves oblong through oblong-elliptic, 5 to 8.2cm long by 2 to 4.8cm wide.
Inflorescence 5-10-flowered.
Calyx sometimes an undulate rim.
Corolla 5-7-lobed, lilac-pink through deep pink, heavily spotted.
Stamens 12-14.
Ovary densely short-stalked glandular.

Seed Collections:

W 1250	1901	CEE 348	1991	AC 4331	1999
W 3416	1906/1909	AC 2029	1996	AC 4853	2001
R 23326	1932	AC 2048	1996	AC 5179	2002
SABE 942	1981	AC 4010	1998	C&N 6146	2007
Cox 5063	1990	AC 4016	1998	C&N 6147	2007
EGM 137	1990	AC 4079	1998	JN 11026	2011

R. oreodoxa* var. *shensiense

Hardiness:
H5-6.
Flowering Period:
Late February-April.
Distribution in the wild:
Taibai Shan, SW Shaanxi, China.
Growing in forests at elevations of 2,300-2,500m.

Identification:
as var. *oreodoxa* except:
Pedicel sparsely rufous-tomentose.
Corolla 5-lobed.
Stamens 10.
Ovary densely short-stalked glandular.

Seed Collections:
None have been officially documented.



R. oreodoxa



R. fargesii

Fate or good fortune appear to have thrown the subsection's membership, 1869 and Jean-Pierre Armand David together, as the Lazarist priest chanced upon two other of its species that year while of course, still religiously carrying out his devotions.

First up, was the absolutely stunning, *R. oreodoxa:*

A shrub, or more likely a small tree to around 8m high - with a few individuals hitting 12m in height - *R. oreodoxa* was described by Adrien Franchet seventeen years after its discovery, his text appearing within Volume 33 of the *Bulletin de la Société Botanique de France,* published in 1886. The species is distinct from all but one of the other Subsection *Fortunea* rhododendrons, and of course, its own varieties, in having quite thin branchlets, those supporting an inflorescence just 3 to 4mm in diameter. A side by side comparison will reveal the rest of the membership to have shoots below a flower bud ranging from 4 to 13mm in width, the one exception to this being *R. decorum,* where they are only 3-7mm broad. The short oblong leaves, 4.5 to 10cm in length and 1.8 to 4cm in width, considered in combination with the small, unscented corollas - 2.6 to 4.8cm long - and the late February to April bloom time, will confirm an identification.

Classification-wise, the Edinburgh Revision botanists split the taxon into three, while Chinese botanists have gone one better and defined a quartet:

R. fargesii was found sometime between 1891 and 1894 by Paul Guillaume Farges while on a short break from converting the heathen. Based at Tchen-keou-tin in Chengkou County, then part of northeast of Sichuan, now included within the Chongqing Municipality, which was where the discovery was made, Père Farges too, like many of his colleagues, appears to have spent more time botanising the nearby hills than proselytising the local population (probably much to their relief). Specimens were duly despatched to France and then forwarded on to Franchet, with a botanical description published in Volume 9 of the *Journal de Botanique,* during 1895. *R. fargesii* would join a select list of 129 new-to-science plants - amongst the 4,000-plus specimens returned in total - that were named for the priest. To wit: *Abies fargesii, Berberis fargesii, Corylus fargesii, Decaisnea fargesii, Epimedium fargesii, Geranium fargesii, Hydrangea fargesii,* and so on and so forth, all the way down the alphabet to *Wikstroemia fargesii*, with several taxa featuring under almost every letter and only F, K, U, X, Y and Z skipped. None however, would bear an honorific referencing his employer. Almighty strange that…

Marginally wider leaves - to 4.8cm - more heavily spotted blooms, and on occasion, slightly fewer stamens in those corollas - 12 to 14, rather than a fixed 14 - are features that can aid in differentiating between the two varieties, but only the ovary offers a definitive key: sticky, and *R. fargesii* will be to hand; sans any stipitate-glandular hairs, and the subject being examined will be *R. oreodoxa*.

Known only from Taibai Shan in southwest Shaanxi - the overall endemic distribution covers southern Gansu, western Hubei, southern Shaanxi, Sichuan and northwestern Yunnan - *R. oreodoxa* var. *shensiense* has pedicels with a sparse rufous tomentum. It may also have 5-lobed corollas, rather than the 7-8 of var. *oreodoxa,* or the 6-7 of var. *fargesii,* and these will be populated with 10 stamens instead of 12-14, but such morphology is currently far from bankable. More reliable is a repeat of the dense covering of short-stalked glands on the outer surface of the ovary. Scions from a plant growing at the Gothenburg Botanic Garden in Sweden have been established in a handful of British gardens.

The Chinese addition, *R. oreodoxa* var. *adenostylosum,* has been found established in forests between the 3,600 and 3,900m contours in western Sichuan and eastern Tibet. It has the principle distinguishing feature of 14 to 15 stamens, plus a 6-7-lobed corolla, densely glandular ovary, and, unlike its three cohorts, a glandular rather than eglandular style. Plants of this variety have not as yet been introduced into UK cultivation.

The two most well known and widely grown forms of the species were ushered into British gardens by Ernest Wilson well over a hundred years ago: *R. fargesii* arriving in 1901 from a gathering made in the west of Hubei; *R. oreodoxa* following from western Sichuan during 1904. The former first opened its blooms in the grounds of Caerhays Castle, the Cornish Riviera estate owned by J. C. Williams, just a decade later, during March 1911, while the latter flowered for the proprietors of the Veitch Nurseries - sponsors of both expeditions - at their Coombe Wood facility on the outskirts of London, in the spring of 1913. Cultivation is usually without problem, both varieties being fully hardy, vigorous and free-flowering from an early age. Moreover, not all will be lost if the early developing buds are hit when night-time temperatures drop below zero in late February, March or April, as they can usually shrug off a degree or two of frost. Also, mirroring a trait displayed by many other rhododendron species, the leaves will roll up into tubes and droop whenever the weather gets too cold, or conversely, too hot.



R. shensiense



R. shensiense



R. oreodoxa



R. oreodoxa

R. fargesii

R. decorum* ssp. *decorum

Hardiness:
H4-5.
Flowering Period:
Late April-June.
Distribution in the wild:
SE Tibet; W Guizhou, SW & W Sichuan, & NW Yunnan, China; NE Upper Myanmar.
Growing in and at the margins of forests, in thickets and scrub,
in drier open areas along side valleys, amongst rocks and boulders,
and on limestone cliffs, at elevations of 1,000-4,000m.

Identification:
Shrub or small tree, upright, spreading, bushy or straggly,
1 to 9m high, occasionally to 15m.
Leaves oblong through oblong-ovate, 5 to 18cm long by 2 to 7.6cm wide,
apex obtuse or rounded, apiculate, base cordate, cuneate or rounded, retained 1-2 years;
upper surface olive- through bright-green, matt,
with a wax-coating that becomes glossy and sticky if heated or rubbed;
lower surface sometimes punctate, with small hairs
(these only seen using a magnifying lens).
Petiole 10-40mm long, pale green, glabrous.
Inflorescence 5-14-flowered in an open-topped truss; fragrant.
Rhachis 8-30mm long, sparsely short-stalked glandular,
the hairs sometimes near sessile.
Pedicel 25-40mm long, stout, short-stalked glandular, the hairs sometimes near sessile.
Calyx small, the 6-7 lobes 1-3mm long,
their outer surface and margins moderately through densely short-stalked glandular,
the hairs sometimes near sessile.
Corolla 4.5 to 7.5cm long, 6-7-lobed, fleshy, open- through funnel-campanulate,
white through pale pink, often flushed rose or lavender-rose,
with a yellow, green or crimson tinge at the base,
and with or without green, crimson or purple spotting;
the outer surface sparsely glandular,
the inner surface often moderately glandular and densely puberulent at the base,
the glandular hairs short-stalked to near sessile,
the lobes emarginate or entire.
Stamens 12-16; filaments pubescent at the base.
Ovary densely short-stalked glandular, the hairs white and near sessile.
Style moderately through densely short-stalked glandular from base to tip,
the hairs white or yellowish;
the stigma small or swollen, 2-6.5mm wide.
Capsule oblong, 18-40mm long, often slightly curved, ridged,
sometimes with the vestiges of glands.

Seed Collections:

W 1782	1904	KR 336	1980	CEE 355	1991	AC 1027	1995
W 1209	1906/1909	L 867	1981	SICH 531	1991	AC 1041	1995
F 5869	1910	SBEC 42	1981	SICH 611	1991	AC 1043	1995
F 6776	1910	SBEC 116	1981	SICH 921	1992	EGM 300	1995
W 4257	1910/1911	SBEC 181	1981	SICH 930	1992	FED 439	1995
F 18902	1917/1919	SBEC 228	1981	SICH 944	1992	AC 1331	1996
Farrer 979	1919	SBEC 439	1981	SICH 981	1992	AC 1351	1996
KW 3805	1921	SBEC 734	1981	SSNY 94	1992	AC 1857	1996
KW 4487	1921	SBEC 1059	1981	SSNY 95	1992	AC 1896	1996
KW 5002	1921	SBEC 1060	1981	AC 565	1993	AC 1919	1996
R 6681	1923/1924	SBEC 1225	1981	AC 653	1993	KR 3946	1996
R 11404	1923/1924	SBEC K063	1981	AC 701	1993	AC 3757	1998
F 28315	1930/1931	SBEC K108	1981	AC 757	1993	JN 895	1999
F 30887	1930/1931	SBEC K112	1981	AC 797	1993	SICH 2153	2001
R 24433	1932	KEY 29	1985	AC 812	1993	SICH 2216	2001
McLaren V 69	1932/1939	CHM 2619	1986	KR 2499	1993	GLGS 15969	2002
McLaren V 172	1932/1939	SBLE 142	1987	KR 2726	1993	KR 7714	2002
McLaren V 187	1932/1939	SICH 240	1988	KR 2793	1993	LPE 161	2003
Yu 13894	1937	SICH 343	1988	AGS 2096	1994	ZH-G 068	2006
Yu 14935	1937	SICH 380	1988	AGS 2192	1994	C&N 5950	2007
Yu 18288	1937	CLD 130	1990	CNW 386	1994	C&N 5883	2007
Yu 19005	1937	CLD 211	1990	CNW 553	1994	C&N 5882	2007
Yu 20961	1937	CLD 514	1990	CNW 582	1994	C&N 5910	2007
Yu 22891	1937	CLD 539	1990	CNW 602	1994	NN 0903	2009
Yu 22910	1937	CLD 1473	1990	CNW 775	1994	NN 0907	2009
Yu 22998	1937	Cox 5003	1990	CNW 787	1994	CNC 12031	2012
KW 100	1938/1939	Cox 5047a	1990	Cox 6548	1994	JN 12082	2012
		EGM 124	1990	P&M 26	1994	JN 12173	2012
		CEE 335	1991	P&M 187	1994	JN 12263	2012

R. decorum* ssp. *diaprepes

Hardiness:
H3-4.
Flowering Period:
June-July.
Distribution in the wild:
SW Sichuan, & S & W Yunnan, China; NE Upper Myanmar; Laos.
Growing in and at the margins of evergreen, mixed and deciduous forests,
in thickets and open areas, at elevations of 1,700-3,300m.

Identification:
Shrub or small tree, upright and spreading, 1 to 8m high, occasionally to 14m.
Leaves oblanceolate through oblong-lanceolate to oblong-elliptic,
10 to 19cm long by 4 to 7cm wide, sometimes to 30cm long and 12.5cm wide,
apex obtuse or rounded, apiculate, base rounded, cordate or obtuse, retained 1-2 years;
upper surface olive- through dark green, matt or somewhat shiny,
with a wax-coating that becomes glossy and sticky if heated or rubbed;
lower surface sometimes punctate, with small hairs (only seen using a magnifying lens).
Petiole 18-40mm long, pale green, glabrous.
Inflorescence 5-12-flowered in an open-topped truss; fragrant.
Rhachis 10-30mm long, sparsely short-stalked glandular,
the hairs sometimes near sessile.
Pedicel 20-40mm long, stout, short-stalked glandular, the hairs sometimes near sessile.
Calyx small, the 5-6 lobes 1-3mm long, the outer surface and margins
eglandular or sparsely through moderately short-stalked glandular,
the hairs when present often near sessile.
Corolla 6.5 to 11cm long, 7-8-lobed, fleshy, open-campanulate,
white, sometimes flushed rose, often with a yellow, green or crimson tinge at the base
and with or without green, crimson or purple spotting;
the outer surface often sparsely short-stalked glandular, the hairs when present
often near sessile, the inner surface densely puberulent at the base.
Stamens 18-20; filaments densely pubescent at the base.
Ovary densely short-stalked glandular, the hairs white and often near sessile.
Style moderately through densely short-stalked glandular from base to tip,
the hairs white or yellowish.
Capsule oblong, 30-65mm long, slightly curved, ridged,
sometimes with the vestiges of glands.

Seed Collections:

F 11958	1913	Yu 17839	1937
F 15791	1917/1919	KR 2571	1993
F 15816	1917/1919	BASE 9671	2000
F 17551	1917/1919	KR 7482	2002
F 17586	1917/1919	KR 7559	2002
F 27727	1924/1925	JN 11074	2011
Yu 13961	1937		

Armand David came across *R. decorum* sometime between 1869 and 1870, the exact date being a bit of a moveable feast, rather like Easter, but the journey from Moupin to France once again landed the specimens on the desk of Adrien Franchet, with the resulting species botanic description - featured in the 1886-published Volume 33 of the *Bulletin de la Société Botanique de France* - likewise experiencing a sixteen year gestation bottleneck.

Leaf shape, fragrant corollas and their basally puberulous stamen filaments cleave *R. decorum* from the trio of *R. oreodoxa* varieties, as well as from *R. vernicosum*. The latter taxon shares the same characteristic of a base-to-tip sticky style, but has glands that are a distinctive crimson or dark red in hue. Any confusion with *R. fortunei* is quickly resolved following a check of the petiole colour - purple (in cultivation), rather than the pale green of *R. decorum*. Regrettably, that test doesn't always work for *R. discolor* unless the plants are from Houlstonii Group, but when in doubt, the late-in-the-season flowers will be seen to have hairless stamens.

R. diaprepes was found in the west of Yunnan Province by George Forrest during his exploration of the Shweli-Salween Divide in June 1913 and was jointly described by Isaac Bayley Balfour and William Wright Smith in Volume 10 of *Notes from the Royal Botanic Garden, Edinburgh,* this published in 1917. The species has long been regarded as a larger-faceted, later-flowering version of *R. decorum* - June-July instead of May-June - and that view was formally adopted by the Edinburgh Revision botanists who, taking account of the lower altitude and more south-westerly distribution, reduced specific status to subspecies ranking. Field study has confirmed that assessment and documented intermediate forms where the populations overlap.

A detailed examination of the two will show that *R. diaprepes* has larger leaves and flowers, more stamens, and a longer gynoecium - ovary-style - this 5.6 to 9.5cm long, instead of being 3 to 5cm in length. Those corollas also have 7 to 8 lobes instead of the 6 to 7 that feature on its subspecies sister. As would be expected, hardiness values reflect the altitudinal banding, with ssp. *diaprepes* only rated H3-4 in UK cultivation, while ssp. *decorum* attains a H4-5 figure.

The expansive geographic distribution of ssp. *decorum* and the subsequent variation found within that extensive population has prompted Chinese botanists to further divide the taxon beyond the clear *decorum-diaprepes* demarcation, with two additional subspecies maintained: *R. cordatum,* which has a cordate leaf base, petioles that are only 12-14mm long, and a range restricted to Yunnan Province; and *R. parvistigmatis,* which is found at lower altitudinal levels in southwest Sichuan, has leaves with an acute or apiculate apex and a rounded base, petioles that are longer than 15mm, a 7-lobed corolla that is entire instead of being emarginate, and a very small stigma only 2mm in diameter. Neither subspecies has a niche distribution and one team of Chinese botanists have already reduced *R. cordatum* to synonymy in a paper published by *Acta Phytotaxonomica Sinica* in 2003. A similar fate should be applied to *R. parvistigmatis*.

It should also be noted that the *R. cordatum* epithet is actually illegal under ICNAFP nomenclature rules as it was previously used within the genus - by Augustin Léveillé in 1914 - to describe a plant that is now synonymous under *R. souliei.*

Perhaps to counter the loss of ssp. *cordatum, R. qiaojiaense* was 'officially' discovered in the Yaoshan Nature Reserve in northeastern Yunnan, during May 2005, Lian-Ming Gao, Shu-Dong Zhang and Na-Na Lin - all members of the Kunming Institute of Botany - making the 'discovery'. Except the new subspecies had already been introduced into UK cultivation a decade earlier under a 'species nova' catchall. For Alan Clark had gathered two batches of capsules - field numbers AC 1041 and 1043 - from the same locale later visited by Gao, Zhang and Lin - Qiaoshan, in Qiaojia County; between the 2,600 and 2,700m contours; the

plants growing in and at the margins of mixed woodland. Described in early 2009 by Lian-Ming Gao and De-Zhu Li (*Annales Botanici Fennici,* Volume 46, Part 1), the listed character differences with *R. decorum* are of the nitpicking variety and fall fully within the scope of the existing botanic description. This taxon too therefore, like the other two, is just another unremarkable geographic variant awaiting the application of synonymy.

Seedlings of *R. decorum,* germinated from a Jean-Marie Delavay collection made in Yunnan during 1887, arrived at the Royal Botanic Garden, Kew, courtesy of the Jardin des Plants in Paris, during 1889. All the major Western collectors would later find the species and introduce seed as the collections table above indicates, though World War II, the Chinese Civil War, the upheavals of the Communist Revolution and finally, implementation of the Nagoya Protocol in October 2014, interrupted proceedings on occasion.

Cultivation of *R. decorum* in British gardens is usually without problem, the plants hale and hearty, free-flowering from a very young age, their scent divine. Bloom time varies and is dependent on provenance, the most robust forms from the highest altitudes opening their flowers at the end of April, while those whose wild distribution approaches that of ssp. *diaprepes,* delay their floral bouquet until the last weeks of June. Specimens will eventually grow into small trees approaching 9m in height, with an upright to spreading habit.

R. diaprepes was first introduced into UK cultivation during 1913 by George Forrest and Keith Rushforth laid claim to the re-introduction credit in 1993, however, longterm horticultural success is not straightforward, as unlike its subspecies sister, new growth often comes early, before the flowers open, so the hit taken from a hoar frost will not only see off the young stems but cause significant bark split. Site choice is therefore critical, with colder gardens along the east coast and those inland, effectively ruled out; Edinburgh Botanic's expert gardening staff, for instance, now choose to grow the species at Benmore, their satellite site on Scotland's west coast.

A clone previously gifted an Award of Merit by the Royal Horticultural Society in 1953, and then a First Class Certificate in 1974 - 'Gargantua' - is the hardiest form of the subspecies available, but propagation is by graft or layer, so rarely will it be found for sale, even at the remaining few specialist nurseries. Technically however, it can no longer be considered a form of ssp. *diaprepes* because it is a polyploid with thirty-nine chromosomes - a triploid - and therefore unable to successfully breed with any diploid species, including *R. diaprepes* or *R. decorum,* both of which posses just twenty-six DNA chains.

Had the shrub arisen from a pan of similar seedlings germinated from wild collected seed, it could be treated as a new species, or alternatively, as a natural hybrid - *R. x gargantua* - if it emerged as a rogue amongst those youngsters. But it was conceived in the garden at Tower Court, Ascot, when the terminally ailing, sole specimen of *R. diaprepes* in the collection, was self-pollinated by Roza Stevenson to maintain the biodiversity count (*The Rhododendron and Camellia Year Book 1960,* page 37). The stress of imminent death was the likely precipitant that caused cell division to misfire during meiosis. This is the process where haploid gametes - an egg or a sperm (pollen grain) - with half the standard 2*n* = 26 complement of chromosomes are produced. When one of each come together in the ovary, the full complement is restored - 13 + 13 = 26 - and a viable seed produced, but in the case of 'Gargantua', either the egg or the pollen grain was an unreduced gamete, which had 26 instead of 13 chromosomes. This pairing resulted in the inception of a triploid hybrid - 26 + 13 = 39 - most of which are usually sterile. The discovery that 'Gargantua' was a triploid was made at RHS Wisley in the late 1940s by a team of botanists lead by E. K. Janaki Ammal, their results published in an article entitled *Chromosome Numbers In Species Of Rhododendron,* within the 1950 *Rhododendron Year Book.*



R. decorum (AC 1331)



R. decorum (LPE 161)



R. diaprepes



R. Gargantua



R. diaprepes (Yu 13961)



R. Gargantua (the deformed stigmas indicate genetic instability)

R. decorum



R. decorum

R. davidii

Hardiness:
H4-5.
Flowering Period:
March-April.
Distribution in the wild:
C, S & W Sichuan & NE Yunnan, China.
Growing in evergreen woodland, amongst bamboo, in thickets and in open situations,
at elevations of 1,700-4,000m.

Identification:
Shrub or small tree, upright and spreading, 1.5 to 8m high;
young shoots green, glabrous and eglandular.
Leaves oblanceolate through oblong-oblanceolate, 9 to 17cm long by 2 to 4.5cm wide,
apex acute through abruptly acuminate, base cuneate, slightly decurrent on the petiole;
upper surface with recurved margins;
lower surface greenish-white.
Petiole 15-25mm long, pale pink, flat above, grooved,
the margins with narrow wings, thinly white-tomentose or glabrous.
Inflorescence 6-12-flowered.
Rhachis 20-60mm long, sometimes to 100mm, glandular and tomentose.
Pedicel 8-12mm long, somewhat stout,
moderately through densely short-stalked glandular.
Calyx minute, the 5-6 lobes 1-2mm long,
outer surface and margins densely short-stalked glandular.
Corolla 3.5 to 5cm long, 7-8-lobed, openly- through tubular-campanulate,
pink, rosy-red, or lilac through purplish-blue, with or without darker purple flecks;
the outer surface sparsely glandular, the inner surface glabrous.
Stamens 14-16; filaments glabrous.
Ovary densely short-stalked glandular.
Style glabrous or sparsely through moderately short-stalked glandular at the base.
Capsule cylindric, 18-20mm long.

Seed Collections:

W 1873	1904	EN 4213	> 1985
W 3978	1904	CCH 3917	1989
W 3415	1908	AC 4100	1998
W 4261	1910	AC 4868	2001
KR 172a	1980	AC 4876	2001
EN 3255	> 1985		

Père David's follow-up to the *R. decorum* find was an encounter with the species that now bears his name, *R. davidii,* the mountains of Moupin disclosing yet another of their treasures in 1870. The botanic fate of the collected specimens mirrored the exact same destinies of *R. oreodoxa* and *R. decorum,* all being revealed in Volume 33 of the 1886-published *Bulletin de la Société Botanique de France,* which in fact contains the descriptions of all of Armand David's Moupin finds, a 'Greatest Hits' edition, if you will, whose track list, in addition to the Subsection *Fortunea* species, includes chart-topping introductions such as *R. argyrophyllum, R. calophytum, R. dendrocharis, R. floribundum, R. lutescens, R. moupinense, R. pachytrichum, R. polylepis* and *R. strigillosum,* to name but nine, though these are alphabetically interspersed within a host of hits from that even more popular crooner, Jean-Marie Delavay.

A densely short-stalked-glandular ovary, smaller, but equally adhesive calyx, and in contrast, an eglandular style - the few sticky hairs at the base excepted - are the features that distinguish *R. davidii* from its likely closest relative, *R. huanum. R. oreodoxa,* with similarly coloured and shaped corollas, can have either a glabrous or glandular calyx, with var. *fargesii* possessing a glandular ovary, and var. *oreodoxa,* a non-tacky one, but their leaves are usually half as short as those of *R. davidii* and elliptic in shape rather than oblanceolate through oblong-oblanceolate. Any lingering confusion will be eliminated by a quick glance at the rhachis, no more than 10mm long for any of the *R. oreodoxa* varieties, 20 to 60mm in length for *R. davidii*.

Historically - prior to the Milne-Chamberlain cpDNA dataset being revealed - the densely glandular ovary and calyx of *R. davidii*, along with its extra long rhachis, cleaved the species from *R. praevernum* and *R. sutchuenense*.

When exactly seed of the taxon was first introduced into the UK's woodland gardens remains a subject open to debate. Expedition field records imply three 1904 Ernest Wilson collections were the first arrivals. One gathering, under W 1531, flowered for the first time at Caerhays Castle in 1918, but J. C. Williams immediately saw that it was actually *R. oreodoxa,* the appraisal well founded given he had flowered *R. fargesii* for the first time just seven years previously. Any seedlings from the other two lots - W 1873 and 3978 - plus a collection in 1908 and another in 1910 - W 3415 and 4261, respectively - all seem to have succumbed, though W. J. Bean documents the species as flowering at the Royal Botanic Garden, Kew, from 1912 through until at least 1914, and accurately notes the especially long rhachis. Yet the botanic and horticultural consensus currently in vogue regards any such plants with a provenance pre the mid 1980s, plus a Yu-ying Geng re-introduction from Sichuan that arrived just before the Millennium, as being either *R. oreodoxa,* or one of its natural hybrids. Backing-up this view, the online database of the Harvard University Herbaria currently shows Wilson's 4261 gathering as *R. sutchuenense,* though this could simply be a straightforward inputing error.

Two authenticated Edward Needham collections - EN 3255 and EN 4213 - are the real deal however, and flowering-size plants from both gatherings may now be found in many of the major rhododendron gardens. Cultivation appears straightforward, with no problems reported to date, and the specimens have come through several recent hard winters in east coast arboreta near unscathed. They also bloom from an early age, the corollas opening during March-April, which dictates their placement within a woodland surround.



R. davidii (EN 3255)



R. davidii (EN 3255)



R. davidii (EN 4213)

R. glanduliferum

Hardiness:
H4-5.
Flowering Period:
June-July.
Distribution in the wild:
N & W Guizhou & NE Yunnan, China.
Growing in evergreen forests and scrub, and on the summits of hills,
at elevations of 1,450-2,400m.

Identification:
Shrub or small tree, upright, rounded and spreading, 3 to 8m high, sometimes to 20m;
young shoots stout, sparsely setose-glandular.
Leaves oblong-lanceolate through oblanceolate, 10 to 25cm long by 2 to 6cm wide,
apex shortly acuminate, base cuneate or tapered,
very slightly decurrent on the petiole;
upper surface somewhat shiny, the margins recurved;
lower surface short-stalked glandular at first, especially towards the base,
becoming eglandular.
Petiole 16-30mm long, stout, the margins very narrowly winged,
densely short-stalked glandular at first,
but soon glabrous or with the vestiges of the glands.
Inflorescence 5-18-flowered; fragrant;
the bud scales with long acuminate tips, glandular at the base.
Rhachis elongate, 13-40mm long, densely short-stalked glandular,
the hairs near sessile.
Pedicel 20-40mm long, densely glandular with three hair types present,
setulose, short- and long-stalked.
Calyx minute, the 7 lobes 1-3mm long,
outer surface and margins densely glandular with three hair types present,
setulose, short- and long-stalked.
Corolla 5 to 9cm long, 7-8-lobed, open- through funnel-campanulate,
white, white flushed pink, pale pink or rose, becoming greenish-yellow in the throat,
with or without orange-red flecks on the upper lobes;
the outer surface densely glandular with two hair types present,
setulose and long-stalked,
the inner surface puberulous at the base of the tube.
Stamens 14-16; filaments glabrous.
Ovary densely short-stalked glandular.
Style densely glandular base to tip, the hairs white,
these generally long-stalked over the lower half, short-stalked along the upper half.
Capsule cylindric, 20-45mm long,
glandular with two hair types present, setulose and long-stalked.

Seed Collections:

PW 41	1994	C&H 7131	1995
PW 44	1994	EGM 347	1995
AC 1206	1995		

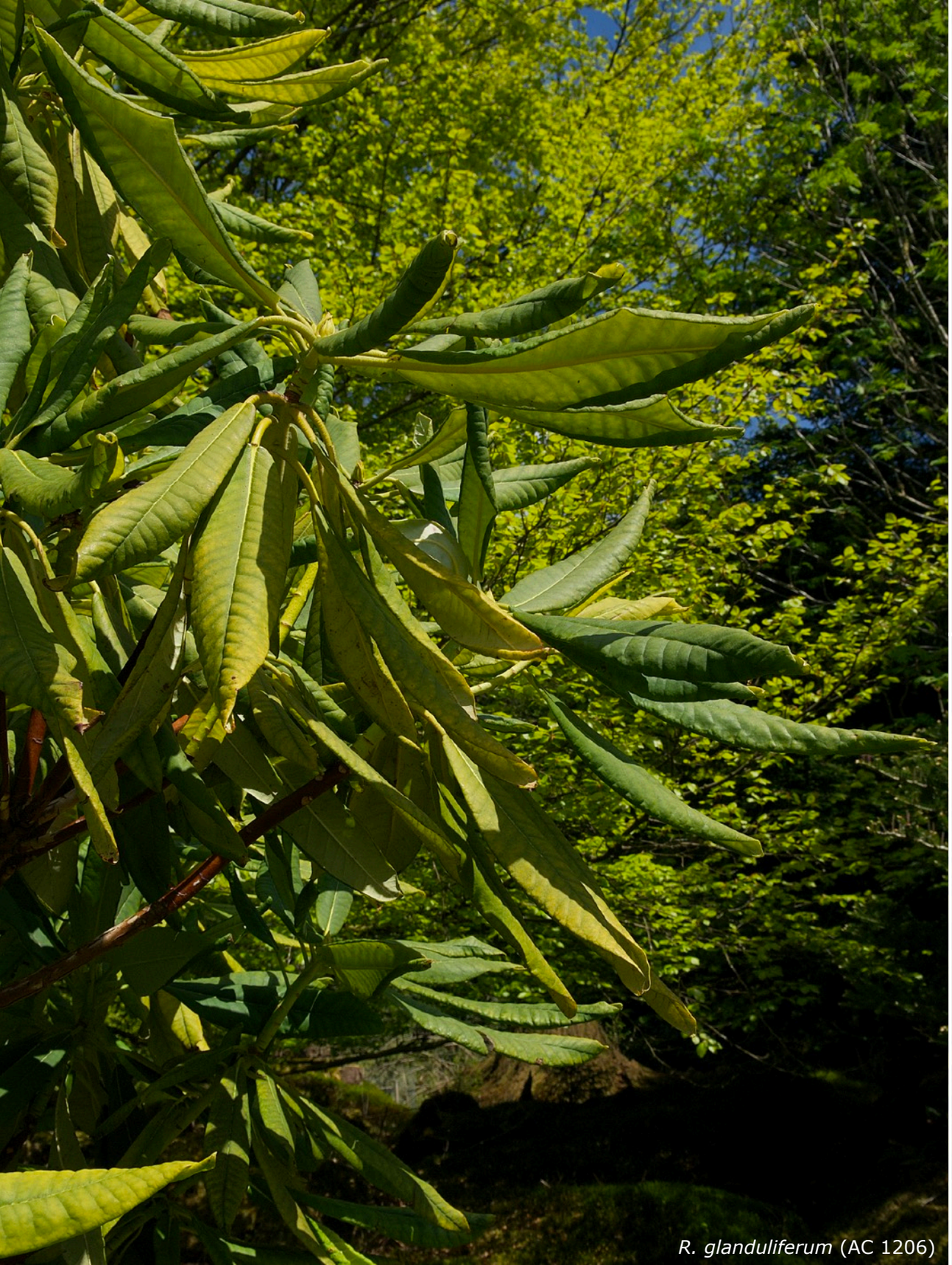
R. glanduliferum fell to one of Armand David's competitors in the converts game, the aforementioned Jean-Marie Delavay, who made the discovery sometime between 1883 and 1885. The collection location in Yunnan was then known as Ta Kouan, this now translated as Daguan, and the Adrien Franchet fast-tracked botanic description appears - where else - but in the 1886, Volume 33 edition of the *Bulletin de la Société Botanique de France*.

Sticky glands are the pre-eminent characteristic that unsurprisingly distinguish *R. glanduliferum* from its subsection relatives - at least when in flower - with a dense covering of such found on the pedicel, calyx and corolla. Moreover, two, or even three forms of these hairs intermingle on each structure: setulose-glandular, long-stalked glandular and short-stalked glandular. The pedicel and calyx host all three, while the outer surface of the corolla boasts just two types, being bereft of any short-stalked glandular hairs, this state also mirrored along the length of the seed capsule. The hairs along the style are also a duopoly: long-stalked glandular populating the lower half, these preponderant at the base; short-stalked glandular from the mid-point upwards and exclusively at the tip. But sans those blooms, the plants are indistinguishable from *R. fortunei* ssp. *discolor.* At least, until the capsules have extended and the hairs can be examined.

On the ground, the species has only been found at six sites: Anlong, Daloushan and Longtoudashan in the north and west of Guizhou; Daguan, Yilang and Zhengxiong in the northeast of Yunnan. These populations are not extensive and the sites - evergreen forests and scrub, plus the summits of a few hills, all residing between the 1,450 and 2,400m contours - are threatened by timber extraction.

R. glanduliferum was only introduced into UK cultivation during 1995 - under C&H 7131 and EGM 347 - both collections made when Peter Cox, Peter Hutchison and Ted Millais were on the same plant hunting expedition to Yunnan. Some aficionados - UK members of the American Rhododendron Society - may also have had access to two Peter Wharton gatherings made the previous year in Guizhou, PW 41 and 44, although two other Wharton lots from that same trip - PW 39 and 83 - which were given *R. glanduliferum* affinity tags, have now been identified as *R. fortunei* ssp. *discolor*. Conversely, an Alan Clark 1995 Yunnan find previously identified as *R. calophytum* var. *openshawianum* - AC 1206 - has now joined the fold after opening its blooms not in February-April, but in June-July. Those five collections however, are the only authenticated introductions to date.

It was actually one of the Millais seedlings that was first to bloom, opening several buds in 2004 at the Loder Plants Nursery in West Sussex. Site and growing requirements so far match those for *R. discolor,* with young plants proving hardy and vigorous. None were reported to have succumbed to the recent cold winters.



R. glanduliferum (AC 1206)



R. glanduliferum (AC 1206)



R. glanduliferum (AC 1206)

R. serotinum
Hardiness:
H4-5.
Flowering Period:
July-September.
Distribution in the wild:
S Yunnan, China; N Laos; N Vietnam.
Growing in mixed woodland at elevations of 1,500-2,900m.

Identification:
Shrub, upright or straggly, 3 to 5m high, but new introductions probably taller;
young shoots pale green, glabrous, long.
Leaves broadly oblong through oblong-elliptic, 8 to 18.5cm long by 3.5 to 9cm wide,
apex rounded or acute, mucronate,
base auriculate, rounded, obtuse or unequally cordate;
upper surface olive-green, wax-coated,
becoming shiny and sticky when heated, the margins moderately undulate;
lower surface papillate.
Petiole 20-35mm long, glabrous.
Inflorescence 7-8-flowered; fragrant.
Rhachis 20-30mm long, papillose-glandular.
Pedicel 30-45mm long, minutely papillose-glandular.
Calyx lobes undulate, 1-8mm long, the margins with minute red glands.
Corolla 4.8 to 6.5cm long, 7-8-lobed, open- through funnel-campanulate,
white, the outer surface often flushed pink or rose,
with a crimson blotch at the base of the upper lobe breaking into flecks;
the outer surface short-stalked glandular along the tube.
Stamens 14-16; filaments pubescent at the base.
Ovary short-stalked glandular, the glands white.
Style short-stalked glandular base to tip, the glands white.
Capsule oblong, 29-31mm long, straight or slightly curved, ridged,
sometimes with the vestiges of glands.

Seed Collections:

AC 756	1993
AC 1239	1995
C&H 7189	1995



Rhododendron serotinum, Tab 8841, *Curtis's Botanical Magazine,* Volume 146, 1920.

The documented historical saga chronicling *R. serotinum* begins with a batch of seedings despatched to England by the Jardin des Plants in Paris. Grown from a collection made by Abbé Jean-Marie Delavay in 1887, with a provenance nominally traceable to a site near Mengzi in southern Yunnan, they arrived at Kew Gardens in 1889, but bore a label identifying them as *R. decorum*. Amongst the group however, three plants stood out from the rest and were clearly different. Whether potential rogues or included in error, they exhibited long straggly growth, had leaves with unequally cordate bases, and when they finally flowered, the corollas displayed a crimson blotch, had hairy stamens and a glandular exterior. They also opened those blooms much later in the season than *R. decorum*, the floral display beginning in August and concluding in October, albeit under glass.

John Hutchinson, who described the three as a new species in Volume 146 of *Curtis's Botanical Magazine,* published in 1920, reports that the long, fastigiate habit of growth, actually allowed Kew's gardeners to train one of the plants up a roof support pillar in the Temperate House, while another specimen, planted outside in the Rhododendron Dell and of a 'gaunt, sparsely branched habit', proved completely winter hardy until a major storm snapped the stem off at the base. There is no mention in Hutchinson's appraisal, of the trio having somewhat undulate leaf margins, but a glance at the illustration that accompanied the text - shown opposite - confirms that to be the case.

Had someone else found *R. serotinum* in the wild all would have been well, but no one did, at least, not before the political upheavals in China excluded the Western plant hunters from the country's floral hotspots for over thirty years. In that interregnum, and during the fifteen years from 1980 that followed, with still no sight of the species despite a gold rush of expedition teams avidly combing the hills for taxa old and new, expert opinion hardened to the view that here was yet another natural hybrid: rogues born in a seed pan; unknown in the wild.

But then, in 1993, a collection first logged as *R. vernicosum,* was made in Yunnan by Alan Clark, and two years later in the autumn of 1995, teams visiting Lao Jing Shan, to the west of Wenshan City in southeastern Yunnan, came upon a population of rhododendrons that were initially thought similar enough to *R. hemsleyanum* to warrant an affinity tag. Because the leaves of the new find had undulate margins, though not as pronounced as those on true specimens of *R. hemsleyanum.* The blades were also narrower, with pointed tips, and the plant's habit, more upright, with long inter-nodal growth.

Further field study confirmed a late-in-the-season bloom time and siren voices could be heard softly proclaiming the fact that Lao Jing Shan was not all that far to the east of Mengzi, where Delavay had made his *decorum-serotinum* collection. Opinion coalesced and all three collections - AC 756, C&H 7189 and AC 1239 - were decreed to be *R. serotinum.* Or rather, a Mark II version of such, as a few slight adjustments to the original Hutchinson botanic description were required to achieve a perfect fit - the addition of acute, as well as rounded, leaf apexes; plus an auricled base - but apropos of these, old and new are indivisible in Doctor David Chamberlain's professional reassessment.

A number of finds collected in Vietnam and Laos are more problematic as these plants exhibit characteristics that are aberrant from the accepted descriptions of *R. serotinum* and *R. hemsleyanum*. Currently, they still await formal assignment to an existing taxon or the gift of specific status, though some - CWT 6282, for instance, collected in Ban Khoang, north of Sa Pa, in Lào Cai Province, during 2011 - have been given an affinity tag.

Specimens of Alan Clark's earlier, introductory find, under the field number AC 756, have now opened white, 7-lobed corollas with 16 stamens. They are also furnished with long oblong leaves that are similar, but do not exactly match those on the original *R. serotinum* seed-pan-rogue introduction, and are without the auricled bases or acutely pointed tips of the two 1995 Lao Jing Shan gatherings. As indicated, they were originally slated *R. vernicosum,* then redetermined as *R. hemsleyanum* aff., but placement under *R. serotinum* is a far better fit despite flowering occurring earlier than the given norm - in mid to late June, rather than July-September. In addition, the yellow-green corolla throat lacks a red blotch or flecks, and the stamen filaments proved to be completely glabrous, but such geographical variation has rightly been incorporated into a countless number of Genus *Rhododendron's* other individual botanic descriptions.

The officially sanctioned Mark II version of *R. serotinum* is clearly related to both *R. decorum* and *R. fortunei,* and when in flower, can be keyed from either by the crimson-blotched corollas, AC 756 seedlings excepted. When out of bloom, the fairly wavy leaf margins should prove sufficient, aided when present, by their auriculate base. Habit too is distinct, narrowly upright and sparse, against spreading and bushy.

The alliance with *R. hemsleyanum* is probably closer still, with the narrower foliage and pointed apex the only aids to a correct identification for much of the year.

Specimen plants from the original 1889 introduction can still be found in a few gardens, with leaves that closely match some forms of *R. decorum,* this including the presence of a waxy coating on the upper leaf surface that becomes shiny and sticky when warmed by very strong sunlight. With these, reliance for a true determination rests on the much later flowering period, the crimson blotched corollas, and a far lankier habit.

Cultivation requirements match those for any other long-leaved rhododendron, with specimens proving fully hardy in a sheltered, woodland environment, easy to grow, and flowering in just over a decade from germination. The new introductions have proved to be especially vigorous, with a specimen from the C&H 7189 collection, growing at Glendoick Gardens, near Perth, taking just twelve years to top the 4m mark.



R. serotinum (C&H 7189)

R. serotinum (AC 756)

R. platypodum

Hardiness:
H4-5.
Flowering Period:
April-May.
Distribution in the wild:
Chongqing, Guangxi & SE Sichuan, China.
Growing in forests and thickets, on steep rocky slopes and at cliff edges,
at elevations of 1,800-2,200m.

Identification:
Shrub or small tree, rounded, 2 to 8m high;
young shoots stout, glabrous, with a slight grey waxy dusting at first.
Leaves thick, broadly elliptic through rounded to oval,
7 to 13cm long by 4.5 to 7.5cm wide,
apex rounded, apiculate or mucronate,
base obtuse through rounded, broadly decurrent on the petiole;
lower surface with persistent punctulate hair bases (confirmed using a magnifying lens).
Petiole 10-20mm long, green, glabrous, flat above, 6-11mm wide,
the margins broadly winged.
Inflorescence 10-15-flowered.
Rhachis 35-70mm long, glabrous, eglandular or sparsely short-stalked glandular.
Pedicel 17-50mm long, glabrous, eglandular or sparsely short-stalked glandular,
the hairs near sessile.
Calyx rim-like, fleshy, the 7 undulate lobes 1-2mm long, outer surface glabrous,
the margins eglandular or short-stalked glandular, the hairs near sessile.
Corolla 3.5 to 5.6cm long, 7-lobed, open- through funnel-campanulate,
pink through pinkish-red; the outer surface glabrous,
the inner surface sometimes densely pubescent at the base of the tube.
Stamens 12-14, rarely 15-16; filaments densely pubescent at the base.
Ovary densely short-stalked glandular, the hairs sometimes setulose.
Style moderately through densely short-stalked glandular base to tip,
the glands white or yellowish.
Capsule cylindric, *c.* 16mm long, densely glandular.

Seed Collections:

AC 4992	2001
AC 5002	2001
JN 11030	2011
C 14005	2014

In 1891, Charles Bock and Arthur von Rosthorn discovered *R. platypodum* at Nanchuang Hsien, then in southeast Sichuan, but now part of the Chongqing Municipality. Their herbarium specimens of the leaf blades were described by Friedrich Diels, writing in *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie,* Volume 29, which was published in 1900. A Chinese rhododendron expert, the now legendary Wen-Pie Fang, relocated the plant population in flower during May 1928, and his specimens and field notes allowed Harry Tagg to complete the botanic description that appeared in Volume 16 of *Notes from the Royal Botanic Garden, Edinburgh,* published in 1931.

The thick, oval-shaped leaves, with their broadly-winged petioles - short but distinctly flattened above and up to 1cm wide - in combination, key *R. platypodum* from all the other Subsection *Fortunea* species bar the newest member of the pack, *R. yuefengense*. Chinese botanists have suggested that this taxon is no more than a smaller growing form of *R. platypodum,* though there are some minor character differences: more circular leaves, which are often fractionally larger than those of *R. platypodum;* longer petioles that are only narrowly winged; and stamen filaments that are glabrous at the base. Flower colour too is slightly different, pink or pinkish-red for *R. platypodum,* white flushed pink for *R. yuefengense,* though only a complementary nod towards an accurate identification can be made on any pigmentation demarcation.

Outwith the subsection, *R. platypodum* could be confused with the elliptically-leaved members of Subsection *Campylocarpa* or Subsection *Thomsonia,* but leaf thickness, plus the short and markedly winged petioles, should again provide a key.

Peter Cox and Peter Hutchison were the first modern-day plant hunters to come upon *R. platypodum,* finding a population of plants on Jinfo Shan, in the Nanchuan District of Chongqing, in the spring of 1999, but apparently not securing any seed so early in the season. That was remedied on the other side of the Millennium when Alan Clark made two gatherings from the same locale in 2001, and Jens Nielsen garnered a third batch a decade later in 2011. A year earlier, in 2010, a team lead by Steve Hootman of the Rhododendron Species Foundation, had expanded the known distribution when they found the species happily ensconced in southeastern Sichuan and it was from that population that Peter Cox added a fourth lot to the total in 2014.

Seedlings germinated from those gatherings have proved to be fully hardy, gaining a H4-5 rating from the RHS, but growth has been observed to come early, so frost protection is essential if the new shoots are to be spared Jack’s attentions.

R. fortunei* ssp. *discolor

Hardiness:
H5.
Flowering Period:
May-July.
Distribution in the wild:
Anhui, Chongqing, Guangxi, Guizhou, Hubei, Hunan,
Jiangxi, Shaanxi, Sichuan, Yunnan & Zhejiang, China.
Growing in woodlands and thickets at elevations of 900-2,100m.

Identification:
Shrub or small tree, upright through rounded-spreading, compact or bushy,
1.5 to 8m high; young shoots sometimes sparsely short-stalked glandular at first,
becoming glabrescent or glabrous.
Leaves broadly oblanceolate through oblong-obovate to oblong,
5.6 to 20cm long by 2 to 7cm wide,
apex obtuse or rounded, rarely abruptly acute,
base tapered, obtuse, cuneate or rounded, rarely cordulate or auricled, retained 1-2 years;
upper surface dark, pale or olive-green, matt or somewhat shiny;
lower surface pale green or yellowish-green,
usually without persistent punctulate hair bases (only confirmed using a magnifying lens).
Petiole 15-38mm long, pale green or more rarely purple, stout, glabrous.
Inflorescence 5-10-flowered; not fragrant.
Rhachis 15-50mm long, sparsely through moderately short-stalked glandular,
the hairs often near sessile, or eglandular, or glabrous.
Pedicel 15-50mm long, sparsely through moderately short-stalked glandular,
the hairs often near sessile, or eglandular, or glabrous.
Calyx small, the 7 lobes 1-5mm long, outer surface and margins often short-stalked
glandular, the hairs near sessile, the margins sometimes ciliate.
Corolla 4.5 to 8cm long, 7-lobed, open- through funnel-campanulate,
pink through rosy-pink, or white, with or without a greenish-yellow basal blotch,
or more rarely with green and red banding on the outside and spotted inside;
the outer surface sometimes sparsely glandular, the hairs near sessile,
the inner surface glabrous, the lobes often undulate.
Stamens 12-16; filaments glabrous.
Ovary densely short-stalked glandular, the hairs near sessile.
Style stalked-glandular base to tip, the glands white or yellowish.
Capsule cylindric, 18-50mm long, straight or slightly curved, ridged,
sometimes with the vestiges of glands.

Seed Collections:

W 570	1900	W 586	1907	PW 83	1994
W 609	1900	EN 3655	> 1985	AC 4271	1999
W 648	1900	PW 34	1994	AC 5091	2002
W 885	1900/1902	PW 39	1994	AC 5208	2002
W 1181	1900/1902	PW 76	1994	JN 11033	2011

R. discolor was discovered by the Missions Étrangères priest Paul Farges sometime between 1891 and 1894, close to Tchan-keou-ten, where he was based in the northeast of Sichuan. On arrival at the Muséum National d'Histoire Naturelle, his dried specimens were described by Adrien Franchet in Volume 9 of the *Journal de Botanique,* which was published in 1895. Ernest Wilson was responsible for introducing the taxon into UK gardens during 1900, part of the floral bounty secured on his initial Veitch-sponsored expedition to China, and a juvenile plant germinated from that seed flowered for the first time in cultivation at their Coombe Wood establishment during June 1911.

Most Western botanists and horticulturalists now consider *R. discolor* to be almost identical with *R. fortunei,* the two differing only in the shape of their leaves, and its status has therefore been reduced to subspecies ranking under the earlier described taxon. However, as detailed above, China's botanists disagree and have chosen to maintain the two species as separate distinct entities, as did the highly respected doyen H. H. Davidian (*The Rhododendron Species,* Volume 2, 1989). The distribution and morphology of the two species do overlap, but the notion that *R. discolor* can only reliably be separated from *R. fortunei* by the proportionately narrower leaves and usually later bloom time is wrong. To wit: the flowers of *R. discolor* are without scent and may have a yellow-green blotch at the base; the calyx lobes are not minute, but can be up to 5mm long; the leaf underside is without persistent punctate glands or hairs, though this will only be seen using a microscope; and the petioles are coloured green, not purple.

Altitudinal range was the factor that decreed subspecies status - low and high, with intergradation occurring in-between. This was the picture sketched in the 1997-published *Encyclopedia of Rhododendron Species,* where Peter and Kenneth Cox gave figures of 600-900m for *R. fortunei* and 1,100-2,100m for *R. discolor.* Yet this clear division is not endorsed by the Chinese, who quote 600-2,000m and 900-1,900m respectively in their online *Flora of China* tome.

Confusing the picture even more is *R. houlstonii.* Currently consigned to synonymy under *R. discolor,* but previously considered to be a variety of *R. fortunei,* it is actually intermediate between the two, varyingly displaying some of the identifying characteristics of both species. Discovered in Hubei by Augustine Henry during 1888 and first collected and introduced from the same area by Ernest Wilson in 1900 - W 570, W 648 and W 885 are the associated field numbers, with W 609 and W 1181, plus W 586 from 1907, the *R. discolor* introductions - it has purple petioles yet oblanceolate-shaped leaves, which may or may not be punctulate.

R. houlstonii was jointly described by Wilson and William Hemsley in the *Bulletin of Miscellaneous Information, Royal Gardens, Kew,* in 1910, and is maintained today as *R. fortunei* ssp. *discolor* Houlstonii Group. However, associating it with either species skews their botanic description away from a clear-cut and distinctive profile, so a better solution might be to regard it as a natural hybrid - *R. x houlstonii* - which it likely is, this better reflecting the actual state of affairs on the ground.

Leaf shape and the glabrous stamens distinguish *R. discolor* from *R. decorum*. Leaf shape, plus the white or yellowish glands on the style key it from *R. vernicosum,* which has crimson-red glands. The usually sparse scattering of short-stalked, almost sessile glands on the pedicel, calyx and corolla, cleave it from *R. glanduliferum,* which has dense coverings of setulose glands. And post such sorting, confusion with any of the remaining Subsection *Fortunea* species is unlikely. *R. discolor* has also proved surprisingly hardy in UK cultivation despite coming from quite low altitudes and if protected from early autumn frosts, the species can succeed in most gardens where rhododendrons thrive. Growth is usually vigorous, but it begins just before the flowers open, which to a degree, mars the display.

R. discolor

R. discolor



R. discolor Houlstonii Group



R. discolor Houlstonii Group



R. discolor Houlstonii Group (W 648)

R. vernicosum

Hardiness:

H4-5.

Flowering Period:

May.

Distribution in the wild:

SE Tibet ; Gansu, Guizhou, SW Sichuan, & N & W Yunnan, China.

Growing at the margins of forests and in clearings,
amongst rocks in open situations alongside streams, in thickets, or in dry rocky meadows,
at elevations of 2,600-4,300m.

Identification:

Shrub or small tree, rounded-spreading or broadly-upright, rigid,
1.3 to 5m high, occasionally to 8m;
young shoots often sparsely glandular, becoming glabrescent.
Leaves elliptic through ovate-elliptic to obovate-elliptic,
4 to 13.5cm long by 2 to 5.6cm wide,
apex obtuse or rounded, base obtuse or rounded, retained 1-2 years;
upper surface wax-covered, becoming shiny and sticky when heated;
lower surface with persistent punctulate hair bases (confirmed using a magnifying lens).
Petiole 13-40mm long, pale green, glabrous.
Inflorescence 5-12-flowered.
Rhachis 5-10mm long,
moderately through densely puberulent and sparsely short-stalked glandular,
these hairs almost sessile.
Pedicel 7-43mm long,
moderately through densely short-stalked glandular, the glands dark red.
Calyx minute, fleshy, the 7-8 lobes 1-2mm long,
outer surface and margins densely short-stalked glandular, the hairs near sessile.
Corolla 3.5 to 5.4cm long, 6-7-lobed, fleshy, widely funnel-campanulate,
rose through pinkish-purple to pale pink, rarely white,
with or without crimson spots or flecks;
the outer and inner surfaces glabrous, the lobes sometimes reflexed.
Stamens 11-14; filaments glabrous.
Ovary densely short-stalked glandular, the glands dark red and near sessile.
Style short-stalked glandular base to tip, the glands dark red.
Capsule cylindric and oblique, 15-40mm long, slightly curved, ridged,
usually short-stalked glandular or with the vestiges of glands.

Seed Collections:

W 1777	1904	McLaren T 71	1932/1939	CNW 1302	1994
W 1256	1906/1909	Yu 13809	1937	SICH 1322	1994
F 5880	1910	Yu 15104	1937	C&H 7009	1995
F 5881	1910	Yu 14694	1937	C&H 7027	1995
F 10075	1912/1914	L 951	1981	C&H 7132	1995
F 10114a	1912/1914	CHM 2620	1986	EGM 348	1995
F 14038	1917/1919	SBLE 81	1987	FED 143	1995
F 15130	1917/1919	SBLE 144	1987	FED 440	1995
F 15165	1917/1919	SBLE 357	1987	AC 1480	1996
F 15606	1917/1919	CCH 3927	1989	AC 1532	1996
F 19007	1917/1919	SICH 676	1991	AC 1827	1996
F 20291	1921/1922	SICH 713	1991	AC 1832	1996
KW 5405	1922	SSNY 2a	1992	AC 1901	1996
R 6829	1923/1924	SSNY 35	1992	KR 4086	1996
R 10551	1923/1924	SSNY 104	1992	KR 4099	1996
R 10882	1923/1924	AC 729	1993	KR 4103	1996
R 11325	1923/1924	AC 742	1993	KR 4208	1996
R 11326	1923/1924	KGB 154	1993	Henriksen 042	1997
R 11329	1923/1924	KGB 495	1993	AC 4133	1998
R 11331	1923/1924	KR 2833	1993	JN 993	1999
R 11408	1923/1924	CNW 122	1994	SICH 2110	1999
R 18139	1929	CNW 233	1994	AC 5186	2007
R 4021 (USDA)	1929	CNW 302	1994	NN 0937	2009
R 24434	1932	CNW 488	1994	CNC 12024	2012
R 25331	1932	CNW 489	1994	JN 12087	2012
R 25373	1932	CNW 641	1994	JN 12099	2012
McLaren P 71	1932/1939	CNW 660	1994	JN 12242	2012

R. vernicosum was discovered and first collected near Tongolo, in western Sichuan, during 1893, by yet another French missionary priest, Abbé Jean-Andre Soulié. The species was described by Adrien Franchet in Volume 12 of the *Journal de Botanique,* published in 1898, with the epithet reflecting the varnished nature of the leaves (from the French verb 'to varnish' - vernir). Now known to have an extensive endemic distribution across much of southwest and central China, as well as being resident in southeast Tibet, the original botanic description has been broadened to incorporate all those extremes and variables present across the population. Prior to that revision however, half-a-dozen or so variants had received specific status immediately after their discovery, this later reduced first to forma ranking, before full synonymy was applied.

The most well-known of these were:

R. araliiforme - a George Forrest 1917 find, described by the collector and Sir Isaac Bayley Balfour in 1922 (*Notes from the Royal Botanic Garden, Edinburgh,* Volume 13). Collected on the mountains of the Mekong-Salween Divide in the northwest of Yunnan, it has smaller, more oblong leaves.

R. euanthum - found on the western flank of the Lichiang Range by Forrest during his trek through Yunnan in 1910, and described by Balfour and William Wright Smith in the 1917-published Volume 10 of *Notes*. It has larger corollas than the type specimen, these white inside on the lower lobes, pink with spots on the upper ones, and oval or oblong-oval leaves.

R. rhantum - another Forrest collection made on the Lichiang Range (but in 1913) that was also described by Balfour and Smith in *Notes,* Volume 10. Smaller, thinner leaves, plus a slightly smaller corolla, pale rose and crimson-spotted, are the defining characteristics.

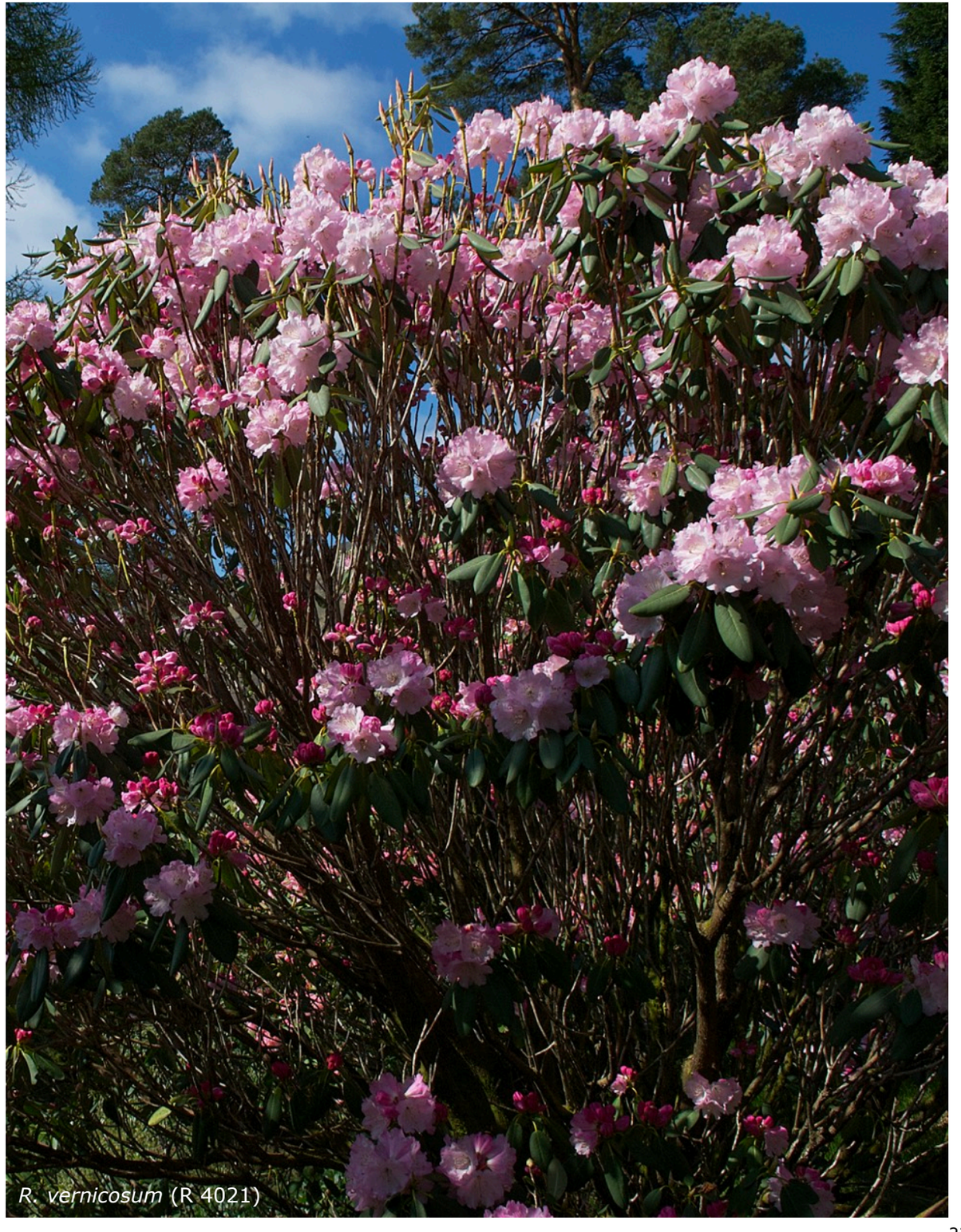
R. sheltonae - collected by Ernest Wilson near Tatsienlu (Kangding) in the west of Sichuan during 1904, it has a jointly written botanic description by Wilson and William Botting Hemsley that appeared in Kew's 1910-published *Bulletin of Miscellaneous Information.* Corollas are no more than 3.5cm long, seed capsules just 2cm long and the leaves are also smaller.

The last of the above four, which Wilson named for the wife of Doctor Albert Shelton of the Chinese Missions Society, was probably the most widely grown of the various forms, though any clamour for RHS Group status has been notably absent.

R. vernicosum displays dark red glands on its style, ovary and pedicel, and it is these that distinguish the species from all the other Subsection *Fortunea* rhododendrons. From *R. decorum,* nominally its closest relative, the glabrous stamen filaments and unscented corollas offer additional keying.

Over seventy documented seed collections of *R. vernicosum* have been made and introduced into British gardens since Ernest Wilson secured the first batch of capsules in 1904 and the species is now common in cultivation, where it flowers from a young age and is easy to grow, but note: because a number of those introductions favour early growth, provenance should be checked if you garden in a frost pocket.

In the wild, *R. vernicosum* has bred with many other rhododendrons, including *R. decorum* and *R. oreodoxa,* producing a host of natural hybrids. *R. x chlorops,* a cross with *R. wardii,* is probably the most well known of those introduced into UK gardens and the hybrids bred from it easily outnumber those of the type species. That statistic also applies to an affinity form of the species collected in Yunnan by Doctor Joseph Rock during 1929 under the field number designation R 18139 (USDA 3788).



R. vernicosum (R 4021)



R. vernicosum (R 4021)



R. vernicosum (CNW 122)



R. vernicosum (Yu 14694)



R. vernicosum (F 10075)

R. vernicosum aff. (R 18139)

R. hemsleyanum

R. hemsleyanum
Hardiness:
H5.
Flowering Period:
May-June.
Distribution in the wild:
Emei Shan, W Sichuan, China.
Growing in woods and thickets at elevations of 1,000-2,000m.

Identification:
Shrub or small tree, upright and sparse, 2 to 6m high, sometimes to 9m;
young shoots glabrous, puberulent or short-stalked glandular.
Leaves oblong through oblong-ovate to ovate-elliptic, 9 to 27cm long by 4 to 13cm wide,
apex rounded, base auriculate and deeply cordate, retained 2 years;
upper surface somewhat shiny, the margins usually distinctly undulate;
lower surface minutely papillate,
with persistent and scattered punctulate hair bases (confirmed using a magnifying lens),
sometimes sparsely short-stalked glandular near the base.
Petiole 26-75mm long, pale green, usually stout,
glabrous or sparsely setulose or short-stalked glandular.
Inflorescence 5-10-16-flowered; fragrant.
Rhachis 30-70mm long, sparsely short-stalked glandular.
Pedicel 20-40mm long, glabrous or densely setulose-glandular.
Calyx minute, the 6-7 lobes 1-1.5mm long, purple,
outer surface and margins glabrous or densely setulose or short-stalked glandular.
Corolla 4.5 to 6cm long, 6-7-lobed, open-campanulate through campanulate,
pure white, occasionally flushed rose-pink on the outside,
and often with a yellow-green throat;
the outer surface glabrous or sparsely through moderately short-stalked glandular
especially at the base, the hairs near sessile,
the inner surface sometimes puberulent at the base of the tube.
Stamens 10-16; filaments glabrous.
Ovary densely short-stalked glandular, the hairs near sessile.
Style densely glandular base to tip, the glands white.
Capsule oblong through oblong-oval, 16-40mm long, sometimes slightly curved,
ridged, and occasionally with the vestiges of glands.

Seed Collections:

Yu 8823	1937
EN 2097	1989


R. hemsleyanum


R. hemsleyanum


R. hemsleyanum (EN 2097)

Emei Shan, in the west of Sichuan Province, is the highest of four mountains held sacred by Chinese Buddhism, the others being Jiuhau Shan to the east in Anhui Province, Putuo Shan even further east in the coastal province of Zhejiang, and Wutai Shan in Shanxi to the northwest. Clocking-in at 3,099m - 10,167 feet - Emei Shan has three distinct peaks and is home to the deity Samantabhadra, an enlightened being or bodhisattva, who took up residence many millennia-ago, arriving in style on a six-tusked elephant, which rather out-marvels any hammer-wielding Norse competitor. A designated UNESCO World Heritage Site since 1996, in addition to its religious significance, Emei Shan is one of the planet's most important bio-diversity hotspots, with over 3,200 endemic plant species recorded across five vegetation zones. And it was where Ernest Wilson discovered *R. hemsleyanum.*

The date was June 1904, and Mount Omei - the old translation of its name - was without the bus park and cable car system now deemed de rigueur for a modern tourist destination, and lacking the 48m-tall and ten-faced Puxian stupa at Jinding - the Golden Summit - a post-millennium monstrosity that only arrived in 2004, though two flights of time-worn stone steps did allow pilgrims to reach the seventy or so mostly Ming and Qing dynasty monasteries that had been constructed close to its zenith. Luckily, steep hillsides, inaccessible cliffs and impenetrable tangles of vegetation kept - and still keep - the thousands of visitors to the main trails and off the vast bulk of the mountain, protecting the flora and fauna from disturbance and discarded detritus, though the pace of development encroaching on the lower flanks is increasing.

Wilson's sole encounter with the rhododendron, early in the season, resulted only in the dried herbarium material he used to describe the find in the 1910 edition of the *Bulletin of Miscellaneous Information, Royal Gardens, Kew.* Piqued readers would have to wait more than two decades - three post the original discovery - before seed of *R. hemsleyanum* was finally obtained. This event occurred on Professor Hsen-Hsu Hu's 1937 botanical exploration of southwest China, the capsules gathered by Te-Tsun Yu, the expedition's plant collector. The Arnold Arboretum, Harvard University's botanical research institution and garden, in the Jamaica Plain and Roslindale neighbourhoods of Boston, Massachusetts, was gifted a portion of the seed under the lot number Yu 8823, but for reasons unknown, the Royal Botanic Garden, Edinburgh, missed out, even though both institutions had provided financial support for the extensive field trip. The seedlings germinated from that encounter flowered for the first time during 1963, at the American Rhododendron Society Test Garden in Portland, Oregon, and hand-pollinated seed from those specimen plants was obtained by Euan Cox, successfully sown and grown-on at Glendoick, the family nursery midway along the A90 Perth to Dundee road, with a UK first-flowering taking place in 1975.

R. hemsleyanum is easily identified from the other members of the subsection by the unmistakably wavy-edged foliage, rounded at both ends, and the leaf base with two slightly overlapping and raised auricles, or 'ears'. The pure white, unspotted flowers, appear late in the season during May-June, and the growth habit is upright and sparse. When first described, the plant was associated with *R. auriculatum,* not least because of that auricled leaf base, but significant character differences separate the two, including foliage shape, the hair and gland type, the lack of any acuminate tips on the bud scales, and of course, those undulating leaf margins. A far closer relationship with the membership of Subsection *Fortunea* was soon evidenced however, and widely accepted by the time the first edition of *The Species of Rhododendron* was despatched for its 1930 print run.

Chinese botanists have opted to split the taxon in two on the basis of glandular or eglandular petioles and pedicels, plus the width of the leaf blades, describing a sticky var. *hemsleyanum* as having narrower foliage to around 8cm wide, while that for the non-tacky var. *chengianum* broadens out to hit the species maxima of 13cm. The latter taxon is also confined to the mountain's lower slopes, below or around the 1200m contour.

Western botanists noted the reporting, but opted for synonymy, and even the *Flora of China* online write-up concedes that the distinctions are not reliable.

To date, only one true collection of wild *R. hemsleyanum* seed has been introduced directly into the UK, a gathering made on Emei Shan by Edward Needham in 1989, under the field number EN 2097. Plants grown from this find are now around 3 to 4m in height with a 2 to 3m spread, though they flower in May rather than June. Five introductions from the northern provinces of Vietnam - AC 368, AC 436, AC 477 and KR 2015, all made in 1991; and C&G 5620, secured in 2006 - currently bear affinity tags.

In British gardens, cultivation of *R. hemsleyanum* is usually without problem provided protection from strong winds is a feature of the planting site. Those leaves, some of which might be up to 27cm long, will occasionally be found to suffer from powdery mildew, so a close association with any known offenders should be avoided.

Ernest Wilson named the species for the botanist he frequently worked with when describing the finds made on his two Veitch-sponsored expeditions, the Keeper of the Herbarium and Library at the Royal Botanic Garden, Kew, and recipient of the 1909 RHS Victoria Medal of Honour, William Botting Hemsley.



R. hemsleyanum (EN 2097)

R. hemsleyanum

R. huanum

Hardiness:
H4-5.
Flowering Period:
April-May.
Distribution in the wild:
Chongqing, NE Guizhou, S & SE Sichuan & NE Yunnan, China.
Growing in broad-leaved woodland at elevations of 1,000-3,000m.

Identification:
Shrub or small tree, rounded or upright, 1.6 to 9m high, occasionally to 12m;
young shoots stout, bright purple at first becoming pale green, glabrous.
Leaves oblanceolate through oblong-lanceolate, 7 to 16cm long by 1.8 to 5cm wide,
apex cuspidate through acuminate, base cuneate,
slightly decurrent on the petiole.
Petiole 10-30mm long, bright purple at first becoming pale green,
the margins with very narrow wings, glabrous.
Inflorescence 6-13-flowered.
Rhachis 18-60mm long, greenish, glabrescent, with long hairs.
Pedicel 20-42mm long, glabrous or occasionally sparsely short-stalked glandular.
Calyx large, the 7 cupulare or rounded lobes 4-10mm long, purple-red,
their outer surface glabrous, the margins short-stalked glandular.
Corolla 3 to 5.9cm long, 6-7-lobed, open-campanulate,
rosy-red through reddish-purple to lilac,
with nectar pouches;
the outer and inner surfaces glabrous.
Stamens 12-14; filaments glabrous.
Ovary densely short-stalked glandular.
Style glandular base to tip, the glands white or yellowish.
Capsule oblong, 15-30mm long, ridged, sparsely glandular.

Seed Collections:

EN 4028	1994
AC 1146	1995
AC 1148	1995
C&H 7049	1995
C&H 7073	1995
EGM 316	1995
EGM 330	1995

Named for Professor Hsen-Hsu Hu, Head of Botany at and later Director of, Beijing's Fan Memorial Institute of Biology, *R. huanum* was first found by Wen-Pei Fang on Mount Nanchuan-hsien during 1928. Administratively, the discovery location moved from southern Sichuan into the newly created Chongqing Municipality on March 14th 1997, but physically remains located southwest of the old city of Chungking, close to the border with Guizhou. Fang described the species in Volume 12 of *Contributions from the Biological Laboratory of the Science Society of China,* published in 1939.

R. huanum is most closely related to *R. davidii* and *R. discolor,* but differs from them in having a far larger calyx, leaves with long tapering tips that terminate in a point and hang downward, and rose-red through purple-red flowers. Moreover, it is the only member of Subsection *Fortunea* to feature corollas adorned with nectar pouches. New growth is equally noteworthy: shiny, olive-green leaves on purple petioles and stems; with the left behind bud scales reddish.

Edward Needham was the first plant hunter to introduce *R. huanum* into British gardens in 1994, with another two expedition teams securing six additional seed lots late the following year, but cultivation reports are mixed. They confirm the hardiness rating, but indicate that the species is proving difficult, especially in the south, with the leaves often chlorotic. The problems appear to mirror those experienced with *R. haofui* from Subsection *Argyrophylla,* but no one has yet hinted that the same treatment regime of a more neutral soil PH is appropriate and works. Placement within a good shelterbelt is also a prerequisite, as the pedicels break from the rhachis if subjected to strong gusts of wind. Currently, the species is not widely grown.

Peripheral to the above, a spelling misnomer appears finally to have been put to rest with the adoption by the International Plant Names Index of the transliteration of the species name used by *Flora of China*. An apparently superfluous 'i' has been dropped, reducing the previously widely used *R. huianum,* to the more proper *R. huanum.*

Orthographers everywhere are apparently celebrating wildly.



R. huanum (C&H 7073)


R. huanum (C&H 7073)


R. huanum (C&H 7073)


R. huanum (C&H 7073)

R. maoerense

Hardiness:
H3-5.
Flowering Period:
May.
Distribution in the wild:
NE Guangxi, China.
Growing in open woodland and alongside streams at elevations of 1,800-1,900m.

Identification:
Small tree, 8 to 12m high; young shoots pale purple at first, glabrous.
Leaves oblanceolate through obovate, 14 to 16cm long by 4 to 5cm wide,
apex obtuse or acute, cuspidate, base cuneate.
Petiole 15-20mm long, pale purple at first, glabrous.
Inflorescence 9-12-flowered.
Rhachis 40-50mm long, sparsely glandular.
Pedicel 30-45mm long, stout and erect, purplish, densely stalked-glandular,
the hairs dark brown.
Calyx discoid, outer surface glabrous, the margins glandular.
Corolla 6 to 6.5cm long, 7-lobed, campanulate,
white through pale pink; the outer surface glabrous, the lobes reflexed.
Stamens 14-17; filaments glabrous.
Ovary densely stalked-glandular, the hairs dark brown.
Style pale purple, sparsely glandular, the glands purple.
Capsule oblong, 20-30mm long.

Seed Collections:

AC 4207	1998

R. maoerense was jointly described by Wen-Pie Fang and Guang Zhao Li in Volume 4 of the *Bulletin of Botanical Research, Harbin,* which was published in 1984. It is endemic to northeastern Guangxi and clearly related to *R. discolor* and *R. glanduliferum,* indeed, possessing the identifying characteristics of both plants. Keying is therefore provided by the eglandular outer surface of the corollas, plus the purple-coloured glands on the style.

Alan Clark was the first, and to date, the only plant hunter to have introduced seed into British gardens, doing so in 1998 from a gathering made in the Maoershan Nature Reserve under the field number AC 4207. Those plants reached flowering size in around a decade from sowing and opened pink or white, funnel-campanulate blooms, in a loose, flat-topped, globular truss.

R. magniflorum

Hardiness:
H3-4.
Flowering Period:
July-August.
Distribution in the wild:
SW Guizhou, China.
Growing in forests, in ravines with other shrubs and bamboo,
and on open grassy hilltops, at elevations of 1,700-1,800m.

Identification:
Small tree, 4 to 6m high;
young shoots pale green, densely setose-glandular, the hairs fawn through brown,
becoming glabrescent.
Leaves oblong, 22 to 25cm long by 7.5 to 8.8cm wide,
apex obtuse, base broadly cuneate through rounded.
Petiole 40-45mm long, pale green,
densely setose-glandular at first, becoming glabrescent.
Inflorescence 9-14-flowered.
Rhachis *c.* 45mm long, densely long-stalked glandular, the hairs pale brown.
Pedicel 25-48mm long, stout, densely long-stalked glandular, the hairs pale brown.
Calyx small, the 5 cupular lobes 3-4mm long, outer surface and margins glandular.
Corolla 9.5 to 10cm long, 5-lobed, tubular-funnel-shaped, white;
the outer surface densely glandular, the hairs pale brown, the inner surface glabrous.
Stamens 16; filaments glabrous.
Ovary densely long-stalked glandular, the hairs pale brown.
Style densely glandular base to tip, these long-stalked over the lower half,
short-stalked along the upper half; the stigma pale yellow.
Capsule cylindric, 35-42mm long, slightly curved, ridged, glandular.

Seed Collections:

NN 0959	2009

R. magniflorum was described by Wen Kwang Hu in 1988, writing in Volume 8 of the *Bulletin of Botanical Research, Harbin.* Most closely related to *R. glanduliferum,* it differs in having an initially denser covering of glandular hairs on the young shoots and petioles, plus broader leaves with a blunt tip, and a small, rather than minute, calyx. Rare in the wild, the species is known from only one location in southwestern Guizhou, where the population is threatened due to habitat loss. Jens Nielsen and Remi Nielsen collected and introduced seed from this locale during 2009, but it was not until 2019 that the flowers were finally revealed, as previously, only the remnants of the blooms had been seen. Nevertheless, they were thought likely to be the largest corollas of any taxon within the subsection, a mouth-watering prospect for any number of hybridizers who were no doubt eagerly awaiting flower bud set, IRRC registration forms to hand.

Photographs of the first plants to flower were quickly posted online by members of the Danish Chapter of the American Rhododendron Society and they showed tubular-funnel-shaped blooms 10cm long, the corollas pure white with just a touch of yellow-green flushing at the base of the throat, and a style topped by a pale yellow stigma.

R. yuefengense
Hardiness:
H4-5.
Flowering Period:
June.
Distribution in the wild:
Guangxi, China.
Growing in woodland and thickets at elevations of 1,800-2,150m.

Identification:
Shrub, spreading, 0.5 to 1.5m high; young shoots stout.
Leaves broadly elliptic through oval, 4.5 to 9.5cm long by 4 to 9cm wide,
apex rounded or obtuse, mucronate, base rounded, obtuse, cordate or cuneate,
narrowly decurrent on the petiole;
upper surface shiny, the margins revolute.
Petiole 10-30mm long, stout, flattened above, purple-red (puce) at first,
the margins narrowly winged.
Inflorescence 5-10-flowered.
Rhachis 40-70mm long, glabrous.
Pedicel 20-38mm long, thick, glabrous, or sparsely short-stalked glandular at first.
Calyx small, the lobes undulate, the margins short-stalked glandular.
Corolla 4 to 4.8cm long, 7-lobed, funnel-campanulate, white flushed pink to pale purple;
the outer surface with stalked or non-stalked glands along the tube, becoming glabrescent.
Stamens 13-15, anthers red-brown; filaments glabrous.
Ovary densely short-stalked glandular.
Style sparsely glandular base to tip, the glands short-stalked along the lower half.
Capsule oblong, *c.* 20mm long, ridged.

Seed Collections:

AC 5229	2002

R. yuefengense is the subsection's newest member, being described by Guang Zhao Li in *Guihaia*, Volume 15, Part 4, in 1995. Initially believed to be a lower-growing form of *R. platypodum,* this view is being challenged by the far longer petioles that are only narrowly winged, and by the glabrous stamen filaments. The flowering period too is different, June for *R. yuefengense,* April-May for *R. platypodum,* and the former possesses a truss that is much looser and more open.

Alan Clark was again the first and so far only plant hunter to have introduced seed into British gardens, from a 2002 gathering made on Maoer Shan in Guangxi. Those plants have so far proved easy to grow, taking the recent severe winters in their stride and remarkably, flowering in as little as three or four years from germination. However, en masse, those blooms are often arrayed in an inelegant sprawl across the framework, neither duplicating the precise, uncluttered ranks found on specimens of *R. orbiculare,* for instance, nor their floral quality.

But as a foliage plant, *R. yuefengense* clearly has potential.


R. yuefengense


R. yuefengense

Subsection *Fulgensia:*



R. fulgens



Taxa:

R. fulgens
R. miniatum
R. sherriffii

Taxonomic Revision:

Subsection *Fulgensia* contains a trio of species with morphologic characteristics that relate them to rhododendrons in three other subsections, namely *Barbata, Neriiflora* and *Thomsonia*.
An inflorescence of red, tubular-campanulate corollas, with five basal nectar pouches, is a commonality of all three, plus many of the species in those related subsections, yet each of the trio listed above displays features divergent from those kindred plants. Accordingly, in the past, their individual placement tended to wander somewhat.
Each has a thick, lanate, unistrate and continuous indumentum on the underside of the leaf, plus a glabrous and furrowed ovary. Yet when set alongside their cousins, rather than their sisters, these features are immediately seen as being aberrant.
For this reason, the choice has been made to associate them together, herein.
Subsection *Fulgensia* has also been transferred from Section *Ponticum* into Section *Leiorrhodium* on account of the Milne-Chamberlain cpDNA dataset published in 2010.

Subsection Morphology:

Shrub or small tree, compact, rounded or upright, 1.5 to 6m high;
branchlets tomentose or glabrous, glandular or eglandular;
bark smooth, pinkish-grey to deep reddish-brown, peeling.

Leaves coriaceous, elliptic through broadly obovate, 3.3 to 13cm long by 1.5 to 7cm wide, apex rounded through broadly obtuse, and apiculate or mucronate, base rounded through cordulate, retained 1-3 years; upper surface dark green, shiny when mature, glabrous, the midrib grooved, the veins deeply impressed, the margins usually slightly recurved; lower surface with a thick, woolly, continuous, unistrate indumentum of fasciculate or long-rayed hairs, dark brown through reddish-brown, sometimes fawn or tawny, the midrib and veins raised but often concealed.

Leaf anatomy comprises a 3-layered upper epidermis, with the cells roughly equal in size in all three layers; the cuticle is around half as thick as the cells are deep; water tissue is present; the lower epidermis cells are not prolonged into papillae.
Sclereid cells are absent.

Petiole 3-28mm long, grooved above, sometimes coloured, tomentose, glabrescent or glabrous, rarely short-stalked glandular.

Inflorescence racemose-umbellate, loose or dense, 3-14-flowered.

Rhachis 2-25mm long, tomentose or glabrous.

Pedicel 4-20mm long, often coloured, floccose, glabrescent or glabrous.

Calyx small, or well-developed and cupular, crimson coloured, 5-lobed, these rounded, triangular or ovate and 1-15mm long, outer surface and margins glabrous.

Corolla 5-lobed, fleshy, 2 to 4cm long, funnel- through tubular-campanulate, blood-red through scarlet to deep carmine, with 5 darker nectar pouches at the base of the throat.

Stamens 10, unequal; the filaments often coloured, glabrous.

Ovary conoid or oblong, 4-6mm long, 5- or 8-locular, furrowed, glabrous.

Style often coloured, glabrous.

Capsule oblong, 10-30mm long, straight or slightly curved, glabrous.

Seeds elongate, narrowly winged, with appendages at both ends.



R. sherriffii (L&S 1390)



R. fulgens

R. fulgens

Hardiness:
H5.
Flowering Period:
March-April.
Distribution in the wild:
E Nepal; S & SE Tibet; W Arunachal Pradesh, Assam, Bengal & Sikkim, India; Bhutan.
Growing in hillside *Abies,* juniper and rhododendron forests,
in thickets, on steep open moorland or amongst scrub,
at elevations of 3,200-4,300m.

Identification:
Shrub or small tree, compact and rounded to upright, 1.5 to 4.5m high;
branchlets glabrous, with brilliant crimson bracts on the young shoots.
Leaves broadly ovate through oblong-obovate to obovate,
5.3 to 13cm long by 2.4 to 7cm wide;
lower surface densely tomentose, the covering continuous, fawn or fulvous, and lanate,
composed of fasciculate hairs.
Petiole 3-28mm long, glabrous when mature.
Inflorescence dense, compact and rounded, 8-14-flowered.
Rhachis 8-25mm long, glabrous.
Pedicel 4-15mm long, crimson tinted, glabrous.
Calyx lobes rounded, ovate or triangular and 1-3mm long.
Corolla 2 to 3.5cm long, tubular-campanulate, blood-red through scarlet.
Stamen anthers brown to chocolate-brown; filaments white or tinted pink at the base.
Ovary 8-locular.
Style pinkish; the stigma small, black and truncate.

Seed Collections:

L&S 1084	1934	LS&H 20665	1949	AC 5460	2004
KW 11587	1935	Stainton 240	1956	AC 5491	2004
L&S 1297	1936	Bowes-Lyon 3260	1966	AC 5513	2004
L&S 2846	1936	BLM 330	1971	AC 5516	2004
L&S 2915	1936	Hedegaard B110	1983	KR 8204	2005
KW 13665	1937	P&L 31	1986	KR 8246	2005
L&S 3075	1937	CHM 3132	1988	KR 8251	2005
L&S 3090	1937	EGM 72	1988	KR 9538	2008
L&S 3239	1937	C&S 1759	1990	TDA 023	2011
LS&H 20184	1949	DSE 65	1995	TDA 024	2011
LS&H 20640	1949	KCSH 032	2003	TDA 359	2013
		NAPE 0196	2003		

Official history proclaims that *R. fulgens* was discovered by Sir Joseph Hooker on his trek through Sikkim in 1849. Uncontested, is the fact that the species was described by the plant hunting botanist in Part 3 of his *Rhododendrons of Sikkim-Himalaya* travelogue, this published in 1851, but alternative sources suggest that yet again, Colonel William Henry Sykes, while in the employ of the East India Company, gathered-up capsules between 1829 and 1830, and then introduced their contents into British gardens, unnamed, along with several other Himalayan rhododendrons, soon after (*Notes on the Garden at Riverhill, Sevenoaks,* by Lieutenant-Colonel J. M. Rogers, published in Volume 1, Number 1, of *The Rhododendron Society Notes,* 1916).

As presented opposite, the geographic distribution of *R. fulgens* across the western Himalaya might appear quite widespread, but on the ground, the species is actually quite rare. That endemicity is shared with members of Subsection *Barbata* and clearly indicates the relationship that exists between the various species, but *R. fulgens* differs in having a considerably thicker indumentum on the lower leaf surface, this composed of fasciculate hairs, and sporting not a single bristle whatsoever on any part of its anatomy. The leaf tomentum is of course similar to that found on *R. miniatum* and *R. sherriffii,* one of many morphologic matches between the three, the glabrous and furrowed ovary probably being the most significant, as indicated, but the bark, the shiny and glabrous adaxial leaf surface, and the coloured calyx lobes also need to be mentioned. Keying those two other members of the subsection from *R. fulgens* is pretty straightforward as the larger, tightly compact flower trusses with more corollas, plus the longer, broader leaves of the latter are distinctive. In cultivation moreover, specimens of *R. fulgens* are generally of a more fulsome stature than that of its cohorts. Out of bloom, the potential exists to confuse the species with *R. campanulatum,* but a glance at the main trunk will quickly establish if the bark is smooth or rough, the former quality being the harbinger of *R. fulgens*. When in flower, the chocolate-coloured stamen anthers are also useful identifiers.

A plant grown from Hooker's seed flowered at the Royal Botanic Garden, Kew, in 1862, though the species may have been blooming at Riverhill much earlier. Subsequent collections of *R. fulgens* have provided a number of garden forms, most with a dome-like, wider-than-high habit, although one or two opt for small tree status. All have fine foliage and most display blood red flowers in tightly-packed trusses. Free-flowering clones should be sought out, as some introductions only manage to produce a few blooms each season, even on mature plants. Otherwise, cultivation is straightforward and easy, the species fully hardy, with a H5 rating, but as flowering occurs from March into April, and sometimes as early as mid February, protection from frost and cold winds must dictate where a specimen is placed within a garden's woodland environs.

R. fulgens (BL&M 330)



R. fulgens



R. fulgens



R. fulgens

R. sherriffii

Hardiness:
H5.
Flowering Period:
February-April.
Distribution in the wild:
S Tibet; Arunachal Pradesh, India.
Growing on steep hillsides at the margins of conifer, fir and larch forest,
and in rhododendron thickets above the bamboo zone,
at elevations of 3,400-4,000m.

Identification:
Shrub or small tree, bushy to upright, 2 to 6m high;
branchlets sparsely tomentose and short-stalked glandular.
Leaves oblong-ovate through obovate,
4.5 to 7.5cm long by 2.5 to 4cm wide;
lower surface densely tomentose, the covering continuous, fulvous or chocolate-brown,
lanate, composed of long-rayed hairs.
Petiole 12-15mm long, reddish-purple, glabrous when mature,
sometimes short-stalked glandular.
Inflorescence loose, 3-6-flowered.
Rhachis 3-4mm long, glabrous.
Pedicel 8-20mm long, reddish, glabrous.
Calyx lobes broad, rounded and 3-5mm long.
Corolla 3.5 to 4cm long, funnel-campanulate, deep carmine.
Ovary 5-locular.
Style carmine; stigma lobulate, carmine or red.

Seed Collections:

L&S 1390	1936
L&S 2751	1936
HECC 10042	2002
KR 8187	2005
KR 8192	2005

R. sherriffii was discovered at Chayul Chu, Lung, in southern Tibet, on April 29th, 1936, with seed secured in October of the same year, and the epithet is an honorific for one of the men who found and introduced the species into UK cultivation, George Sherriff, the other being his longterm expedition partner, Frank Ludlow. Until 2002, they remained the only Western plant hunters to have come upon a wild population of such plants, but in the autumn of that year, Peter and Kenneth Cox, Philip Evans and Peter Hutchison rediscovered the species and reintroduced it into British gardens. Their find also extended the known distribution into the northeast Indian state of Arunachal Pradesh.

John MacQueen Cowan, writing in Volume 19 of *Notes from the Royal Botanic Garden, Edinburgh,* described *R. sherriffii* in 1937.

The species clearly resembles *R. thomsonii* ssp. *lopsangianum,* most noticeably in the loose flower truss and deep red corolla colour. However, instead of a glabrous, or at best, thinly indumented lower leaf surface, *R. sherriffii* comes with a dense lanate tomentum. Equally, rather than the surface being markedly papillate beneath the indumentum, the abaxial epidermis cells are not prolonged in papillae, making the leaf underside distinctly epapillate. The Edinburgh Revision classification opted for a residency within Subsection *Thomsonia,* but those two significant character differences make *R. sherriffii* completely aberrant within that pigeonhole. H. H. Davidian chose to place *R. sherriffii* in its own Series and associated it with *R. miniatum* (*The Rhododendron Species,* Volume 3, 1992), both of which share an oblong ovary that is glabrous and furrowed, and have similarly coloured, smooth peeling bark. As does *R. fulgens;* hence the tripartite alliance herein.

The chocolate-brown-coloured abaxial leaf tomentum of *R. sherriffii* is unique, not only within Subsection *Fulgensia,* but across the entire genus. Composed of long-rayed hairs with short, broad, ribbon-like arms, these have been found on no other rhododendron species, though somewhat similar follicles populate the leaves of *R. traillianum,* a member of Subsection *Taliensia*. In the unlikely event that additional keying is required to separate the species from its subsection cohorts, the significantly longer reddish-purple petioles and pedicels, plus - in comparison - the much smaller calyx lobes, will prove more than adequate to the task.

In cultivation, *R. sherriffii* has a reputation for being difficult and lacking vigour, and garden-grown specimens will likely never approach the tree-like stature of wild plants. Yet away from the hot summers of southern Britain, and when given a swiftly draining, open, but sheltered planting position, bushy, free-flowering and problem free individuals can result, as evidenced by those long-established in the grounds of Muncaster Castle. Natural leaf fall within such a woodland environment is all the mineral encouragement needed on an annual basis, and any packaged fertiliser should be avoided like the plague.

R. sherriffii



R. sherriffii (L&S 1390)



R. sherriffii (L&S 2751)

R. miniatum

Hardiness:
H4.
Flowering Period:
March-April.
Distribution in the wild:
Tsari Valley, S Tibet.
Growing in mixed scrub and along river banks at elevations of around 3,700m.

Identification:
Shrub, compact, 1.5 to 2m high;
branchlets thinly tomentose at first, the hairs black and floccose, becoming glabrous.
Leaves elliptic through oblong-ovate, 3.3 to 5.5cm long by 1.5 to 3cm wide;
lower surface densely tomentose, the covering continuous, fawn or fulvous,
lanate, composed of fasciculate hairs.
Petiole 5-9mm long, tomentose or glabrescent.
Inflorescence 4-6-flowered.
Rhachis 2-5mm long, tomentose.
Pedicel 5-6mm long, sparsely floccose or glabrescent.
Calyx fleshy, cupular, the lobes unequal, rounded and 8-15mm long.
Corolla 3 to 3.5cm long, funnel-campanulate, crimson through vermilion.
Stamen anthers dark brown; filaments white.
Ovary 5-locular.
Style rose or white.

Seed Collections:

CER 9927	1999

Frank Ludlow and George Sherriff were exploring the Tsari Valley in southern Tibet at the end of May 1936 when they came upon the two plants that until recently, were the only known finds of *R. miniatum.* The type specimen was collected under L&S 1710 at Migyitun on Tuesday 26th, a medium-sized shrub around 2m high providing the herbarium samples, while five days earlier, on the 21st, they had discovered a somewhat similar plant at Podzo Sumdo. This had been gathered under L&S 1627 and differs from the later find in having narrower corollas and a minute calyx, with the lobes just 1-2mm long. Flowering branches were sourced from a much taller growing plant, apparently 2.5 to 4.5m high.

The dried material returned from both discoveries was not extensive, but John MacQueen Cowan, who wrote the species botanic description (*Notes from the Royal Botanic Garden, Edinburgh,* Volume 19, 1937), presciently decided that the second collection was the true species. It would take more than sixty years to realise how canny that judgement had been, for *R. miniatum* would not be relocated until just before the turn of the century, when Kenneth Cox, Philip Evans and Garrett Richardson became the first and so far only team of Western plant hunters to bring back viable capsules. The locale was the Tsari Valley, the shrubs matching those of L&S 1710, and the expedition field notes show the species to be thriving, as significant numbers of plants were found, all with the thick, dark and fasciculate indumentum on the undersides of their leaves, plus glabrous ovaries. These two characteristics effectively rule out placement within Subsection *Neriiflora,* as has been suggested by some authors. Keying within Subsection *Fulgensia* is discussed above.

Subsection *Fulva:*


R. fulvum



Taxa:

R. fulvum
- *R. fulvum* ssp. *fulvoides*
- *R. fulvum* ssp. *fulvum*

R. uvarifolium
- *R. uvariifolium* var. *griseum*
- *R. uvariifolium* var. *uvariifolium*

Taxonomic Revision:

The Section *Ponticum* to Section *Leiorrhodium* transfer excepted, Subsection *Fulva* remains as designated in the 1996 Edinburgh Revision classification.

Subsection Morphology:

Large shrubs or small trees, rounded, rounded-spreading or upright, 2 to 12m high; young shoots moderately through densely tomentose, the covering thin and the hairs rufous-brown, fulvous, greyish or whitish; bark usually quite rough, brown through greyish-brown, sometimes striate, flaking or breaking into long shreds.

Leaves coriaceous, oblanceolate through elliptic or oblong,
6 to 27cm long by 2 to 9cm wide,
apex obtuse or shortly acuminate, apiculate or mucronate,
the base tapered, cuneate or obtuse, occasionally rounded, retained 1-3 years;
upper surface indumented at first, glabrous when mature,
the midrib grooved and the veins deeply impressed;
lower surface covered with a usually continuous, thick or thin, unistrate or bistrate granular, felted or woolly indumentum,
the midrib prominent and moderately through densely tomentose,
but occasionally glabrous.

Leaf anatomy comprises a 2- or 3-layered upper epidermis, with the cells in each layer of equal size; the cuticle is around half as thick as the cells are deep, or as thick; water tissue is present; the lower epidermis cells are not prolonged into papillae. Sclereid cells are sometimes present.

Petiole 10-25mm long, grooved above, variably thinly tomentose.

Inflorescence terminal, dense, 5-30-flowered.

Rhachis 5-22mm long, hairy or glabrous.

Pedicel 10-30mm long, hairy or glabrous.

Calyx minute, the 5 lobes 0.5-2mm long, acute or rounded, glabrous.

Corolla 2.5 to 4.9cm long, 5-lobed, campanulate through funnel-campanulate, white through pale pink to rose, usually with a crimson or purple basal blotch, and often dark crimson or purple spotting on the upper lobes.

Stamens 10, unequal; filaments pubescent at the base.

Ovary 5-9mm long, slender, 5-10-celled, glabrous, but sometimes with a few hairs.

Style as long, or slightly shorter than the corolla, glabrous; stigma capitate.

Capsule 20-50mm long, narrowly elongate-cylindric, moderately through strongly curved, often sickle-shaped, grooved, usually glabrous, sometimes puberulous.

Seeds elongate, narrowly winged, each end with appendages.



R. fulvoides (R 180)



R. uvariifolium (F 10639)

R. uvariifolium* var. *griseum

Hardiness:
H3-4.
Flowering Period:
March-April.
Distribution in the wild:
SE Tibet.
Growing in conifer, mixed and rhododendron forests, often in deep gullies, on slopes and along ridges, at elevations of 2,300-4,000m.

Identification:
as var. *uvariifolium* except:
Leaves often smaller, lanceolate through broadly elliptic, the base rounded;
upper surface paler;
lower surface indumentum thin, silky, compacted and unistrate.
Inflorescence 10-15-flowered.
Corolla white, with a crimson basal blotch.

Seed Collections:

KW 5660	1924	AC 3224	1997
LS&E 12329	1946/1947	AC 3274	1997
LS&E 12388	1946/1947	AC 3354	1997
LS&E 13521	1946/1947	AC 3369	1997
LS&E 15054	1946/1947	AC 3514	1997
LS&E 15817	1946/1947	AC 3568	1997
KR 3423	1995	AC 3570	1997
KR 3458	1995	AC 4499	2000
KR 3774	1995	AC 4509	2000
KR 3783	1995	AC 4531	2000
CC 7506	1996	TARRVS 080	2002
CC 7556	1996		

R. uvariifolium* var. *uvariifolium

Hardiness:
H3-4.
Flowering Period:
March-April.
Distribution in the wild:
S & SE Tibet; SW Sichuan & NW Yunnan, China.
Growing in and at the margins of conifer and mixed woodland, in rhododendron forest and thickets, in open thickets and amongst scrub on bouldery slopes, at elevations of 2,100-4,300m.

Identification:
Large shrub or small tree, 2 to 11m high;
young growth creamy-white, suede-like,
the branchlet tomentum hairs whitish through grey.
Leaves oblanceolate through oblong-obovate, 7 to 27cm long by 2.2 to 7.2cm wide;
upper surface dark green, semi-rugulose;
lower surface indumentum variable,
continuous or patchy, thick or thin, plastered through woolly,
white, silvery or ash-grey, 1- or 2-layered,
the upper layer (when present) loose,
composed of more-or-less floccose dendroid hairs,
the lower layer compacted and containing some short-stalked glands amongst the rosulate hairs.
Petiole hairs whitish.
Inflorescence 6-18-flowered, rarely with up to 30 flowers.
Corolla 2.7 to 4cm long, campanulate through funnel-campanulate.
Stamen anthers brown or pale brown.

Seed Collections:

F 10292	1913	R 25419	1932	KGB 558	1993
F 10639	1913	R 25421	1932	AGS 2071	1994
F 11421	1913	McLaren D 18	1932/1939	Cox 6519	1994
F 13990	1917/1919	KW 10498a	1933	CNW 359	1994
F 15216	1917/1919	Yu 7869	1937	CNW 382	1994
F 15444	1917/1919	Yu 7924	1937	CNW 387	1994
F 16531	1917/1919	Yu 10699	1937	CNW 560	1994
KW 4995	1921	Yu 13911	1937	CNW 585	1994
F 21816	1921/1922	Yu 14952	1937	CNW 786	1994
F 21817	1921/1922	LS&E 12342	1946/1947	CNW 1275	1994
R 11045	1923/1924	LS&E 12372	1946/1947	FED 227	1995
R 11075	1923/1924	LS&E 12375	1946/1947	FED 254	1995
R 11386	1923/1924	LS&E 13554	1946/1947	AC 1732	1996
R 11391	1923/1924	LS&E 13567	1946/1947	AC 1741	1996
R 11504	1923/1924	LS&E 13665	1946/1947	AC 1779	1996
KW 6311	1924/1925	LS&E 15034	1946/1947	AC 1783	1996
KW 7122	1926	LS&E 15080	1946/1947	AC 1856	1996
R 18281	1929	R 73	1948/1949	AC 1882	1996
KW 9479	1931	R 158	1948/1949	AC 1927	1996
R 22042	1932	R 173	1948/1949	AC 3050	1996
R 22096a	1932	KW 19451	1950	JN 439	1996
R 22096b	1932	CHM 2646	1986	KR 4158	1996
R 23517	1932	SBLE 103	1987	Henriksen 054	1997
R 24604	1932	Cox 6117	1992	Henriksen 074	1997
R 25251	1932	SSNY 63	1992	Henriksen 128	1997
R 25352	1932	AC 785	1993	TARRVS 193	2002
		KGB 400	1993		

R. uvariifolium was discovered on September 15th, 1904, when George Forrest made the first of a hat-trick of Subsection *Fulva* finds. Sponsored on this, his first expedition, by Arthur Bulley (the owner of Bees Nursery and the founder of Ness Botanic Garden), who had employed him on the recommendation of Sir Isaac Bayley Balfour, the Scotsman had only just arrived in Talifu (now Dali), in northwestern Yunnan, when the British consul, Mr. G. J. L. Litton, invited him on a trip to the annual horse fair at Sung Kwei (Songgui). It was as the party were ascending the Nin-ching Pass, working their way up from the Yangtze River valley to the Chungtien (Zhongdian) Plateau, that Forrest spotted 7m-tall specimens of *R. uvariifolium* in the surrounding woodland.

An extended return trip via the Kari Pass, the Mekong River valley and the French mission station at Tsekou (Chigu), followed by an ascent of the Weihsi (Weixi) Pass on the final leg, added up to a round trip of some 900 miles over 50 days, with the seed of some 78 plant species gathered, along with pressed material for nearly 380 dried specimens. Mules and runners were soon carrying that bounty, the first of many despatched packages, to Bhamo, across the nearby border with Burma (Myanmar), on the start of their respective journeys to Bulley in Liverpool and Balfour at Edinburgh Botanic.

Frederick Diels was responsible for composing the *R. uvariifolium* botanic description from those specimen cards and the field notes Forrest made at the time of the find, this text included in Volume 5 of *Notes from the Royal Botanic Garden, Edinburgh,* published in 1912. If page 213 of that tome were accessed - via the Smithsonian's Biodiversity Heritage Library website, for instance - a shocking fact will be discovered: the epithet is missing an 'i'. This diminution persisted for close to seven decades, with *R. uvarifolium* countenanced in 1930's *The Species of Rhododendron,* all the Edinburgh Revision papers and publications from 1978 to 1996, Volume 2 of H. H. Davidian's *The Rhododendron Species,* the Cox 1997 *Encyclopedia of Rhododendron Species,* and every edition of *The Rhododendron Handbook.* Until the 1980 recension. Which was when the RHS - without explanation within - added in that third 'i' and the species became *R. uvariifolium.* This was maintained in the 1998 tome and has now been adopted by The International Plant Names Index, *Flora of China* online, *The Pocket Guide To Rhododendron Species,* and all other recent publications and specialist nursery websites. Though why - unless it's some kind of faux pas with the original Latin or a seventy-year-old printing error - is still unknown. To me.

Back on subject, within the subsection, *R. uvariifolium* is most closely related to *R. fulvoides,* with only differences in the indumentum effectively separating the two species. An examination of the hairs on the underside of the *R. uvariifolium* leaf will show that they are dendroid or ramiform in the upper layer (rather than capitellate), and rosulate in the lower layer (not stellate). This produces a thick, white through ash-grey, woolly covering when bistrate, or a thin and plastered cloak when unistrate, rather than a coarsely granular mantle, though forms of the species with a compacted unistrate indumentum - silky to the touch and almost matted - which additionally have rounded rather than cuneate or tapered leaf bases, are now classified as *R. uvariifolium* var. *griseum*.

First discovered and introduced by Frank Kingdon-Ward in 1924, these plants have a restricted distribution centred on the Tsangpo region of southeastern Tibet, come with usually smaller and narrower leaves than the type species, and they open white flowers that are blotched crimson. John Cowan described the taxon in 1953, within Volume 21 of *Notes,* assigning it varietal status, though Chinese botanists have now made it synonymous - while noting that subspecies ranking might be more appropriate given the more westerly distribution and the dissimilar indumentum (*Flora of China* online). H. H. Davidian considered all forms of *R. uvariifolium* with a unistrate indumentum to be var. *griseum,* but few doyens would adhere to that black-and-white view today, especially after observing the plants in the wild. To that end, Peter and Kenneth Cox have reported that those on-the-ground populations do not match the forms of var. *griseum* being grown in British gardens, while John McQuire and Mike Robinson have suggested these may in fact be natural hybrids with *R. principis* (*The Encyclopedia of Rhododendron Species,* and *The Pocket Guide to Rhododendron Species,* 2009, respectively). Further field or lab work to establish just what is being cultivated is still awaited, though RHS Group status has been perhaps precipitately adopted by some authorities.

Seed of *R. uvariifolium* var. *uvariifolium* arrived in the UK during 1913, after George Forrest renewed his acquaintance with the species nine years after their first encounter, when - according to the records and despite the propitious timing - only material for the herbarium was gathered. It may be that any collected seed failed to germinate or that any seedlings were later lost, but of the one hundred or so rhododendron specimens catalogued at Edinburgh Botanic under 1904-1906 Forrest field numbers, for whatever reason, none appear in later published lists of Forrest seed lots. Step forward Mr Bulley.

Successfully germinated, young plants of 1913-vintage proved fully hardy, grew into rounded shrubs some 4m high that were well-filled with foliage and flowered freely. The two award clones - 'Yangtze Bend' and 'Reginald Childs' - certainly make fine specimens, bedecked with long, dark green wrinkled leaves and large flower trusses, but are usually propagated by grafting, so rarely available. Other forms are not quite as spectacular and that tenet can also be applied to most clones of *R. uvariifolium* var. *griseum,* with reports that a few plants of this variety appear ill-looking in cultivation, the leaves hanging down dejectedly. However, despite that forlorn air, such mature shrubs continue to flower freely, are fully hardy and long-lived.



R. uvariifolium (F 10639)

R. uvariifolium (F 10292)



R. uvariifolium (R 73)



R. uvariifolium (LS&E 15080)



R. griseum (LS&E 15817)

R. fulvum* ssp. *fulvum

Hardiness:
H4-5.
Flowering Period:
March-April.
Distribution in the wild:
NE Upper Myanmar; W Yunnan, China.
Growing in and at the margins of conifer, mixed and deciduous woodland,
in rhododendron forest and thickets, and on alpine slopes amongst rocks and boulders,
at elevations of 2,500-4,000m.

Identification:
Shrub or small tree, 2 to 12m high;
branchlet tomentum hairs whitish through rufous-brown.
Leaves oblanceolate through oblong-obovate, 6 to 21cm long by 2 to 9cm wide;
upper surface dark green and shiny;
lower surface covered with a two-layered continuous indumentum,
the upper layer cinnamon or rich reddish-brown, largely composed of capitellate hairs,
giving the surface a finely granular appearance,
the lower layer velvety, composed of short, grey stellate hairs.
Petiole hairs whitish, brown or cinnamon-brown.
Inflorescence 8-20-flowered.
Corolla 2.5 to 4.9cm long, campanulate.
Stamen anthers mid-brown through dark reddish-brown.

Seed Collections:

F 8989	1912	F 25076	1924/1925	Cox 6026	1992
F 15660	1917/1919	F 25483	1924/1925	AC 621	1993
F 15777	1917/1919	R 18339	1929	AC 623	1993
F 17636	1917/1919	R 23502	1932	AC 642	1993
F 17681	1917/1919	R 23508	1932	AC 644	1993
F 17854	1917/1919	KW 10498	1933	AC 804	1993
F 18310	1917/1919	L&S 1357	1936	AC 3031	1996
Farrer 874	1919	L&S 1381	1936	AC 3042	1996
F 20816	1921/1922	L&S 1383	1936	AC 3083	1996
F 21810	1921/1922	L&S 1384	1936	CCHH 8136	1997
F 21815	1921/1922	L&S 1542	1936	BASE 9707	2000
R 7662	1923/1924	L&S 2754	1936	KR 9861	2010
R 7665	1923/1924	Yu 13909	1937	KR 10084	2010
R 11023	1923/1924	Yu 19047	1937	JN 12154	2012
R 11168	1923/1924	Yu 19677	1937	JN 12207	2012
F 24110	1924/1925	Yu 20750	1937	TDA 612	2014
F 25020	1924/1925	R 161	1948/1949	TDA 745	2014

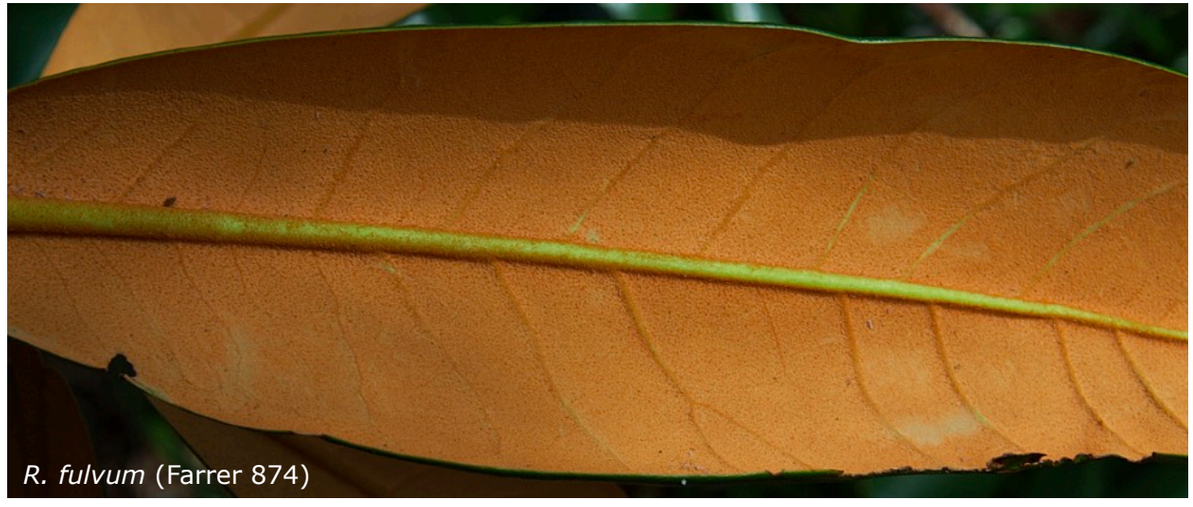
R. fulvum was the second of the subsection's triumvirate of species to be discovered by George Forrest, with seed and herbarium specimens secured from a site on the western side of the Shweli-Salween Divide in western Yunnan during August 1912. The botanic description, written by Isaac Bayley Balfour and William Wright Smith, appeared in Volume 10 of *Notes from the Royal Botanic Garden, Edinburgh,* this published in 1917.

The taxon's most distinctive feature is assuredly the bistrate indumentum that covers the undersurface of the leaves from tip to toe. On a windy day, when even the protection afforded within a woodland garden allows the foliage to rise up as each new gust hits, the effect is eye-catching, especially if a squall provokes a Mexican-wave of reddish-brown to wash up and down a mature specimen. The finely grained, cinnamon-coloured upper layer of the indumentum is formed of capitellate hairs, which resemble very short-handled mops when viewed under a microscope, with the lower layer composed of equally short-stalked, but stellate hairs, where the branches have a more tree-like, spreading profile from that central stem. The same two hair types are present on the undersides of the ssp. *fulvoides* leaf, but here the mops have much longer handles and are rather more bunched together, giving the granules a coarser appearance, plus the hairs are also lighter coloured - tawny through fawn - which means the windblown effect is not as dramatic.

The foliage offers a pair of additional characteristics to key the two subspecies apart: in *R. fulvum,* the leaves are shorter and more broadly obovate-shaped, with a dark green and shiny upper surface; in *R. fulvoides,* the blades are longer and narrower, oblanceolate-shaped, olive-green or paler in hue, and matt. In contrast, the silvery-white indumentum of *R. uvariifolium* is clearly distinctive, despite the woolly through plastered variance.

When not in flower, *R. fulvum* could be mistaken for *R. rex* ssp. *fictolacteum,* which has an equally striking, similarly coloured leaf indumentum, though here the covering is usually thick and woolly. Bedecked with bloom, a count of the stamens will key the two apart - 10 rather than 14 to 16, respectively - and a check of the ovary will find that of *R. fulvum* to be glabrous, the *R. fictolacteum* appendage, densely tomentose.

The Forrest 1912 gathering was the first of many seed introductions into UK gardens, where the species has proved hardy, easy to grow, long-lived and popular. Plants flower from a young age and become very free-flowering once mature, though night-time frosts will wreak havoc with the blooms wherever shelter is lacking. Subjected to a prolonged cold spell, the leaves roll up into tight tubes and droop, a proclivity repeated when exposed to very strong summer sunlight.


R. fulvum (Farrer 874)

R. fulvum (F 18310)

R. fulvum (F 8989)

R. fulvum (AC 621)



R. fulvoides (Rock 50)



R. fulvoides (F 14988)

R. fulvoides (Rock 50)

R. fulvum* ssp. *fulvoides

Hardiness:
H4-5.
Flowering Period:
March-April.
Distribution in the wild:
SE Tibet; SW Sichuan & NW Yunnan, China.
Growing in conifer, mixed and deciduous woodland,
in rhododendron forest and thickets, and on alpine slopes amongst rocks and boulders,
at elevations of 2,700-4,500m.

Identification:
Shrub or small tree, 2 to 9m high;
branchlet tomentum hairs whitish through rufous-brown.
Leaves oblanceolate through oblong-lanceolate, 6 to 27cm long by 2 to 9cm wide;
upper surface pale or olive-green, matt;
lower surface covered with a two-layered continuous indumentum,
the upper layer fulvous, fawn or brown, largely composed of capitellate hairs,
giving the surface a coarsely granular appearance,
the lower layer velvety, composed of short, grey stellate hairs.
Petiole hairs grey through fulvous.
Inflorescence 8-20-flowered.
Corolla 2.5 to 4.9cm long, campanulate.
Stamen anthers mid-brown through dark reddish-brown.

Seed Collections:

F 14499	1917	R 11048	1923/1924	R 25468	1932
F 14988	1917	R 11225	1923/1924	McLaren D271	1932/1939
F 15278	1918/1919	R 11351	1923/1924	R 9	1948/1949
F 16721	1918/1919	F 24314	1924/1925	R 26	1948/1949
F 20020	1921/1922	F 25744	1924/1925	R 50	1948/1949
F 20075	1921/1922	F 25936	1924/1925	R 134	1948/1949
F 21814	1921/1922	F 25944	1924/1925	R 143	1948/1949
F 21896	1921/1922	F 25958	1924/1925	R 180	1948/1949
F 21897	1921/1922	KW 8300	1927/1928	SBLE 449	1987
F 21898	1921/1922	R 22092	1932	CNW 1192	1994
F 22768	1921/1922	R 22097	1932	Cox 6532	1994
F 22902	1921/1922	R 22111	1932	AC 1881	1996
F 22903	1921/1922	R 23487	1932	AC 1883	1996
F 22918	1921/1922	R 23488	1932	AC 1909	1996
R 10931	1923/1924	R 23497	1932	CC 7536	1996
R 11016	1923/1924	R 25425	1932	KR 3969	1996
R 11034	1923/1924	R 25426	1932	MH 369-29	2018
R 11044	1923/1924	R 25431	1932		

The population of *R. fulvoides* resident on the mountains of the Mekong-Salween Divide in northwestern Yunnan was first encountered by a Western plant hunter during September 1914, George Forrest unknowingly completing his Subsection *Fulva* hat-trick. The botanic description that he subsequently wrote with the soon-to-be-honoured Knight Commander of the Order of the British Empire, Sir Isaac Bayley Balfour, was published in Volume 12 of *Notes from the Royal Botanic Garden, Edinburgh,* during 1920.

The taxon is clearly related to its subspecies sister *R. fulvum,* but differs in several obvious regards: the leaves are longer and narrower, with a matt rather than shiny upper surface and pigmentation that is a paler green; the lower surface indumentum although granular, is much coarser and lighter coloured, yellowish-red through fawn to pale brown, rather than cinnamon through rich reddish-brown, and the covering of hairs can also be somewhat discontinuous. Recent field observations have confirmed an overlap between the two population distributions where morphological distinctions merge, this confirming the Edinburgh Revision's ranking reduction.

R. fulvoides can quickly be keyed from the third member of the subsection, *R. uvariifolium,* by checking the abaxial indumentum colour and texture, with white through ash-grey, and woolly or plastered, indicating that the latter is to hand. The more wrinkled upper leaf surface of the two *R. uvariifolium* varieties provides a further check.

Forrest secured viable seed of *R. fulvoides* during a second meeting with the species at the start of his 1917-1919 expedition through northeastern Myanmar, Sichuan, Yunnan and then independent Tibet, and some fifty further gatherings have been returned since that initial collection. However, H. H. Davidian has reported that 'the vast majority of these introductions have now been lost to cultivation' (*The Rhododendron Species,* Volume 2, 1989), though no reason is given for this diminution and there are no avoid-like-the-plague warnings in the horticultural literature. Typically, cultivated plants will form large rounded shrubs or small trees, ultimately topping-out around 4 or 5m high in the most-favoured locales. Fully hardy in the south and in gardens along the UK's west and east coasts, they do still require a woodland environment to protect the foliage from strong winds and the flowers from frost, as those blooms often begin opening from early March onwards. Clones with deep pink or rose flowers in compact trusses of near twenty large corollas are the most sought-after, with other forms having quite small trusses, so provenance should be checked before purchase.


R. fulvoides (F 14988)

R. fulvoides (F 21897)

R. fulvoides

Section *Leiorrhodium* Subsection *Glischra:*


R. recurvoides



Taxa:

- *R. adenosum*
- *R. crinigerum*
  - *R. crinigerum* var. *crinigerum*
  - *R. crinigerum* var. *euadenium*
- *R. glischroides*
- *R. glischrum*
  - *R. glischrum* ssp. *glischrum*
  - *R. glischrum* ssp. *rude*
- *R. habrotrichum*
- *R. recurvoides*
- *R. vesiculiferum*

Taxonomic Revision:

Once again, apart from the *Ponticum* to *Leiorrhodium* transfer, Subsection *Glischra* remains as designated in the 1996 Edinburgh Revision classification although its membership has been reduced by two after field study confirmed that *R. diphrocalyx* and *R. spilotum* were in fact natural hybrids between one of the Subsection *Glischra* species and respectively, a member of Subsection *Neriiflora,* and an occupant of Subsection *Selensia.*

Subsection Morphology:

Shrub or small tree, bushy and compact, rounded or spreading to upright, sometimes becoming open with age or in shade, 1 to 9m high; young shoots hairy or glabrous, densely bristly and/or glandular-bristly; bark rough, grey to light brown, sometimes striate.

Vegetative bud scales persistent, often for several years, or deciduous, often sticky, sometimes markedly so.

Leaves chartaceous through coriaceous, ovate through oblanceolate to obovate, 3 to 30cm long by 1 to 8cm wide;
upper surface matt or shiny, often rugulose through bullate, glabrous or with persistent bristles, the midrib grooved and the veins usually deeply impressed, the margins sometimes recurved;
lower surface covered with shortly stalked glands and bristles, the midrib and primary veins prominent, or masked by a dense matted indumentum of ramiform hairs.

Leaf anatomy comprises a 2-layered upper epidermis, with the cells in the top layer being significantly smaller than those in the layer below;
the cuticle is around half or as thick as the top cells are deep;
water tissue is usually present;
the lower epidermis cells are rarely prolonged into papillae.
Sclereid cells are present in the leaves of each member of the subsection.

Petiole 5-30mm long, grooved above, shortly hairy or glabrous, glandular-bristly.

Inflorescence lax, 4-20-flowered, the bud scales persistent or deciduous, often sticky, sometimes markedly so.

Rhachis 3-15mm long, hairy or glabrous, usually shortly glandular-bristly, rarely stalked-glandular.

Pedicel 6-42mm long, shortly hairy or glabrous, glandular-bristly,
sometimes also stalked-glandular hairy.

Calyx well-developed, 5-lobed, these 4-15mm long, equal or unequal,
pointed or rounded, sometimes tongue-shaped, occasionally split,
outer surface and margins glabrous or hairy,
often stalked-glandular, sometimes glandular-bristly.

Corolla 5-lobed, 2.5 to 5.3cm long, campanulate through funnel-campanulate,
white, white flushed pink, to pink and rose-purple, sometimes with pink stripes or margins,
often with a deeper crimson or purple basal blotch and spots.

Stamens 10, unequal; filaments puberulous at the base.

Ovary usually 5-6-celled, occasionally up to 8-celled, hairy or glabrous,
densely glandular or glandular-bristly.

Style glabrous, rarely hairy along the lower third or half,
sometimes glandular or glandular-bristly at the base,
rarely glandular-bristly along the lower third or two-thirds.

Capsule 10-24mm long, slender or oblong, often slightly curved, glabrous or hairy,
usually densely glandular-bristly, but occasionally stalked-glandular.

Seeds elongate, narrowly winged, each end with often quite small appendages.



R. crinigerum (R 11189)



R. rude



R. crinigerum (R 11189)

R. crinigerum* var. *crinigerum

Hardiness:
H4-5.
Flowering Period:
April-May.
Distribution in the wild:
NE Myanmar; SE Tibet; NW Sichuan & NW Yunnan, China; Arunachal Pradesh, India.
Growing in open conifer forests, in bamboo thickets, amongst boulders, in valleys, on rocky slopes and cliffs, at elevations of 2,200-4,300m.

Identification:
Shrub or small tree, spreading or compact, 1 to 6m high;
young shoots moderately through densely short-stalked setose- and setulose-glandular.
Leaf buds very sticky,
the scales persistent for several years, rarely deciduous.
Leaves coriaceous, obovate through oblanceolate, lanceolate through elliptic,
6.8 to 20cm long by 1.5 to 6cm wide,
apex acuminate through cuspidate, base obtuse, tapered or rounded, retained 2-4 years;
upper surface dark green, sometimes bullate, very shiny, glabrous when mature,
the midrib usually sparsely glandular and hairy, the margins often revolute;
lower surface with a continuous, usually thick, dense and matted indumentum,
dark brown, brown, fawn through red-brown, yellowish or whitish,
composed of very thin but long-branched ramiform hairs,
these intermixed with a few stalked-glandular hairs,
the midrib sparsely through moderately hairy and densely short- or medium-stalked glandular, the primary veins concealed.
Petiole 10-25mm long, rarely to just 3 or 4mm,
moderately through densely setose- and setulose-glandular.
Inflorescence 8-20-flowered, in a lax or compact truss;
the buds purplish-brown and very sticky, the scales long-pointed and persistent.
Rhachis 6-15mm long, often pubescent,
and moderately through densely setulose-glandular.
Pedicel 12-40mm long, sparsely through moderately pubescent,
and moderately through densely, both setulose-glandular
and short- or medium-stalked glandular.
Calyx lobes 5-10mm long, more rarely to 13mm, usually unequal,
pink, pinkish-purple or reddish, lanceolate through cup-shaped, and split,
the outer surface and margins glabrous or floccose,
the former also densely short- or medium-stalked glandular
and setulose-glandular at the base,
the latter with short through long-stalked glands.
Corolla 3 to 4cm long, campanulate through funnel-campanulate,
white, pink or rose, and white flushed, margined or striped pink or rose,
with or without, either or both, a crimson-purple basal blotch and spots.
Style glabrous, but usually glandular at the base.

R. crinigerum* var. *euadenium

Hardiness:
H3-4a.
Flowering Period:
April-May.
Distribution in the wild:
NW Yunnan, China.
Growing in valleys and on cliffs at elevations of 3,600-3,700m.

Identification:
as var. *crinigerum* except:
Leaf lower surface densely glandular,
the tomentum thin and sparse, the primary veins exposed.

Seed Collections - var. *crinigerum:*

F 12944	1914	R 10980	1923/1924	R 22228	1932
F 13244	1914	R 10981	1923/1924	R 23480	1932
F 14008	1917/1919	R 10982	1923/1924	R 23485	1932
F 14062	1917/1919	R 10983	1923/1924	R 23489	1932
F 14286	1917/1919	R 10992	1923/1924	R 23490	1932
F 14911	1917/1919	R 11083	1923/1924	Yu 20700	1937
F 21880	1921/1922	R 11142	1923/1924	R 2	1948/1949
KW 5427	1922	R 11189	1923/1924	R 3	1948/1949
R 10960	1923/1924	R 11192	1923/1924	R 20	1948/1949
R 10967	1923/1924	R 11193	1923/1924	R 38	1948/1949
R 10968	1923/1924	R 11196	1923/1924	R 98	1948/1949
R 10970	1923/1924	F 25585	1924/1925	R 100	1948/1949
R 10971	1923/1924	F 25641	1924/1925	KW 19447	1950
R 10972	1923/1924	F 25803	1924/1925	JN 756	1999
R 10973	1923/1924	KW 7123	1926	BASE 9583	2000
R 10974	1923/1924	KW 8164	1927/1928	BASE 9588	2000
R 10975	1923/1924	R 18402	1929	KR 9832	2010
R 10976	1923/1924	KW 9503	1931	KR 9920	2010
R 10977	1923/1924	R 22000	1932	JN 12145	2012
R 10978	1923/1924	R 22112	1932	TDA 623	2014

Seed Collections - var. *euadenium:*

F 25633	1924/1925	F 25794	1924/1925	F 25850	1924/1925
F 25634	1924/1925	F 25818	1924/1925	R 18477	1929

R. crinigerum was the first of the subsection's nine species to be encountered, Père Jean-Andre Soulié stumbling upon a population of the plants in western Sichuan during May 1895. Dried specimens were despatched back to Paris where Adrien Franchet penned the botanic description, this appearing in Volume 12 of the *Journal de Botanique,* published in 1898. Sixteen years would then pass before the taxon was re-discovered by George Forrest in August 1914, with seed introduced into UK gardens under the field number F 12944.

Ten years after that, in July 1924, while the Scotsman was exploring the mountainous terrain of the Salween-Kiu-Chiang Divide in northwest Yunnan, he and his native collectors would find a plant very similar to the one discovered by Soulié. Herbarium material was returned under the field number F 25619, plus several batches of seed, these collected and introduced at the same time, with the gathering made under F 25794 linked to the type specimen. Harry Tagg, back at Edinburgh, when writing the botanic descriptions for the 1930s tome *The Species of Rhododendron,* would describe Forrest's find as *R. crinigerum* var. *euadenium*.

According to that one line testimonial, the only difference Tagg identified between the two plants related to the composition of the indumentum on the underside of their leaves: for var. *crinigerum,* it was thick and matted, completely hiding the major veins, with only a few glandular hairs mixed-in; while for var. *euadenium,* the covering was thin, exposing the primary veins, but the hairs were densely intermixed with glands.

Cut and dried then.

Except recent fieldwork has shown far more variability on the ground than the herbarium material would have you believe, with plants displaying the entire character arc between the two varieties, albeit with the thin, stalked-glandular indumentum maintained throughout. A prognosis has also been put forward suggesting that var. *euadenium* is actually a natural hybrid between *R. crinigerum* and *R. glischrum*. Both of these species grow along the border regions between Myanmar and Yunnan, close to where Forrest discovered the original *R. euadenium* populations, with speciation observed in some of those hybrid clusters. However, despite a much narrower altitudinal distribution - 3,600 to 3,700m, as opposed to the 2,200 to 4,300m spread of var. *crinigerum,* a biogeography that lends weight to the natural hybridity argument - expert opinion is currently in fence sitting mode, so the status quo position is maintained herein.

The continuous covering of indumentum on the abaxial leaf surface of both varieties, be it thick or thin, keys them from all the other Subsection *Glischra* species except for *R. recurvoides,* which is easily identified courtesy of its lower stature and far smaller leaves, the respective maxima for these being 3m in height and 20cm in length, as opposed to 1.5m and 7cm.

Cultivation of either varietal denomination is usually without problem, the test being to acquire a plant that combines the best foliage with the best flowers, especially as there are more than a few unexceptional forms doing the rounds. Standouts of var. *crinigerum* are specimens from three Joseph Rock seed collections - R 38, R 10983 and R 11189 - all of which have shiny bullate foliage. The first and last come with deep rose striping on the white flowers, while plants grown from the middle gathering have a fuller truss with blooms that open flushed and margined in pink. The Forrest 25633 collection of var. *euadenium* has very fine foliage and blooms that are white flushed deep pink in tone, with deeper hued stripes and a much darker crimson blotch and spotting at the base of the upper lobe.


R. crinigerum


R. euadenium (F 25633)



R. crinigerum (R 38)



R. crinigerum (R 10983)



R. euadenium (F 25633)

R. habrotrichum (F 15778)

R. habrotrichum

Hardiness:
H4-5.
Flowering Period:
April-May.
Distribution in the wild:
NE Myanmar; W Yunnan, China.
Growing in open situations in forests and thickets, amongst scrub,
boulders and rocks on mountain slopes, at elevations of 2,700-3,700m.

Identification:
Shrub, or more rarely a small tree, bushy, rounded through broadly-upright,
often becoming leggy with age, 1 to 4m high;
young shoots densely setose-glandular, the bristles crimson-purple.
Leaf bud scales deciduous.
Leaves coriaceous or somewhat chartaceous, ovate through obovate,
6.5 to 18cm long by 3 to 8cm wide, apex acute through abruptly acuminate,
base rounded through cordulate, retained 2 years;
upper surface dark green, smooth through rugulose, matt and glabrous,
rarely sparsely setose-glandular,
the midrib setose-glandular at the base or along the lower half,
the margins flat, fringed with stalked-glandular, setulose and ciliate hairs;
lower surface pale green and glabrous, rarely sparsely setose,
the midrib and primary veins moderately through densely setose-glandular,
the midrib bristles sometimes restricted to the lower third or two thirds.
Petiole 10-30mm long, stout, densely crimson-purple setose-glandular.
Inflorescence 8-15-flowered, in a compact or lax truss;
the bud scales persistent or deciduous.
Rhachis 8-15mm long, densely floccose or pubescent, and sometimes setulose-glandular.
Pedicel 18-25mm long, stout, glabrous, densely crimson-purple setulose-glandular.
Calyx lobes 8-15mm long, equal or unequal, distinct, red or crimson-purple,
lanceolate, oblong or rounded, the outer surface pubescent, ciliate or glabrous,
and moderately through densely setulose-glandular, the margins setose-glandular,
often intermixed setulose, with all the bristles on the calyx crimson-purple in hue.
Corolla 3.6 to 5cm long, funnel-campanulate through campanulate,
white, white flushed rose through pink or striped pink, deep through pale rose,
with or without, either or both, a crimson-purple basal blotch and spots.
Style glabrous, rarely hairy at the base,
but setose-glandular along the lower third or half.

Seed Collections:

F 9048	1912	F 18069	1917/1919	F 24315	1924/1925	F 27400	1924/1925
F 12054	1912/1914	Farrer 887	1919	F 26629	1924/1925	F 29588	1930/1931
F 12095	1912/1914	KW 3042a	1919	F 26632	1924/1925	KW 404	1938/1939
F 15778	1917/1919	F 20262	1921/1922	F 27343	1924/1925	KW 409	1938/1939
F 16006	1917/1919	R 7658	1923/1924	F 27399	1924/1925		

Frank Kingdon-Ward, Reginald Farrer and Joseph Rock all found populations of *R. habrotrichum* in the wild from which seed was introduced into British gardens, but once again, it was George Forrest who beat them to the post, securing herbarium material from plants growing on the western side of the Shweli-Salween Divide in Yunnan during August 1912 and fully-developed capsules later that same year. Isaac Bayley Balfour and William Wright Smith contributed the botanic description, their Latin prose contained within Volume 9 of *Notes from the Royal Botanic Garden, Edinburgh,* published in 1916.

R. habrotrichum can quickly be distinguished from all the other Subsection *Glischra* rhododendrons - except *R. glischroides* and *R. vesiculiferum* - by the crimson-purple sticky bristles that adorn its branchlets, petioles, pedicels and calyx lobes, with the broader but shorter leaves an additional difference with *R. glischrum*. Leaf shape and width differentiate the species from *R. glischroides* - ovate through obovate, rather than oblanceolate through oblong-lanceolate; 3 to 8cm in breadth instead of 2.5 to 5cm - though the key identifying characteristic is the lack of any white or fawn tomentum on the midrib and veins of the lower leaf surface, plus the leaf bud scales are non-viscid, while those of *R. glischroides* are very sticky at first. With regard to *R. vesiculiferum, R. habrotrichum* lacks the distinctive, bladder-topped white hairs that are found on the abaxial midrib, the lateral veins, the petiole and pedicel, and the ovary and style.

In cultivation, swift drainage is an essential requirement, with specimens indicating their displeasure at too damp a site through the chartaceous leaves. Flowering from a very young age, bushes of *R. habrotrichum* gifted deep rose flowers that open in tight compact trusses are the floral high point of the subsection, yet to date, not a single hybrid has been registered where the species epithet - 'with soft hairs' - appears in the parental equation. Apart that is, from the natural hybrid *R. x diphrocalyx,* which is now believed to be an undirected mating with one of the Subsection *Neriiflora* contingent. Equally, no modern-day Western plant hunters have revisited any of the wild population sites since Kingdon-Ward's 1938 encounter in northeastern Myanmar, an oversight a bunch of power-mad generals and the Nagoya Protocol will likely perpetuate for at least the next few decades.


R. habrotrichum





R. habrotrichum



R. habrotrichum

R. habrotrichum

R. habrotrichum (F 15778)

R. glischrum* ssp. *glischrum
Hardiness:
H4-5.
Flowering Period:
Late April-May.
Distribution in the wild:
NE Upper Myanmar; SE Tibet; NW Yunnan, China.
Growing in open situations in and at the margins of forests,
in thickets, in open ravines, and on rocky slopes,
at elevations of 2,100-4,300m.

Identification:
Shrub or small tree, spreading through broadly-upright, 1 to 9m high;
young shoots densely setose-glandular and moderately setulose-glandular,
the bristles green or pale green.
Leaf buds sticky, the scales deciduous.
Leaves somewhat chartaceous,
oblong-lanceolate through oblanceolate, rarely obovate,
9 to 30cm long by 2.5 to 8cm wide,
apex obtuse through acuminate, cuspidate,
base cuneate, narrowly rounded through cordulate, retained 1-3 years;
upper surface olive-green, slightly rugulose, matt and flat,
the midrib setulose-glandular near the base, and often intermixed setose-glandular,
the margins often slightly recurved, ciliate, setulose,
and sometimes sparsely setulose-glandular;
lower surface pale green, densely setulose, especially on the veins,
and often sparsely through moderately intermixed setulose-glandular,
the midrib moderately through densely both setulose and setulose-glandular,
and it is rarely without any non-sticky bristles.
Petiole 12-30mm long, stout, densely setose-glandular and moderately setulose-glandular,
the bristles green or pale green.
Inflorescence 6-15-flowered, in a lax truss; the buds green and sticky,
with the scales persistent throughout flowering, and sometimes retained longer.
Rhachis 8-20mm long, often pubescent, densely setulose-glandular.
Pedicel 20-42mm long, densely setulose-glandular,
often moderately intermixed setose-glandular, the bristles pale green.
Calyx lobes 5-15mm long, unequal, pink, red or crimson-purple, lingulate (tongue-shaped),
their outer surface and margins moderately through densely setulose-glandular,
and sometimes intermixed with long ciliate hairs.
Corolla 3 to 5cm long, campanulate,
purple-rose, rose-pink through scarlet, rarely pink, white or white flushed pink,
usually with a crimson-purple basal blotch and often crimson-purple spotted.
Style glabrous,
but setulose-glandular at the base or occasionally along the lower third.

R. glischrum* ssp. *rude
Hardiness:
H4-5.
Flowering Period:
May.
Distribution in the wild:
NE Upper Myanmar; SE Tibet; NW Yunnan, China; Arunachal Pradesh, India.
Growing in forests and thickets at elevations of 3,400-3,700m.

Identification:
Shrub or small tree, somewhat rounded to broadly-upright, 2 to 3m high;
young shoots densely setose-glandular and moderately setulose-glandular,
the bristles green.
Leaf buds very sticky, the scales deciduous or somewhat persistent.
Leaves somewhat chartaceous,
oblong-lanceolate through oblanceolate, rarely obovate,
9 to 19cm long by 2.5 to 7.5cm wide,
apex obtuse, abruptly acuminate or long acuminate, cuspidate,
base cuneate, narrowly rounded through cordulate, retained 1-3 years;
upper surface dark or olive-green, slightly rugulose, matt and somewhat convex,
moderately through densely intermixed setose and setose-glandular,
the midrib setose or setose-glandular along the lower half, sometimes intermixed,
rarely without any bristles;
lower surface pale green, densely intermixed setulose and setulose-glandular,
the midrib densely setulose-glandular throughout,
intermixed setose-glandular at the base or along the lower half.
Petiole 13-23mm long, stout, densely setose-glandular and moderately setulose-glandular,
the bristles green.
Inflorescence 8-10-flowered, in a lax truss; the buds green and very sticky,
with the scales persistent throughout flowering, and sometimes retained longer.
Rhachis 10-15mm long, often pubescent, short-stalked glandular or setulose-glandular.
Pedicel 15-35mm long, often floccose,
and moderately through densely setose-glandular, often intermixed setulose-glandular.
Calyx lobes 5-15mm long, equal, pinkish-purple, lingulate (tongue-shaped),
their outer surface and margins densely setulose-glandular.
Corolla 2.5 to 3.8cm long, campanulate through openly-campanulate,
purple-crimson or pinkish-purple,
often with darker banding outside and crimson spotting inside.
Style often floccose along the lower third or half,
and medium-stalked glandular intermixed setulose-glandular
along the lower third or two-thirds.

Seed Collections - ssp. *glischrum:*

F 12901	1914	KW 6281	1924/1925
F 13996	1917/1919	R 18386	1929
F 16555	1917/1919	R 18387	1929
Farrer 887a	1919	R 18420	1929
KW 3042	1919	R 18449	1929
F 21812	1921/1922	LS&E 13044	1946/1947
F 21813	1921/1922	LS&E 13590	1946/1947
R 11388	1923/1924	R 162	1948/1949
F 25610	1924/1925	CNW 390	1994
F 25616	1924/1925	CNW 391	1994
F 25619	1924/1925	CNW 398	1994
F 25725	1924/1925	AC 1855	1996
F 25785	1924/1925	AC 1887	1996
F 25927	1924/1925	AC 1917	1996
F 27085	1924/1925	DGEY 75	2001
F 27462	1924/1925	JN 12137	2012
F 27463	1924/1925	JN 12176	2012

Seed Collections - ssp. *rude:*

F 25645	1924	LS&T 6569	1938
F 25777	1924/1925	KC 117	2001
KW 6256	1924/1925	HECC 10040	2002
KW 10952	1933	HECC 10067	2002
LS&T 3670	1938	KR 10388	2012
LS&T 3706	1938	KR 10415	2012

R. glischrum was the next species in the subsection to be discovered, one of four George Forrest new-to-science discoveries that would ultimately end up filed in the same botanical pigeonhole. A population of plants growing along the Kari Pass, on the mountains of the Mekong-Yangtze Divide in Fugong County, northwest Yunnan, became the premier find, made during July 1914, and the species received an Isaac Bayley Balfour-William Wright Smith-penned botanic description in 1916 (*Notes from the Royal Botanic Garden, Edinburgh,* Volume 9).

Forrest's encounter with the taxon's near twin, *R. rude,* occurred almost a decade later in June 1924, and took place on the mountains of the Salween-Kiu Chiang Divide in northwestern Yunnan, Harry Tagg providing the botanic description that appears in *The Species of Rhododendron,* published in 1930.

When adhering to the black-and-white precepts of those original type elucidations, *R. glischrum* will be seen to differ from *R. rude* only in not having glandular or eglandular bristles on the upper leaf surface. Quite rightly, this resulted in a loss of specific status and imposition of subspecies ranking in the Edinburgh Revision texts, but on the ground - in northeast Upper Myanmar, southeast Tibet and northwest Yunnan - as well as in cultivation, there are intermediate forms with a mix of sticky and non-sticky bristles present even on mature leaves, which makes identification somewhat hit-and-miss. Technically, the leaf and flower buds of *R. glischrum* are a tad less sticky than those of *R. rude,* but after having seen numerous plants in the wild transitional between the two extremes, horticultural experts Peter and Kenneth Cox regard any distinction between the subspecies as redundant (*The Encyclopedia of Rhododendron Species,* 1997).

Differentiation from the other Subsection *Glischra* rhododendrons is more precise:

R. adenosum has calyx lobes that only attain 7mm in length, half the 15mm maxima of either *R. glischrum* subspecies;

The lower leaf surfaces of *R. crinigerum* and *R. recurvoides* are devoid of any bristles and have a continuous indumentum;

R. glischroides has a thin, white or fawn tomentum on the abaxial midrib and veins;

R. habrotrichum has crimson-purple not green-coloured bristles on the branchlets, petioles and pedicels;

And *R. vesiculiferum* has white, bladder-headed hairs on its abaxial leaf surface.

Altitudinally, *R. glischrum* has set up home between the 2,100 and 4,300m contours, while *R. rude* occupies a narrower band from 3,400 to 3,700m, and post the Millennium, the distribution of the latter was found to extend into Arunachal Pradesh.

Forrest's initial introductions of seed in 1914 and 1924, were followed by a veritable who's who of plant hunters adding to the list of wild gatherings now established in British gardens, all of which are fully hardy and quite fast-growing.

Specimens of *R. glischrum* will be found to differ widely in habit, height, foliage length and flower colour, though two garden-worthy forms tend to predominate. One is a medium-sized upright shrub between 2 and 3m high at maturity, bearing white flushed rose flowers and 20cm-long leaves. The other is taller and wider-spreading, to at least 4m high and more across, with larger trusses of rose flowers, these blotched crimson, and leaves that extend to the species maxima of 30cm. When covered in bloom, mature plants of both forms are stunning.

Selections of *R. rude* tend to emphasise the darker, crimson-purple banding on the outside of the corollas. They grow into rounded, bushy shrubs around 2 or 3m high that can be a little temperamental with regard to position, drainage and shelter, so despite their knockout flowers, specimens will prove a rare find in the UK's rhododendron collections.

R. glischrum (CNW 390)


R. glischrum (CNW 391)


R. rude (KW 10952) ‘Frank Kingdon-Ward’


R. rude (KW 10952) ‘High Flier’

R. glischroides

Hardiness:
H4-5.
Flowering Period:
February-April.
Distribution in the wild:
NE Myanmar; SE Tibet; W Yunnan, China.
Growing in thickets along side valleys, on rocky slopes and cliff ledges,
and amongst scrub, at elevations of 2,700-3,700m.

Identification:
Shrub, bushy, rounded-spreading or upright, 1.3 to 4.5m high;
young shoots densely brown or crimson setose-glandular,
and moderately setulose-glandular.
Leaf buds very sticky, the scales somewhat persistent.
Leaves somewhat chartaceous,
oblanceolate through oblong-lanceolate, 7 to 17cm long by 2.5 to 5cm wide,
apex acuminate, long acuminate or cuspidate, base rounded, cordulate or obtuse;
upper surface green or bright green, rugose through bullate, convex, usually matt,
the midrib sometimes setulose-glandular at the base,
the margins setulose, and sometimes recurved;
lower surface pale green, densely setulose,
the midrib and primary veins with a thin, but sometimes dense and arachnose,
whitish or fawn tomentum, the hairs short or long and branched, but not vesiculate,
the midrib also densely setulose.
Petiole 10-20mm long, densely setose-glandular and moderately setulose-glandular,
the bristles brown, crimson or purplish.
Inflorescence 6-12-flowered, in a lax truss; the bud scales usually persistent.
Rhachis 6-10mm long, pubescent and setulose-glandular.
Pedicel 6-20mm long, densely setulose-glandular and moderately setose-glandular,
the bristles crimson or reddish-purple.
Calyx lobes 5-20mm long, unequal, crimson-purple, lanceolate through oblong,
the outer surface pubescent and long-stalked glandular, the margins setulose-glandular.
Corolla 3 to 5cm long, campanulate,
creamy-white, white flushed pale or deep rose, rose or mauve-pink,
with or without a crimson, maroon or purple basal blotch, and sometimes spotted purple.
Style glabrous.

Seed Collections:

F 27463	1925
F 27470	1925
F 27600	1925
F 27609	1925
F 27625	1925

The last of George Forrest's contributions to the subsection was *R. glischroides,* which he and his team encountered in northeastern Upper Myanmar, on the western side of the mountains that divide the Salween and the N'Maikha rivers, during April, 1925. The taxon's botanic description, written jointly by the plant hunter and Harry Tagg, appears in *The Species of Rhododendron,* published by the Rhododendron Society in 1930.

In the initial Edinburgh Revision papers - *A Preliminary Synopsis of the Genus Rhododendron,* authored by James Cullen and David Chamberlain, which featured in 1978's Volume 36 of *Notes from the Royal Botanic Garden, Edinburgh* - specific status was revoked and *R. glischroides* reduced in rank to a subspecies of *R. glischrum.* However, this change was reversed eighteen years later when the saga's final publication - *The Genus Rhododendron: Its Classification & Synonymy* - concluded the emendation in 1996.

As evident from the above convolution, *R. glischroides* is most closely allied to the two presently extant *R. glischrum* subspecies, yet it also shares many of the attributes of *R. vesiculiferum,* including the rugulose foliage. From the two subspecies, one distinction is provided by the tomentum on the lower surface of the leaves, another by the bristle colour on the pedicels, and the bushy, lower growing habit, offers a tertiary check, with the leaves of *R. glischroides* also more bullate and smaller. The very sticky leaf and flower buds provide one keying characteristic to distinguish *R. glischroides* from *R. vesiculiferum,* this enhanced by the usually persistent nature of the bud scales, but the main variance is a lack of white hairs on the petiole, pedicel, ovary, style and seed capsule. On the leaf underside of *R. glischroides,* the long- or short-branched hairs can be white in hue, but they are never topped with a hydra of bladder-shaped heads, as a glance through a low-power microscope will quickly confirm.

Back in April 1925 and concurrent with the type discovery, a variant of *R. glischroides* was found growing close-by. This plant, which was described by Forrest and Tagg in 1931 (*Notes,* Volume 16), was named *R. glischroides* var. *arachnoideum,* and although a denser covering of white or fawn-coloured hairs was evidenced on the leaf abaxial surface - giving a cobwebby effect - the find was, in all other aspects, identical with the specific species. Not unexpectedly therefore, synonymy was the variant's ultimate fate, though post that axe fall, some aficionados still persist in using the original, or an affinity designation, on their plant labels.

Free-flowering from a young-age, with eye-catching white-flushed-rose blooms, *R. glischroides* is also gifted with a foliage mantle that remains interesting all year round, from emergence to maturity, so the species is widely planted in British woodland gardens. There is however, one major drawback to successful cultivation: a few of the introductions are predisposed to early growth, so will suffer serious bark-split if hit by a heavy Spring frost. Siting is therefore critical, especially for venues on the east coast or inland.

To date, George Forrest is the only Western plant hunter to have encountered the species in the wild, gathering and introducing five batches of seed, these all amassed on his penultimate expedition during 1925, but for whatever reason, two groups of different field numbers feature in previously published listings.

To set the record straight:

F 27470 is the capsule collection directly linked to the type specimen material Forrest returned under F 26426.

The F 27643, F 27609 and F 27625 lots garnered subsequently, are respectively associated with herbarium sheets filed away under F 26455, F 26428 and F 26448.

And F 27600, the only collection of var. *arachnoideum* capsules ever to be made and introduced into UK cultivation, is wedded with the type specimen material sourced under the field number F 26425.



R. glischroides

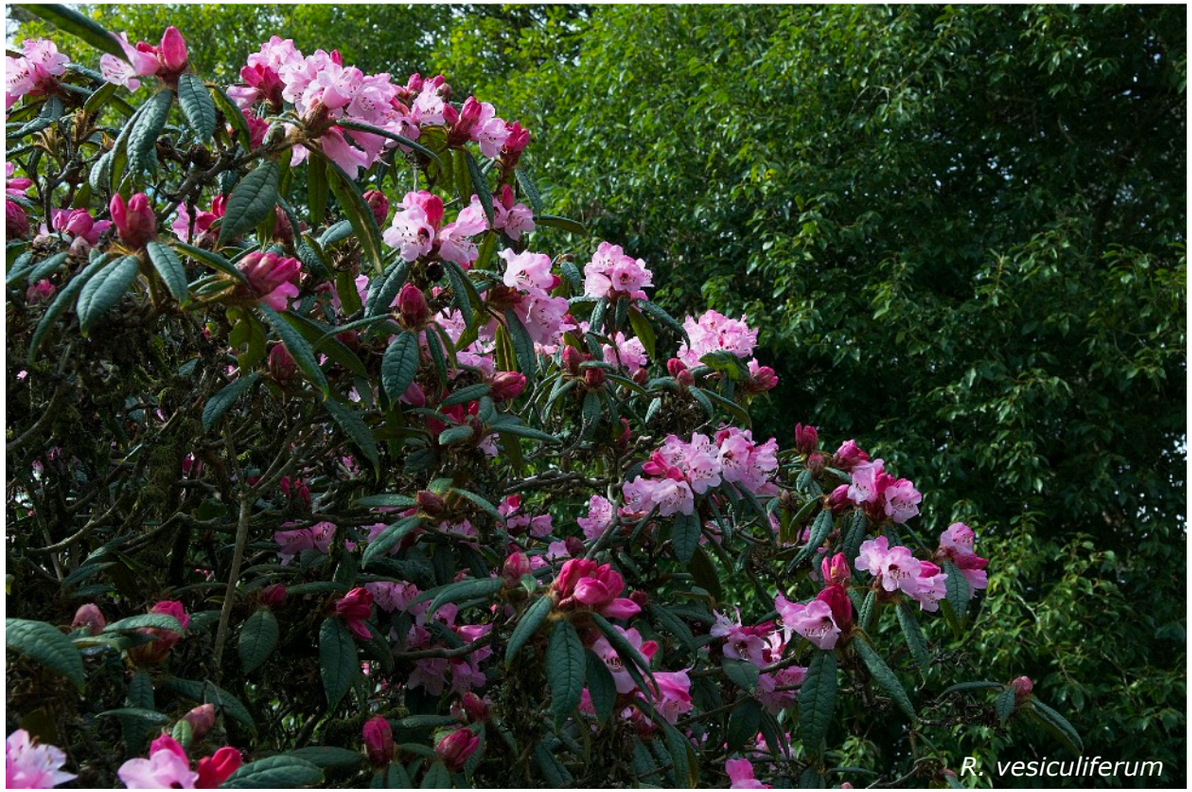


R. glischroides (F 27625)



R. glischroides


R. vesiculiferum


R. vesiculiferum

R. vesiculiferum

Hardiness:
H4-5.
Flowering Period:
March-April.
Distribution in the wild:
NE Upper Myanmar; SE Tibet; W Yunnan, China.
Growing in evergreen forests and thickets,
and on rocky slopes at elevations of 2,400-3,400m.

Identification:
Shrub or small tree, rounded through broadly-upright, 1.5 to 3m high;
young shoots, densely setose-glandular and moderately setulose-glandular,
the bristles brown or crimson-purple.
Leaf bud scales deciduous.
Leaves coriaceous or somewhat chartaceous,
obovate through oblanceolate to oblong-lanceolate,
7.8 to 16.5cm long by 2.5 to 5.5cm wide,
apex acute through long- to abruptly-acuminate, base rounded or cordulate;
upper surface green or olive-green, rugose through markedly bullate, matt,
glabrous at maturity, the midrib sometimes sparsely setulose-glandular at the base,
the margins sometimes slightly recurved, ciliate or setulose;
lower surface pale green, often lacunose, densely setose or setose-glandular,
the midrib and veins densely white-vesicular hairy, the midrib also densely setose
and setulose, and sometimes sparsely through moderately setulose-glandular,
especially at the base.
Petiole 10-20mm long, densely setose-glandular and moderately setulose-glandular,
the bristles brown or crimson-purple, and white-vesicular hairy, rarely glabrous.
Inflorescence 7-15-flowered, in a usually lax truss;
the bud scales deciduous or somewhat persistent.
Rhachis 5-10mm long, floccose or glabrous, and long-stalked glandular.
Pedicel 15-25mm long, densely setose-glandular and moderately setulose-glandular,
the bristles brown or crimson-purple, and sparsely white-vesicular hairy.
Calyx lobes 5-10mm long, unequal, purplish, lanceolate through oblong-oval,
their outer surface often pubescent, short- through medium-stalked glandular,
the margins often ciliate, setose- or setulose-glandular.
Corolla 2.5 to 3.5cm long, campanulate through funnel-campanulate,
near white through pink to purplish-rose,
with a small deep crimson or purple basal blotch and spotting.
Ovary with white-vesicular hairs amongst the glandular bristles.
Style often floccose at the base and setulose-glandular along the lower third,
and white-vesicular short-hairy along the lower third, rarely glabrous.
Capsule with white-vesicular hairs amongst the glandular bristles.

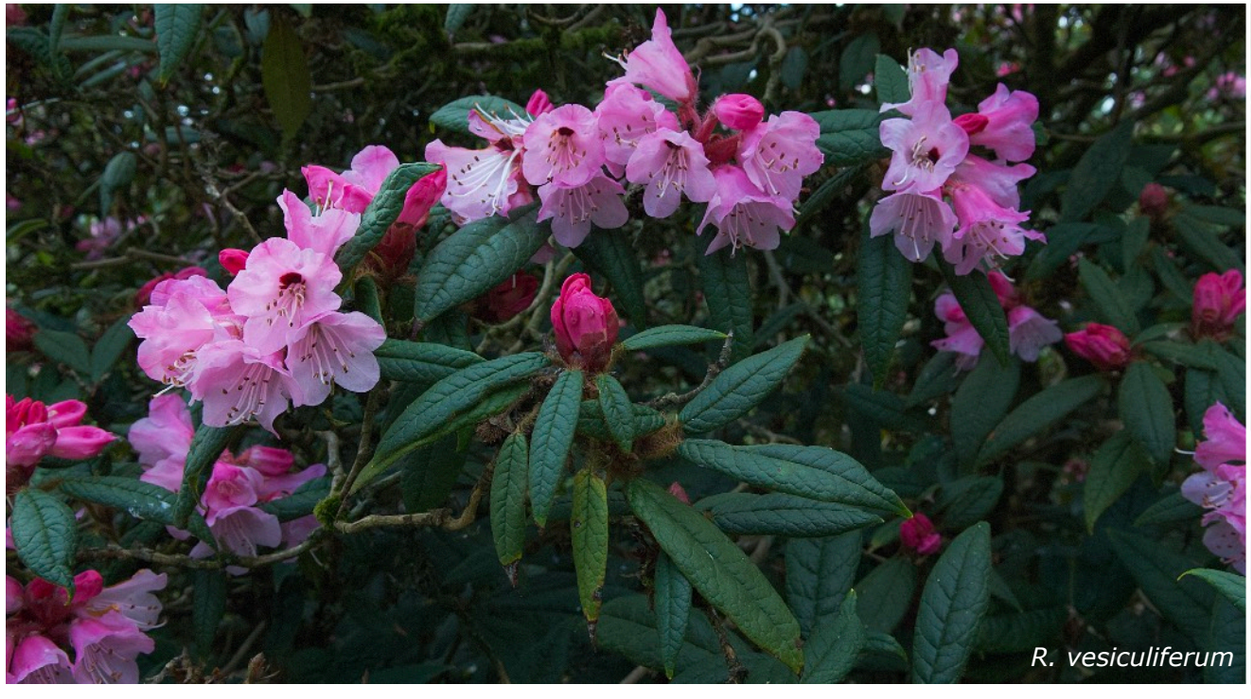
Seed Collections:

KW 6752	1926	KW 9485	1931
KW 6856	1926	KW 9726	1931
KW 9258	1931	Yu 19650	1937

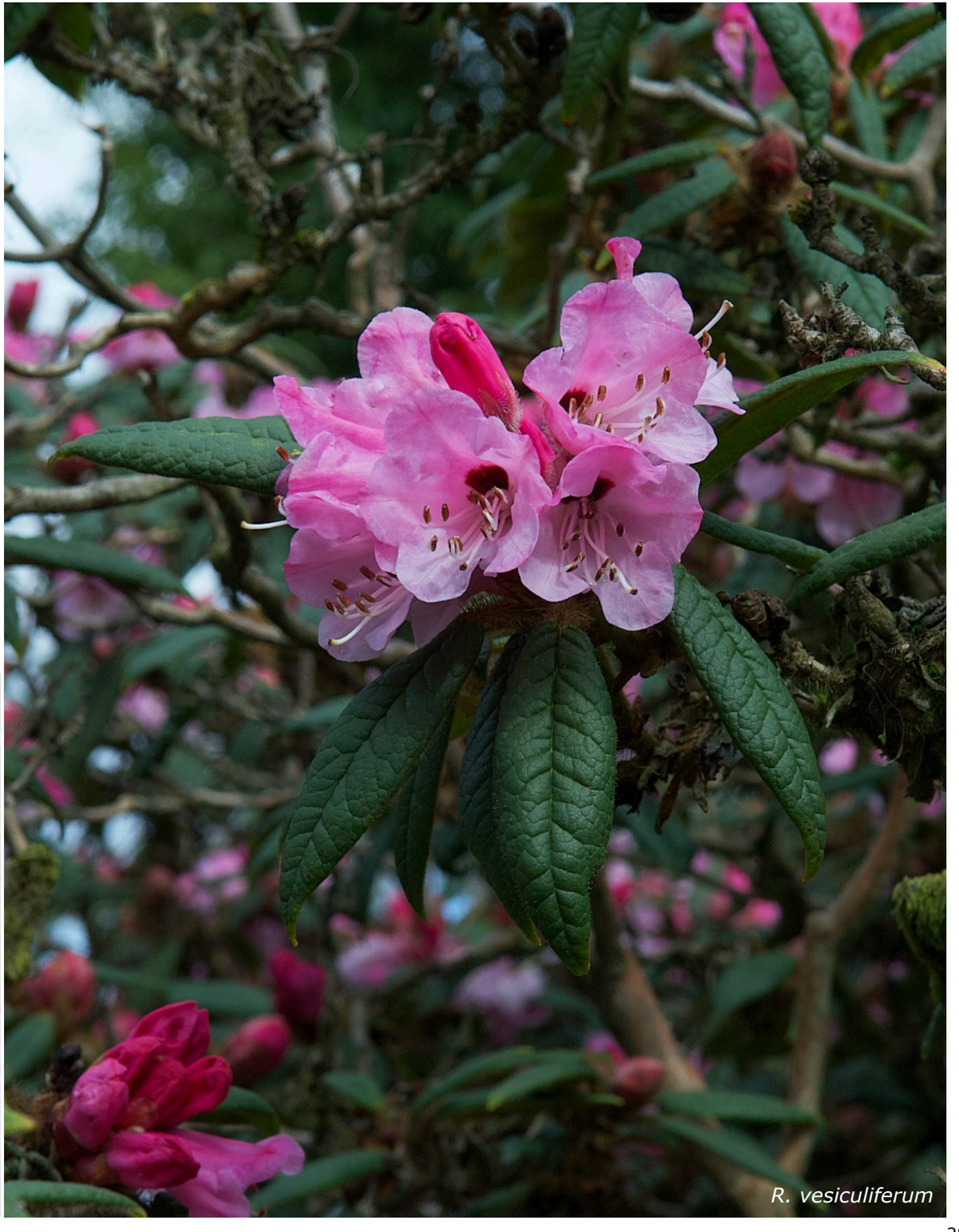
Frank Kingdon-Ward's 1926 exploration of Myanmar's Seinghku Valley resulted in the discovery of two previously unknown Subsection *Glischra* rhododendrons. One of these, found close to his base camp at Seinghku Wang in mid-May, was *R. vesiculiferum*. Two seed lots were secured, with Ward bringing home three further batches on a subsequent expedition in 1931. The Chinese collector, Te-Tsun Yu, also garnered capsules in 1937. Yet despite these multiple introductions, the species remains one of the rarest members of the genus grown in British gardens, with one or two authors even suggesting it is no longer in cultivation. That is certainly not the case, though the paucity of living specimens was rather exacerbated when specimens grown from Kingdon-Ward's sixth gathering - under the field number KW 10952; the award-winning 'High Flier' clone amongst their ranks - were, post the Royal Horticultural Society's 1968 AM-investiture, re-examined and found not to be *R. vesiculiferum* at all, but *R. glischrum* ssp. *rude*.

The defining morphologic characteristic of *R. vesiculiferum,* separating it not only from its closest ally, *R. glischroides,* but from each and every other member of Genus *Rhododendron,* are the white vesicular hairs present on the abaxial leaf veins and midrib, the pedicels, ovaries and seed capsules. They are also usually found on the petioles and along the bottom third of the style. Under magnification, these hairs will be seen to have a short multicellular stalk that is topped by a number of unmissable, basically bladder-like, multicellular protrusions, which stick out at various angles. These adornments are known as 'vesicles' and they provide the plant with its Latin epithet.

The botanic description for *R. vesiculiferum* was written - in English - by Harry Tagg and published in 1930's *The Species of Rhododendron*. Its official, Indo-European Italic dialect version - without which no taxon truly exists (*aut sic ducimur ad credendum*) - can be found inside Volume 16 of *Notes from the Royal Botanic Garden, Edinburgh,* which went to print in 1931. Specimens grown from the Ward and Yu introductions all require a well-sheltered planting site to prosper, this especially true for establishments along the east coast and inland.



R. vesiculiferum



R. vesiculiferum

R. recurvoides (KW 7184)

R. recurvoides

Hardiness:
H5.
Flowering Period:
March-May.
Distribution in the wild:
NE Upper Myanmar.
Growing on steep granite slopes amongst boulders at elevations around 3,400m.

Identification:
Low shrub, bushy and compact, rounded through spreading, sometimes upright,
1 to 1.5m high; young shoots densely setose and densely setose-glandular.
Leaf bud scales persistent for several years.
Leaves coriaceous,
lanceolate through oblanceolate, 3 to 7cm long by 1 to 2.2cm wide,
apex obtuse through acute, base obtuse through tapered;
upper surface dark green, rugulose, shiny, setulose-glandular at first,
but glabrous at maturity except for the usually persistent bristle bases,
which make the surface rough to the touch,
the midrib setose and setose-glandular at the base or along the lower half,
the margins strongly recurved;
lower surface with a dense, thick, continuous indumentum,
yellowish- or orange-brown, cinnamon or dark brown, composed of ramiform hairs,
the midrib short-stalked glandular, the primary veins hidden.
Petiole 5-20mm long, slightly grooved above,
densely setose and densely setose-glandular.
Inflorescence 4-7-flowered, in a lax truss;
the buds ovoid, the outer scales brown,
the inner scales pale green through near white,
pointed, with brown hairs, persistent.
Rhachis *c.* 3mm long, sparsely setose-glandular and long-hairy.
Pedicel 12-16mm long, pubescent, densely setose-glandular or long-stalked glandular.
Calyx lobes 5-10mm long, equal or unequal, ovate or lanceolate,
their outer surface and margins densely long-stalked glandular.
Corolla 2.6 to 3cm long, campanulate through funnel-campanulate,
white, white flushed pink through rose, or rose,
with crimson spots but without a basal blotch.
Stamen filaments villous at the base or along the lower half.
Style glabrous.
Capsule densely long-stalked glandular.

Seed Collections:

KW 7184	1926

Discovered a century ago in July 1926, *R. recurvoides* is actually the newest addition to the subsection's membership as its transfer from the Roxieanum Subseries of the Taliense Series was only engineered in 1982. It was the second of the new-to-science *Glischra* rhododendrons that Frank Kingdon-Ward found in northeastern Upper Myanmar while exploring the Seinghku Valley, part of a deep trench cut through the mountains by the Dai Chu River. On departing the fir forest around his camp for the granite scree slopes above, he spotted a group of small shrubs 'scattered about amongst the boulders'.

The plant hunter's field notes record that they were sited out in the open, on the sunniest parts of the sheltered slope, and even 'quite tiny plants' had been 'a mass of flowers'. He also reported that only a few metres away, stands of *R. crinigerum* were growing amongst the trees or in thickets.

Kingdon-Ward returned to the site in early November of that same year to secure seed from both populations, gathering *R. crinigerum* under the field number KW 7123, and *R. recurvoides* under KW 7184, and to this day, he remains the only Western plant hunter to have found and collected the latter. Harry Tagg was responsible for writing the botanic description that appeared in Volume 3, Part 5, of *The Rhododendron Society Notes 1929-31,* published in 1932, and despite the sticky bristles evident on the young shoots of *R. recurvoides,* and the close alliance with *R. crinigerum* stressed by Ward in his field notes, chose to associate the taxon with the Taliense Series rhododendrons. Because he, and his principal successors, were all convinced that an even closer relationship existed between *R. recurvoides* and *R. recurvum* - this now a synonym of *R. roxieanum* Oreonastes Group - even though the nearest known population of that species was located several hundred miles away in northwest Yunnan.

The choice of epithet for Ward's discovery will, of course, highlight that error for all eternity as the lower Tiber dialect of ancient Rome in this case translates as 'resembling *R. recurvum*'. Even H. H. Davidian maintained this misjudged placement, though he at least opted to describe *R. recurvoides* as a Taliense Series aberrant in Volume 3 of his post-retirement compendium *The Rhododendron Species*. The long-standing boo-boo was finally corrected by David Chamberlain in the Subgenus *Hymenanthes* monograph he wrote for the Edinburgh Revision - published in *Notes from the Royal Botanic Garden, Edinburgh,* Volume 39, Number 2 - the move to Subsection *Glischra* wholeheartedly endorsed by Peter Cox in his book, *The Smaller Rhododendrons,* of 1985 vintage.

In all fairness, *R. recurvoides* does show a resemblance to a few of the Subsection *Taliensia* species, especially to *R. roxieanum,* but the dense covering of setose-glandular bristles on the branchlets, petioles and pedicels quickly key them apart and should have been a morphological no-brainer from the off. From all but one of the other Subsection *Glischra* rhododendrons*,* the continuous abaxial indumentum is an obvious key, while from *R. crinigerum* - its actual closest relative - the far smaller leaves and stature offer clear delineators. Yet the fact that *R. recurvoides* displays traits from both subsections has prompted conjecture that it may have come into existence via a cross between *R. crinigerum* and one of the *Taliensia* contingent, producing a natural hybrid that has now speciated. And the biogeography, with the population of plants Ward found distributed across a tight band on either side of the 3,400m contour, would certainly support this hypothesis. However, currently, too little is known of those wild plants to make a valued judgement and DNA evidence relating to the taxon's possible hybridity is not available.

The seedlings germinated from Kingdon-Ward's capsule collection have mirrored the two forms he observed in Myanmar: a slow-growing dwarf, producing a 1m high dome after many years, which is a rock garden gem; and a faster-growing plant, with a more upright habit, less densely filled with leaf blades, which is half as tall again.



R. recurvoides (KW 7184)



R. recurvoides (KW 7184)



R. recurvoides (KW 7184)

R. recurvoides (KW 7184)



R. adenosum (Rock 18228)

R. adenosum

Hardiness:
H4-5.
Flowering Period:
May.
Distribution in the wild:
SW Sichuan, China.
Growing in conifer forests and swamps at elevations of 2,700-3,500m.

Identification:
Shrub or small tree, rounded or broadly-upright, 2 to 5m high;
young shoots hairy or glabrous, usually densely brown or fawn setulose-glandular.
Leaf bud scales deciduous.
Leaves coriaceous or somewhat chartaceous,
ovate-lanceolate through lanceolate, 7 to 12.8cm long by 2 to 5cm wide,
apex acute through acuminate, base rounded or cordulate, retained 2 years;
upper surface olive-green, matt and glabrous,
or sparsely through moderately hairy often with some stalked setulose-glandular hairs,
both types variably persistent and often completely lost at maturity,
the midrib glabrous or similarly garbed,
with cartilaginous margins that are papillate and often setulose-glandular;
lower surface pale green and glabrous, or densely hairy with very short hairs,
these moderately through densely intermixed with medium- or long-stalked setulose-glandular hairs, these variably persistent and sometimes quickly lost,
especially towards the apex,
the midrib glabrous or similarly garbed,
with the glandular hairs sometimes present only along the lower half.
Petiole 8-23mm long, glabrous or hairy,
moderately through densely brown or fawn setulose-glandular.
Inflorescence 4-8-flowered, in a lax truss; the bud scales deciduous.
Rhachis 6-12mm long, pubescent.
Pedicel 15-30mm long, short-hairy,
these densely intermixed with pale green setulose-glandular hairs.
Calyx lobes 4-7mm long, equal, pale green, lanceolate through ovate,
their outer surface and margins glabrous or short-hairy,
and moderately through densely medium- or long-stalked glandular.
Corolla 3 to 5.3cm long, funnel-campanulate,
white through pale pink,
with or without, either or both, a crimson basal blotch and crimson or purple spotting.
Stamens 10, rarely 13.
Style glabrous.

Seed Collections:

R 18226	1929
R 18228	1929
LS&E 13606	1946/1947

R. adenosum is known only from southwest Sichuan, which was where Joseph Rock discovered the species in July 1929, on a mountain close to the monastery at Kulu - now Kangwu - in Muli County. That gathering, made early in the season, only secured the dried material for the type herbarium specimen sheets - under the field number R 18040 - with two seed collections sourced from the same localised population - R 18226 and R 18228 - made later in the year during September. No other plant hunter has revisited the site or collected the species elsewhere since Rock's initial find, apart that is, from Frank Ludlow, George Sherriff and Henry Elliot, who apparently returned seed following their 1946-47 expedition to southeast Tibet. LS&E 13606 is listed in the field number datasets that were published within *The Rhododendron Handbook 1967,* Part 1 - on page 265, to split hairs - these detailing 'Rhododendrons in Cultivation in Great Britain and Ireland', so even though the entry has not been included in subsequent editions of the Royal Horticultural Society's rhododendron bible, the gathering must have sourced viable seed that germinated.

No?

In 1953, Rock's find was described as *R. glischrum* var. *adenosum* by John MacQueen Cowan and H. H. Davidian - *Notes from the Royal Botanic Garden, Edinburgh,* Volume 21 - though Davidian later raised the taxon to specific status (*Quarterly Bulletin, American Rhododendron Society,* Volume 32, Number 2, Spring, 1978). David Chamberlain opted for that exact same ranking that very same year, refashioning the epithet as *R. kuluense* in the process (*A Preliminary Synopsis of the Genus Rhododendron,* included within Volume 36 of *Notes*), but was beaten by a nose in the re-naming precedence stakes by his erstwhile predecessor at Edinburgh Botanic.

Given that original classification, within the subsection, *R. adenosum* will clearly be most closely related to *R. glischrum,* but in combination, five characteristics can be used to separate the two: shorter leaves; very short hairs and glandular-bristles on the lower leaf surface; shorter calyx lobes; a non-sticky rhachis; and no more than eight corollas in the flower truss. The species also bears a superficial resemblance to both *R. crinigerum* and *R. habrotrichum,* but is respectively: without a thick and continuous indumentum on the lower leaf surface; and its branch and leaf glands are fawn or brown in hue, not crimson-purple. The *R. habrotrichum* leaf blade is also considerably broader.

In cultivation, *R. adenosum* has proved easy to grow, its formative years spent as a fairly compact, sometimes shyly-flowering rounded shrub, but then a biological switch is flipped and the branches begin to climb more directly skyward, developing into an upright bush between 2 and 3m high that is very free-flowering at maturity. Specimens are fully hardy from a young age, but as with its endemic distribution, which officially has not yet been extended in southeastern Tibet, the species will prove to be a rare find in the woodland gardens of England, Scotland and Wales, absent even from some of those that are home to extensive specialist collections, and this despite the obvious floral beauty.



R. adenosum (Rock 18228)

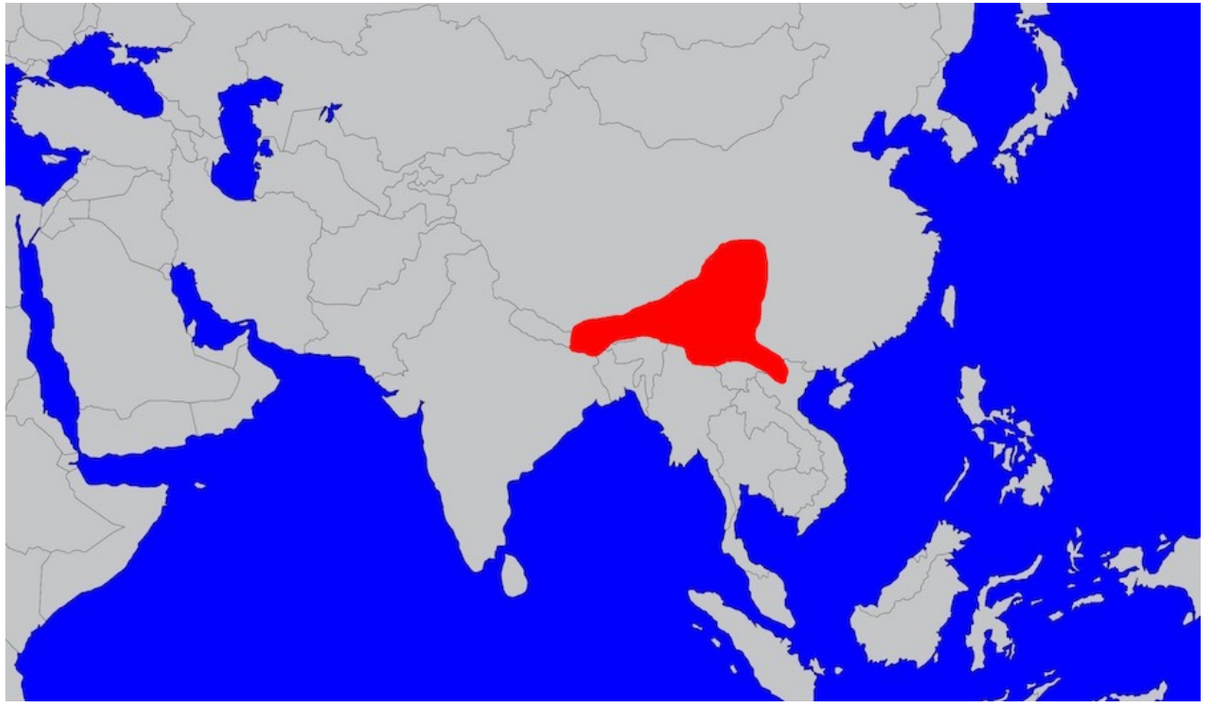


R. adenosum (Rock 18228)

Subsection *Grandia:*



R. protistum



Taxa:

R. grande
R. kesangiae
R. kesangiae var. *kesangiae*
R. kesangiae var. *saktengianum*
R. macabeanum
R. magnificum
R. montroseanum
R. praestans
R. protistum
R. pudorosum
R. sidereum
R. sinogrande
R. suoilenhense
R. watsonii

Taxonomic Revision:

The move from Section *Ponticum* to Section *Leiorrhodium* is the only wholesale change applied to Subsection *Grandia* post publication of the 1996 Edinburgh Revision. However, the whiter-than-white colour-associated concluding epithet of one taxon, which was not unique within the genus, has been replaced with a geographic appellation reflecting the locale - the far east of Bhutan, close to the town of Sakteng, in the Trashigang District - where the variety was first discovered.

Subsection Morphology:

Large shrubs through small to large trees, rounded or broadly upright, 1 to 30m high; branchlets usually stout, variably fawn through whitish tomentose, the covering thin, or glabrous; bark rough, reddish- or grey-brown, scaling or flaking.

Vegetative bud large, oval through oblong-oval, greenish, sometimes reddish or maroon, tomentose, sometimes glandular, rarely glabrous; the outer scales ovate, the lower often with long or short acuminate tips, the upper with a rounded or obtuse apex, or more rarely with long acuminate tips; the scales deciduous, rarely persistent.

Leaves large, thick, coriaceous, to 70cm long (or more) by 30cm wide, oblanceolate through obovate to broadly elliptic, apex acute through acuminate, rounded or obtuse, the tip apiculate, cuspidate or mucronate, often shortly so, rarely emarginate, the base cuneate, sometimes broadly so, obtuse, rounded or tapered, often somewhat decurrent on the petiole, rarely broadly so, retained 1-4 years; upper surface glabrous on maturity or with the vestiges of a juvenile indumentum, somewhat rugulose, shiny or matt, the midrib usually grooved and the veins deeply impressed; lower surface with a unistrate indumentum, rarely bistrate, plastered or agglutinate, shiny or matt, whitish, silvery, fawn through buff to brown, compacted and thin, continuous or partial,

woolly and thick when an upper layer is present, mainly composed of rosulate hairs,
with a few ramiform or non-cup-shaped dendroid hairs,
or glabrous,
the midrib and veins prominent.

Leaf anatomy comprises a 2-3-layered upper epidermis, with the cells in all the layers
roughly the same size; the cuticle is thin, around half as thick as the cells are deep;
water tissue is sometimes present, but in small amounts;
the lower epidermis cells are not prolonged into papillae.
Sclereid cells are present in all members of the section.

Petiole 5-50mm long, cylindric, occasionally flat and with wings, usually grooved above,
variably floccose-tomentose, the hairs whitish through fawn and the covering thin.

Inflorescence racemose-umbellate, broad and large, usually dense,
10-30-flowered, sometimes more;
the buds large, the scales usually deciduous.

Rhachis stout, 10-100mm, variably pubescent, the hairs whitish, grey or brown.

Pedicel 10-70mm long, stout, rarely slender, variably floccose-tomentose,
the hairs whitish, fawn, brown or rufous, sometimes glandular, rarely glabrous.

Calyx minute, 5-8-10-lobed, these broadly triangular or ovate and 1-3mm long,
sometimes irregular, occasionally an undulate rim, fleshy,
their outer surface and margins variably floccose-tomentose,
glabrescent or glabrous, sometimes short-stalked glandular.

Corolla 3 to 7.6cm long, 5-6-10-lobed,
fleshy, tubular- or broadly-campanulate, oblique or ventricose,
white, creamy-white, yellow, pink to rose or deep red-purple, often with a basal blotch,
nectar pouches often present;
the lobes broad, rounded and emarginate.

Stamens 12-20, unequal, shorter than the corolla;
filaments glabrous, but sometimes pubescent at the base.

Ovary conoid, oblong or slender, rarely ovoid, 5-12mm long, 6-20-locular,
variably tomentose, the hairs rufous, pale brown, fawn or whitish,
and often branched, the covering thin,
sometimes densely short-stalked glandular, rarely glabrous.

Style straight, rarely declinate, stout, glabrous,
rarely hairy or short-stalked glandular at the base;
the stigma small or large, and discoid.

Capsule large and woody, oblong through oblong-oval, rarely slender,
the base sometimes distinctly oblique, 20-70mm long by 4-20mm wide,
usually slightly curved, ridged, variably tomentose,
the hairs rufous, brown or fawn, and often branched,
sometimes glabrous or variably short-stalked glandular.

Seeds marginally longer than broad, with conspicuous wings, each end with appendages.



R. praestans

R. grande

Hardiness:

H3-4.

Flowering Period:

February-April.

Distribution in the wild:

E Nepal; S Tibet; Sikkim, C Arunachal Pradesh & Assam, India; Bhutan.
Growing in evergreen or mixed forests at elevations of 1,600-3,200m.

Identification:

Large shrub or tree, rounded or upright, 5 to 15m high.
Leaves oblanceolate through elliptic, 14 to 46cm long by 5 to 13cm wide, retained 2-3 years;
upper surface medium through dark green, shiny;
lower surface indumentum continuous, shiny, white, silvery or fawn, thin and compacted, rarely woolly and loose.
Petiole 20-50mm long, the margins often ridged.
Inflorescence 15-25-flowered; the inner bud scales sticky.
Pedicel 10-30mm long, glandular.
Calyx glandular.
Corolla 4 to 7cm long, 8-lobed, obliquely- through tubular-campanulate, ventricose, fleshy,
cream through pale yellow to pink, sometimes with a purplish tinge, with a dark purple basal blotch or blotches, occasionally spotted, purple-hued nectar pouches present.
Stamens 15-18; filaments pubescent at the base or glabrescent.
Ovary glandular.
Style sometimes sparsely glandular at the base.
Capsule 20-45mm long by 10-13mm wide, often glandular.

Seed Collections:

Cooper 2040	1914	Bowes-Lyon 5194a	1967	AC 5267	2004
Cooper 3940	1915	Bowes-Lyon 5795	1967	AC 5271	2004
L&S 1134	1936	TSS 61d	1970	AC 5281	2004
L&S 1148	1936	TSS 62	1970	AC 5396	2004
L&S 1186	1936	TSS 63	1970	KR 8154	2005
L&S 1235	1936	TSS 64	1970	KR 8180	2005
L&S 1258	1936	TSS 69	1970	KR 8181	2005
KW 13683	1937	Beer 670	1975	KR 9483	2008
L&S 2977	1937	P&L 19	1986	TDA 098	2012
LS&T 3663	1938	P&L 34	1986	TDA 118	2012
LS&T 3680	1938	KR 1340	1987	TDA 161	2012
LS&T 4028	1938	Bowes-Lyon 22	1987/1989	TDA 310	2013
LS&H 18660	1949	CHM 3020	1988	TDA 540	2013
LS&H 18736	1949	EGM 58	1988	TDA 553	2013
TSS 1	1961/1962	C&S 1624	1990	TDA 575	2013
TSS 37	1961/1962	EMAK 1055	1991	TDA 576	2013
C&H 431	1965	KC 105	2001	TDA 1098	2016



William Griffith (1810-1845).



Robert Wight (1796-1872).

Assigned to the 1837-38 Pemberton diplomatic mission to Bhutan, William Griffith, a British doctor, botanist and naturalist employed by the East India Company, was bowled over by the 15m-high, tree-like specimens of a rhododendron he found in that Himalayan Kingdom's forests: *R. grande,* the first member of the subsection to which it gives its name, to be discovered. Robert Wight, another botanically-minded surgeon on the East India Company's payroll, would later describe the specimens his friend had collected in Volume 8 of the *Calcutta Journal of Natural History,* published in 1847.

Regrettably, that meant that Sir Joseph Dalton Hooker's 1849 Sikkim collection of *R. argenteum,* would, in 1887, end up consigned to synonymy, as once again, Kew's éminence grise, lost out in the precedence stakes to Wight championing a Griffith find. Yet mirroring the *griffithianum-aucklandii* mishap, Hooker did at least gain the not insubstantial notoriety of actually introducing the first batch of *R. grande* seed into UK cultivation, and aficionados can still worship a magnificent flowering specimen grown from that gathering in the garden of Stonefield Castle, on the shores of Loch Fyne, in Argyll.

The glandular hairs on the *R. grande* ovary key it from all the other occupants of Subsection *Grandia* apart from some forms of *R. macabeanum* and the now speciated *R. kesangiae.* Smaller and narrower leaves provide an added distinction with regard to *R. sinogrande,* while a very much earlier flowering time and larger leaves - to 46cm long rather than 25cm - help do the same for *R. sidereum,* these taxa the taxon's two closest relatives. If the yellow rather than white flowers don't do the trick, then the broader leaves with a bistrate, densely woolly, abaxial indumentum, will indicate that *R. macabeanum* is to hand rather than *R. grande,* while the presence of a mica-like, discontinuous white tomentum on the adaxial surface of the juvenile foliage, should single out either variety of *R. kesangiae*.

Outwith the subsection's membership, the cup-shaped hairs found exclusively on the leaf undersides of the *Falconera* rhododendrons are sufficient in and of themselves to prevent the possibility of an identification muddle with the only other members of the genus likely to cause any confusion, though a low magnification microscope will be needed to confirm their presence.

Cultivation of *R. grande* - indeed of any of the large-leaved rhododendrons - is, for those with abodes along the west coast, straightforward, the mild conditions and prodigious precipitation perfectly duplicating the temperate rain forests where the plants are found in the wild, though shelter from strong winds within the fortifications of a woodland surround needs to come as part of the package. Elsewhere, for gardeners resident along the east coast and in the south of England, plus the most favoured sites inland, provenance will need to be checked before purchase to ensure one of the tougher, H4-rated clones, which often delay opening their blooms until April, is being loaded onto the shopping trolley. Otherwise, the very early-in-the-season bloom time, swiftly followed by the onset of new growth, will only lead to heartbreak and disaster. Even so, those hardier forms of *R. grande* still require protection from Arctic gales and late spring frosts, but will often prove to be long-lived and floriferous, as a stroll around the woodland garden at Edinburgh Botanic will attest (below and overleaf left).



R. grande



R. grande



R. grande



R. grande (Beer 670)

R. grande



R. macabeanum

R. macabeanum

Hardiness:
H4.
Flowering Period:
March-May.
Distribution in the wild:
Manipur & Nagaland, India.
Growing in mixed or birch forests on mountain slopes,
or in dense pure stands on the summits, at elevations of 2,400-3,760m.

Identification:
Large shrub or tree, rounded, rounded-spreading or upright, 3 to 15m high;
bark flaking, revealing a cinnamon-brown underbark.
New growth densely white woolly-tomentose at first.
Leaves broadly ovate through broadly elliptic, 13.2 to 38.5cm long by 8 to 20cm wide,
retained 1-2 years;
upper surface dark green, often shiny;
lower surface indumentum bistrate, continuous, thick and dense,
the upper layer lanate-tomentose, the lower layer compacted and whitish.
Petiole 25-50mm long, terete, with or without a slight groove above,
often somewhat winged.
Inflorescence often somewhat loose, 12-30-flowered;
bud scales sometimes persistent partway through flowering, the bracts long and red.
Pedicel 20-40mm long, sometimes glandular.
Calyx sometimes glandular.
Corolla 5 to 7.5cm long, 8-lobed,
obliquely-tubular- through narrowly funnel-campanulate, ventricose, fleshy,
yellow, lemon yellow, greenish-yellow or yellowish-white,
with or without a dark purple blotch and spots at the base,
purple-hued nectar pouches present.
Stamens 16-19.
Ovary sometimes glandular.
Capsule 20-40mm long by 9-12mm wide, sometimes densely glandular.

Seed Collections:

KW 7724	1927	AC 5538	2004
KW 11175	1935	AC 5543	2004
KW 17407	1948	AC 5546	2004
KW 19082	1949	AC 5559	2004
NAPE 0027	2003	TDA 772	2014

The second of the *Grandia* species to be encountered - in an unplanned meeting with Sir George Watt on Mount Japfü (within the Naga Hills of Manipur state in northeastern India on March 9th, 1882) - was *R. macabeanum.*

Engaged as the medical officer for the Government of India's demarcation survey of their border with Burma, Sir George was still able to spend much of his time botanising and managed to collect herbarium specimens of the yellow-flowering species from four different locations in the same area that year, along with a host of other plant material. Watt named his discovery for one of the Deputy Commissioners of the Naga Hills District, Robert Blair McCabe, but mistakenly catalogued the species as *R. falconeri* var. *macabeanum.* Isaac Bayley Balfour corrected that howler in 1920, with a formal botanic description published in Volume 12 of *Notes from the Royal Botanic Garden, Edinburgh*.

R. macabeanum was not found again until Frank Kingdon-Ward visited the slopes of Japfü, on December 1st, 1927, securing seed under the field number KW 7724. One plant grown from that gathering secured an Award of Merit from the Royal Horticultural Society when first flowering occurred ten years on from germination in 1937, and Lieutenant-Colonel E. H. W. Bolitho, of Trengwainton, Cornwall, garnered a First Class Certificate when the same plant bloomed again twelve months later. Other seedlings grown from that Kingdon-Ward collection - now stately mature specimens in their prime - remain the best forms of the species introduced into British gardens to date, as do many of his other plant collections, for FKW was highly selective in his sampling.

Three more batches of seed were sourced by the plant hunter and explorer - in 1935, 1948 and 1949 - after which a fifty-year hiatus ensued. This was ended when the Steve Hootman-lead Nagaland and Arunachal Pradesh Expedition secured ripe capsules in 2003, and Alan Clark returned four more seed lots in the autumn of the following year. Those expeditions found that the *R. macabeanum* populations were established to a far higher altitude than previously recorded, the old 2,400 to 3,000m banding short by almost eight hundred metres, with pure stands of low-growing plants found on the slopes of Mount Saramati just 40m below its 3,800m summit.

If the large, deep yellow flowers, wide dark green shiny leaves, densely white-woolly-indumented young growth and the rounded, but upright, tree-like habit of a mature specimen fail to separate the species from the other members of Subsection *Grandia* in a horticultural situation, then the two-layered, thick and dense, abaxial leaf indumentum will. *R. sinofalconeri,* flowering specimens of which are now established in UK cultivation, can, at first glance, appear very similar to *R. macabeanum,* especially the unblotched forms, but on closer inspection, the upper leaf surface will be seen to be matt, and when the blade is turned over, a loupe will confirm the presence of cup-shaped hairs in the upper layer of indumentum.

R. macabeanum is probably the easiest of the large-leaved rhododendron species to grow. It flowers from March into May and is certainly tougher than most of its subsection cohorts, with all the Kingdon-Ward plants being rated H4, and the recent high altitude gatherings likely to prove hardier still, possibly deserving of a H5 rating on the new RHS scale. Several clones derived from hand pollinated seed are widely available in commerce, but as indicated, those with a KW 7724 label are still the best, having deep yellow blooms in dense and compact trusses, marvellous white-clad young growth, and stunning mature foliage. But any youngster to be had will have resulted from grafting, so expect the price tag to be commensurate.

R. macabeanum

R. macabeanum (KW 7724)

R. macabeanum



R. macabeanum

R. watsonii

Hardiness:
H5.
Flowering Period:
February-April.
Distribution in the wild:
S Gansu, N & W Sichuan, China.
Growing in open birch, conifer or mixed forest at elevations of 2,600-3,400m.

Identification:
Shrub or small tree, compact and rounded, 1.5 to 10m high.
Leaves oblong-elliptic through oblanceolate to obovate,
10 to 23cm long by 4 to 10cm wide,
broadly or narrowly decurrent on the petiole, retained 1-2 years;
upper surface green or olive-green, shiny or matt;
lower surface glabrous on young to moderately mature plants,
on older specimens indumented, this continuous, shiny, whitish, silvery, fawn or brown.
Petiole short to subsessile, 5-20mm long, yellow, flat and stout,
the margins broadly or narrowly winged, tomentose or glabrous.
Inflorescence often lax, 10-16-flowered.
Pedicel 13-30mm long, stout or slender, becoming glabrescent.
Corolla 3 to 5cm long, 7-lobed, obliquely- through broadly-campanulate,
ventricose, fleshy,
white or white flushed pink,
with or without, either or both a crimson basal blotch and spots.
Stamens 14; filaments pubescent at the base.
Ovary glabrous.
Capsule 23-40mm long by 4-8mm wide, straight or slightly curved, glabrous.

Seed Collections:

W 1872	1903/1905	CCH 4026	1989	AC 4840	2001
W 1206	1906/1909	Cox 5013	1990	AC 4849	2001
W 4244	1910/1911	Cox 5075	1990	AC 4943	2001
W 4251	1910/1911	EGM 109	1990	AC 4955	2001
W 4259	1910/1911	EGM 138	1990	AC 4958	2001
CHM 2578	1986	AC 3829	1998	JN 12027	2012
CCH 3939	1989	AC 4786	2001	JN 12282	2012

R. watsonii, the third of the *Grandia* rhododendron species to be encountered by a Western plant hunter, is actually the odd man out in the subsection because its endemic distribution - through the west and north of Sichuan into southern Gansu - is outwith the west-east band occupied by its cohorts. It is also the only member of the contingent with a straight H5 hardiness rating in UK cultivation, though the February-April flowering period rules out a planting site anywhere near a known frost pocket and is the likely reason why so few specimens are found in British gardens.

Ernest Wilson discovered the rhododendron well over a century ago in 1904 while on his second expedition to China for the Veitch Nursery firm of Chelsea and Exeter, then the largest family-run horticultural business in the whole of Europe. Six years later, in another joint endeavour with William Botting Hemsley, he wrote the species botanic description that appears in the 1910 *Bulletin of Miscellaneous Information* published by the Royal Botanic Garden, Kew. The species is named for the Commissioner of the Imperial Maritime Customs Service at Chungking (now Chongqing), W. C. Haines-Watson, who had become one of Wilson's travelling companions after the two had met for the first time in the town of Sungpan, during the year previous to the find.

The short, sometimes almost subsessile petioles of *R. watsonii* are highly distinctive, being yellow in colour, flat in profile, and winged along their entire length. That last characteristic shows a clear relationship with *R. praestans,* though the leaves of *R. watsonii* are considerably smaller, to 23cm long and 10cm wide, as opposed to maxima of 40cm and 14cm. Amongst the *Grandia* rhododendrons the species is also unique in having a glabrous ovary and seed capsule, as all the other subsection occupants boast a usually dense tomentum on their extended ovaries.

R. watsonii, in combination with either *R. rufum, R. prattii* or *R. longesquamatum,* all members of Subsection *Taliensia,* is likely one of the parents of *R. x balangense,* which bears a thicker indumentum on the leaf underside and comes with a five- instead of seven-lobed corolla, this enclosing ten rather than fourteen stamens. Mention of this natural hybrid is made here as previously, when in possession of specific species ranking, after an initial residency in Subsection *Taliensia,* it was moved into Subsection *Grandia* expressly because of that morphologic alliance with *R. watsonii.* However, more recent field study reporting has revealed that these plants were part of a large hybrid swarm populating the wooded slopes of Balang Shan, which therefore required the insertion of a lower case 'x' in front of their epithet.

Until the mid-1980s, Ernest Wilson was the only collector to have found *R. watsonii* in the wild, introducing seed on five occasions, with Wilson 4251 the only gathering recorded as having been sourced from tree-like specimens growing up to 10m in height that had a corresponding trunk circumference of 60cm or more (a typo in the 1998 *Rhododendron Handbook* converting this entry to *R. wasonii* in the field number listings). An additional fourteen collections have been made since the West's botanists and horticulturalists were allowed to resume wandering over China's hills, but this influx is not currently reflected in a burgeoning number of garden specimens.



R. watsonii



R. watsonii



R. watsonii

R. sidereum

Hardiness:
H3-4.
Flowering Period:
April-May.
Distribution in the wild:
NE Upper Myanmar; N & W Yunnan, China; E Arunachal Pradesh, India.
Growing in conifer and mixed forests at elevations of 2,400-3,700m.

Identification:
Large shrub or small tree, rounded or upright, 2 to 12m high; branchlets thin.
Leaves oblanceolate through narrowly elliptic, 9 to 25cm long by 2.5 to 7.2cm wide, retained 2-5 years;
upper surface olive-green, matt, punctate, the margins slightly revolute;
lower surface indumentum continuous, shiny, silvery-white, fawn, coppery or buff.
Petiole 15-25mm long, terete, grooved above, tomentose, glabrescent or glabrous.
Inflorescence 12-20-flowered.
Pedicel 15-35mm long.
Corolla 3 to 5cm long, 8-lobed, obliquely-campanulate, ventricose, fleshy,
creamy-white through clear yellow to lemon-yellow,
occasionally opening pink but quickly changing to yellow,
with or without a crimson-red basal blotch,
crimson-hued nectar pouches present.
Stamens 16; filaments pubescent at the base.
Capsule 20-36mm long by 8-11mm wide, the base distinctly oblique.

Seed Collections:

F 18054	1919	F 27679	1924/1925	CCHH 8054	1997
Farrer 872	1919	F 27761	1924/1925	HECC 10014	2002
KW 3061	1919	KW 6753	1926	AC 5345	2004
KW 5485	1922	KW 6792	1926	KR 8383	2006
R 7376	1923/1924	KW 19406	1950	KR 8425	2006
F 24563	1924/1925	KW 20838	1953	KR 9770	2010
F 24742	1924/1925	AC 577	1993	KR 9771	2010
F 25090	1924/1925	AC 599	1993	KR 9772	2010
F 26458	1924/1925	AC 635	1993	BE 12-39	2012
F 26633	1924/1925	KR 2681	1993	KR 10396	2012
F 26634	1924/1925	AC 3056	1996	KR 10597	2012
F 26791	1924/1925	AC 3064	1996	TDA 603	2014
F 27673	1924/1925	KR 3980	1996	TDA 748	2014
F 27677	1924/1925			TDA 749	2014

Eight years after Ernest Wilson's premier assignation with *R. watsonii,* the fourth member of the *Grandia* aristocracy was found at Tamgam, on Myanmar's northeastern frontier. Captain Bryan Norman Abbay, of the 27th Light Cavalry, Indian Army, made the discovery in May 1912, while serving as one of the Assistant Commandants of the Burma Military Police, though his dried specimens did not immediately stand out as a new species. First classified as *R. grande,* then as a form of *R. arboreum,* additional material collected later by Reginald Farrer, George Forrest and Frank Kingdon-Ward, when examined by Sir Isaac Bayley Balfour in 1920, allowed the *R. sidereum* epithet to be conceived and formally published, with full credit for the discovery assigned to the captain in Volume 12 of *Notes from the Royal Botanic Garden, Edinburgh*.

That original confusion with *R. grande* indicates how close, morphologically, the two species are to one another, with *R. sidereum* differing only in having smaller leaves, which are both shorter and narrower - 9 to 25cm long by 2.5 to 7.2cm wide, instead of 14 to 46cm by 5 to 13cm - and lacking glandular hairs on the pedicel, calyx, ovary and capsule. Both species also have a H3-4 hardiness rating, though *R. grande* opens its blooms from February onwards, while *R. sidereum* delays its floral display until April-May. Out of flower, apropos the second identification faux pas, the species is easily mistaken for *R. arboreum*.

Farrer and Forrest separately, yet concurrently, share credit for the initial introduction of the species into UK cultivation during 1919, with over thirty further gatherings arriving in subsequent years, a third of these recently. Yet despite that seeming abundance of seed, *R. sidereum* is only rarely grown in British gardens, with specimens absent from even some of the major collections, which is a shame, for at its best, the species can rival or even surpass *R. macabeanum* for floral beauty. One reason for the lack of uptake might be that the flower truss is not as densely packed as most other Subsection *Grandia* rhododendrons and can be quite open in some forms, which means the best clones need to be sought-out, but more likely, the lack of a large-leaved foliage cloak, just like *R. watsonii,* has wrongly consigned *R. sidereum* to the category of also-ran.


R. sidereum

R. sidereum



R. sidereum



R. sidereum

R. sidereum

R. sinogrande (KW 21111)

R. sinogrande

Hardiness:
H3-4.
Flowering Period:
March-May.
Distribution in the wild:
SE Tibet; E Arunachal Pradesh & Assam, India; N & W Yunnan, China; NE Upper Myanmar.
Growing in conifer and mixed forests, in rhododendron thickets and forest,
and amongst bamboo, at elevations of 2,100-3,600m.

Identification:
Large shrub or tree, domed, rounded or upright, 6 to 15m high.
Leaves oblanceolate through obovate to broadly elliptic,
20 to 70cm long (sometimes to 100cm) by 8 to 30cm wide, retained 2-4 years;
upper surface dark green, shiny, the margins somewhat revolute;
lower surface indumentum continuous, shiny, buff, silvery-white or fawn.
Petiole 20-50mm long, terete, stout, with or without a slight groove,
the margins sometimes ridged.
Inflorescence 12-30-flowered, occasionally more.
Pedicel 30-70mm long.
Corolla 4 to 7.5cm long, 8-10-lobed, obliquely-campanulate,
ventricose, fleshy,
pale creamy-white through pale yellow to creamy-yellow,
with a crimson or dark purple basal blotch or blotches,
crimson- or crimson-purple-hued nectar pouches present.
Stamens 18-20; filaments densely pubescent at the base.
Capsule 35-70m long by 10-20mm wide.

Seed Collections:

F 9021	1912	AC 582	1993
F 11875	1913/1914	AC 606	1993
F 15659	1917/1919	AC 636	1993
F 17406	1917/1919	KR 2572	1993
Farrer 959	1919	KR 2651	1993
F 20387	1921/1922	CNW 417	1994
F 20819	1921/1922	CNW 940	1994
F 21705	1921/1922	CNW 955	1994
F 22761	1921/1922	CNW 957	1994
KW 5418	1922	CNW 960	1994
R 6249	1923/1924	CNW 964	1994
R 7381	1923/1924	CNW 1039	1994
R 11173	1923/1924	CNW 1042	1994
R 11239	1923/1924	CNW 1055	1994
R 11348	1923/1924	CNW 1056	1994
F 24140	1924/1925	CNW 1058	1994
F 25679	1924/1925	CNW 1063	1994
F 25875	1924/1925	CV 9532	1995
F 26092	1924/1925	AC 1853	1996
F 26456	1924/1925	AC 1888	1996
KW 6261	1924/1925	AC 1908	1996
KW 6716	1926	AC 1916	1996
KW 6782	1926	AC 1930	1996
KW 7642	1926	AC 3018	1996
KW 8130	1927/1928	AC 3041	1996
R 18331	1929	KR 4027	1996
McLaren D268	1932/1939	CCHH 8079	1997
R 182	1948/1949	GLGS 17120	2002
KW 19449	1950	KR 8405	2006
KW 20877	1953	KR 8406	2006
KW 21111	1953	ZH-G 070	2006
SBEC 104	1981	C&N 5834	2007
SBEC 182	1981	JN 12150	2012
SBEC 334	1989	JN 12152	2012
AC 557	1993	MH 369-09	2018

Technically, it was George Forrest's native collectors who discovered *R. sinogrande,* one of the undisputed monarchs of the genus, on the mountains of the Shweli-Salween Divide during August 1912, just three months after Abbay's *R. sidereum* find. These were a group of Nakhi tribesmen from the Lichiang Valley in Yunnan, trained by the Scotsman on his 1904-1906 expedition, who answered the summons when he returned for a third time, arriving at Forrest's base camp in Tengyueh (Tengyue) in early May.

And they were immediately put to work.

Because the situation on the ground in China at that time was precarious, with the revolution against the Manchu (Qing) Dynasty proceeding at pace and lawless conditions prevailing as a consequence. This left Forrest - once again - in a risky and highly dangerous position, unable to stray far from the 'relative' safety of the town with its British Consulate. His men, on the other hand, were able to range freely, and under the direction of their headman, Lao Chao - who Forrest regarded as his 'best card in this business' - they were soon crisscrossing the mountains of the Divide in search of new plants, *R. sinogrande* being one of the specimens they brought back.

Once fully excised of its liquid content, the herbarium material, along with Forrest's field notes, was despatched to Edinburgh Botanic, where Isaac Bayley Balfour and William Wright Smith jointly wrote the species botanic description that appears in Volume 9 of *Notes from the Royal Botanic Garden, Edinburgh,* published in 1916.

Although not the tallest-growing rhododendron, *R. sinogrande* does boast the largest leaves of any species in the genus, with the most robust and hearty youngsters displaying dark green, glossy foliage fully one metre long and a third that wide, such dimensions not only attained in the wild, but matched by juvenile specimens growing in the wettest of west coast gardens. Most closely related to *R. montroseanum,* if the leaves fail to distinguish the species, reliance for a correct identification when in flower can be placed on the higher number of stamens contained within the corollas - 18 to 20 - or when in fruit, on the very large capsules - 35 to 70mm long by 10 to 20mm wide - with each divided internally into between 16 and 20 chambers (the maxima figures for *R. montroseanum* and *R. grande* are respectively: 45mm, 15mm and 10-celled; and 45mm, 13mm and 16-celled).

Forrest's 1912 type collection - under the field number F 9021 - also included the first batch of *R. sinogrande* seed to be introduced into British gardens and amazingly, a juvenile from that premier germination is 'said' to have flowered less than seven years later during May 1919: at Heligan, near Mevagissey, on Cornwall's southern coast (though the records of the event are far from decisive). Unquestionably, another of the youngsters flowered the following April - on the 6th of the month - in the glasshouse at Edinburgh Botanic, and this was followed two years later by a second opening under glass, at South Lodge, Horsham, the home of Frederick DuCane Godman. But is was during that same year - 1922 - that the species first flowered outdoors, at Caerhays and Trewithen in May, and at Trengwainton in June, the Cornish Riviera's Gulf Stream-influenced climate clearly a boon.

The most celebrated blooming however, occurred in the early 1930s:

This was when Johnnie Holms, owner of the Larachmhor (Làrach Mòr) estate on the west coast of Scotland - near Arisaig, in Lochaber, a sheltered corner of which had been turned into a Himalayan-like rhododendron fairyland - paraded a huge flower truss of the species, complete with its whorl of enormous leaves, down the entire three-quarter-mile length of Princes Street, Edinburgh's main shopping thoroughfare.

And was near mobbed in the process.

For the inflorescence held close to thirty huge, ventricose-campanulate, pale creamy-yellow and crimson-blotched corollas, and one of the leaf blades measured 2½ feet long by 12 inches wide - 76cm by 30cm for the post metrification generation.



George Forrest's native collectors in the early 1900s. Photographed by the plant hunter,
Lao Chao, his headman, sits on the left, with a plant press to dry herbarium specimens foreground right.

East coast gardeners wanting to grow *R. sinogrande* out in the open should opt for those forms that sport shorter, narrower leaves than the type, these often designated as Boreale Group, though they will still require a well-sheltered and mild woodland site if they are to thrive. Previously classified as *R. sinogrande* var. *boreale,* they are native to northwest Yunnan and southeast Tibet, where they grow on the wooded mountainsides up to the 3,600m-contour, the upper limit of the species distribution. Forrest discovered and introduced this variant too - in 1922, under the field number F 21705 - with Harry Tagg composing the botanic description for the new addition in 1926 (*Notes,* Volume 15).

Rhodophiles who garden where the climate or the soil prevent cultivation of the species, should diary an April visit to one of the Scottish west coast establishments where fine examples of *R. sinogrande* will be found: Logan House, Brodick, Benmore Botanic, Crarae, Stonefield Castle, Arduaine, Larachmhor or Inverewe. In Wales, splendid specimens can be seen at either end of the Principality, at Portmerion and Clyne Castle. So too, at Trewithen, in Cornwall, though the FCC-awarded clone was not labelled as such when last viewed. Pride of place however, must go to Muncaster in Cumbria, where the garden created by Sir John Frecheville Ramsden in the 1920s, is home to over a dozen exemplary giants, these often bedecked head-to-toe with magnificent creamy-white blooms.

R. sinogrande


R. sinograndeR. sinograndeR. sinograndeR

R. sinogrande

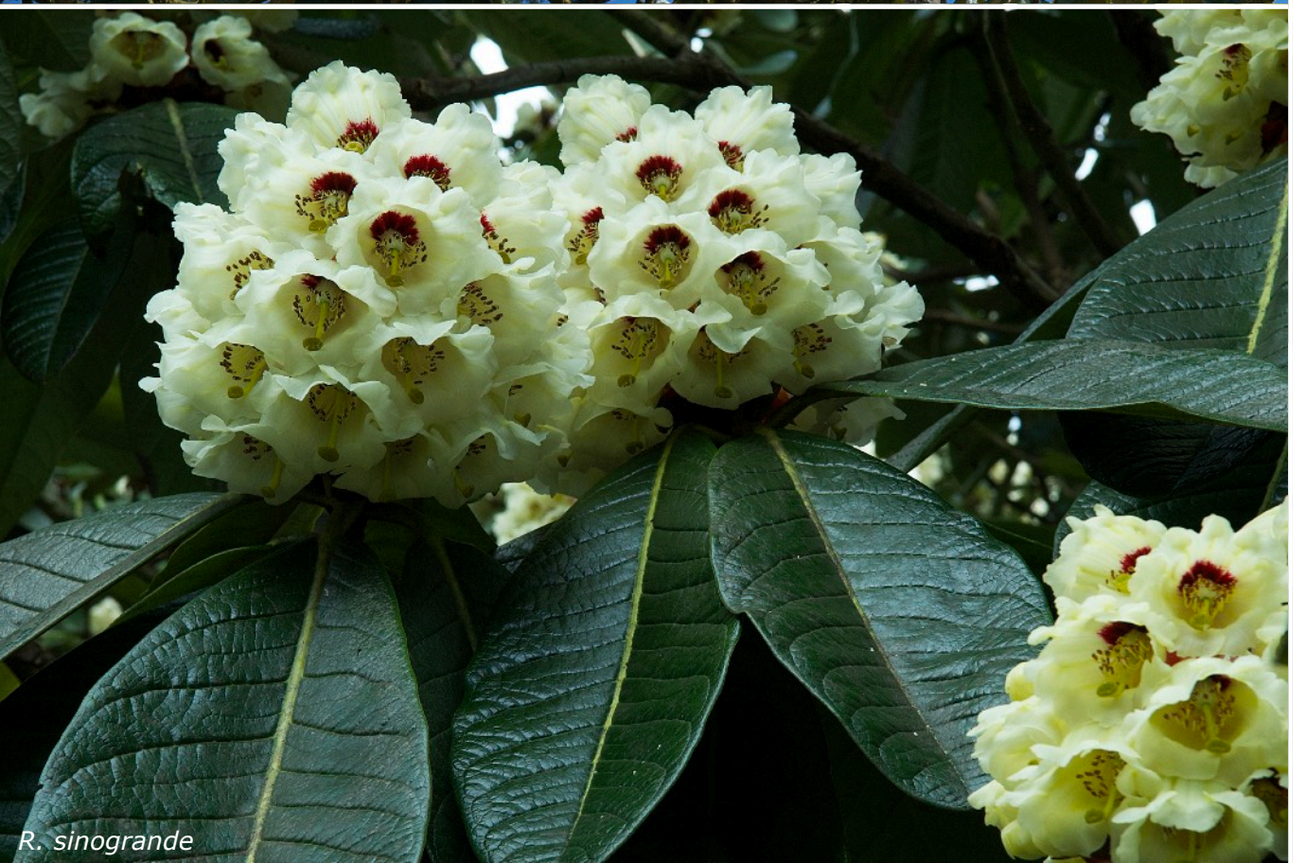
R. sinogrande

R. sinogrande



R. sinogrande (KW 21111)





R. sinogrande

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R. sinogrande



R. sinogrande



R. praestans

R. praestans
Hardiness:
H4-5.
Flowering Period:
April-May.
Distribution in the wild:
SE Tibet; NW Yunnan, China; NE Upper Myanmar.
Growing in evergreen, mixed and rhododendron forest at elevations of 2,700-4,300m.

Identification:
Shrub or small tree, rounded and compact, or upright, 1 to 10m high.
Leaf buds often glandular.
Leaves oblanceolate through oblong-obovate to obovate,
14 to 40cm long by 4.5 to 14cm wide,
broadly decurrent along the full length of the petiole, retained 2-4 years;
upper surface mid through dark green, shiny or matt;
lower surface indumentum continuous, shiny, greyish-white, silvery or fawn at maturity.
Petiole 15-25mm long, stout, strongly flattened, with, without or slightly grooved,
broadly winged, tomentose, glabrescent, or glabrous.
Inflorescence 10-25-flowered; the bud scales deciduous or persistent.
Pedicel 10-60mm long.
Corolla 3 to 5cm long, 7-8-lobed, obliquely-campanulate,
ventricose, fleshy,
pale yellow, white, creamy-white, white flushed pink, pink or deep magenta-rose,
with or without, either or both, crimson spotting or a crimson or purple basal blotch.
Stamens 14-18; filaments occasionally pubescent at the base.
Capsule 21-45mm long by 6-13mm wide, the base distinctly oblique.

Seed Collections:

F 13023	1914	R 11502	1923/1924	R 153	1948/1949
F 14209	1917/1919	R 11503	1923/1924	Cox 6025	1992
F 14233	1917/1919	R 11634	1923/1924	Cox 6511	1994
F 15967	1917/1919	F 25716	1924/1925	KR 9871	2010
F 18914	1917/1919	F 25992	1924/1925	KR 9943	2010
R 10913	1923/1924	KW 9795	1931	KR 9951	2010
R 10957	1923/1924	R 23496	1932	KR 10048	2010
R 10966	1923/1924	R 23520	1932	TDA 676	2014
R 10995	1923/1924	R 23587	1932	TDA 677	2014
R 11007	1923/1924	KW 13369	1937	TDA 679	2014
R 11008	1923/1924	Yu 19040	1937	TDA 680	2014
R 11013	1923/1924	R 103	1948/1949	TDA 682	2014
		R 118	1948/1949		

George Forrest was nearing the end of his third plant hunting expedition when he and his native collectors, exploring the ground below the Kari Pass on the mountains of the Mekong-Yangtze Divide in Yunnan, came upon a stand of *R. praestans* during August 1914. As with *R. sinogrande,* Isaac Bayley Balfour and William Wright Smith would jointly pen the species botanic description, their prose appearing in the very same 1916-published Volume 9 edition of *Notes from the Royal Botanic Garden, Edinburgh,* though the epithet syllabary actually placed the entry some eleven pages in advance of Forrest's earlier discovery, the 'Chinese *R. grande*'. And it should be noted that the botanic creativity evident in that chosen Latin cognomen reached new vernacular heights for the *R. praestans* denomination: with 'excellent'.

The petioles, broadly winged down their entire length, identify the species from each of the subsection's roster of members, though of course their primary function is to give the blades the best possible resilience to wind, a task they accomplish to a greater degree than exhibited by any other large-leaved rhododendron. Compacted and plastered, the sometimes agglutinate abaxial leaf indumentum distinguishes the species from its three Subsection *Falconera* facsimiles - *R. basilicum, R. rothschildii* and *R. semnoides* - which, should a magnifying lens not be immediately to hand, generally have a thicker, woolly or granular covering. The latter two individuals, according to current expert supposition, almost certainly began life as *R. arizelum* x *R. praestans* hybrids, eventually multiplying and evolving into populations that have now stabilised and speciated.

Forrest's 1914 collection was the first batch of seed introduced into UK cultivation, with nearly forty additional lots arriving thereafter, those gathered by Joseph Rock making up the majority. Two additional Forrest finds - *R. coryphaeum* and *R. semnum* - were long ago declared synonymous.

Established at higher elevations in the wild than any of its subsection relations - to the 4,300m contour in some locales - *R. praestans* is one of the hardiest members of the group, able to cope with the climatic conditions of most UK gardens where rhododendrons can be cultivated, though not on completely open sites or those resident along the spine of the country. A probable consequence of this adaptation has resulted in the species being a very slow grower, with cultivated specimens adopting the profile of a low, domed shrub for a decade or two, even more, that structure albeit densely filled with marvellously wrinkled, sometimes glossy foliage. *R. praestans* also takes a long time to reach flowering size, but if the correct clone was selected whilst browsing those on offer at your local specialist nursery, when blooming begins, the branches will be covered in white or magenta-rose footballs. But pick the wrong individual, and flowering will be far from free, with only a couple of trusses grudgingly opening annually, and if you were having a really bad day, that handful of blooms will also have a decidedly wishy-washy tone, the pink forms especially muddy as their pigmentation fades.



R. praestans



R. praestans (KW 13369)



R. praestans (KW 13369)



R. praestans (Rock 103)



R. praestans (F 18914)



R. praestans

R. protistum

R. protistum

Hardiness:
H3.
Flowering Period:
January-March.
Distribution in the wild:
SE Tibet; W & NW Yunnan, China; E Arunachal Pradesh, India; NE Upper Myanmar.
Growing in open or dense, *Abies* or mixed forest, at elevations of 2,400-4,200m.

Identification:
Large shrub or tree, domed to broadly upright, leggy in shade, 5 to 36m high.
Leaf buds tomentose or glabrous, occasionally glandular.
Leaves oblanceolate through obovate to oval or elliptic,
12 to 56cm long by 4 to 25cm wide,
sometimes slightly decurrent on the petiole, retained 1-2 years;
upper surface mid- through dark-green, matt, the midrib hairy or glabrous;
lower surface glabrous on 'juvenile' plants, often up to or beyond 60 years of age,
or sometimes with indumentum developing as a marginal band against the leaf edge,
or as a closely-scattered discontinuous covering, often in addition to the banding,
becoming continuous across the whole surface when 'mature',
the tomentum matt, sometimes woolly, whitish, fawn, pale brown or buff.
Petiole 18-50mm long, terete, stout,
the margins occasionally ridged, tomentose or glabrous.
Inflorescence sometimes loose and open-topped, 20-30-flowered.
Pedicel 12-25mm long.
Corolla 5 to 8cm long, 8-lobed,
obliquely-tubular-campanulate through funnel-campanulate, fleshy,
creamy-white, creamy-white flushed rose, deep rose through reddish-purple to pink,
sometimes whitish at the base, rarely two-tone, fading,
very occasionally spotted crimson or purple,
with or without a small crimson or dark purple basal blotch,
nectar pouches present.
Stamens 16-20.
Style occasionally hairy at the base.
Capsule 26-50mm long by 8-16mm wide.

Seed Collections:

F 16351	1918	F 25684	1924/1925	KW 13648	1937
F 18393	1918/1919	F 25825	1924/1925	KW 203	1938/1939
F 18394	1918/1919	F 26316	1924/1925	KW 20876	1953
F 18458	1918/1919	F 26429	1924/1925	KW 21498	1953
F 18548	1918/1919	F 27355	1924/1925	KW 21602	1953
F 19355	1921/1922	F 27614	1924/1925	GSE 967600	1996
F 20106	1921/1922	F 27730	1924/1925	CCHH 8107	1997
F 20863	1921/1922	KW 7427	1926	BASE 9635	2000
F 24775	1924/1925	KW 8069	1927/1928	GLGS 17052	2002


R. protistum (juvenile leaf)


R. protistum (mature leaf)

R. protistum, and the now synonymous *R. giganteum,* have long baffled the genus-savvy botanists and horticulturalists who have studied the pair. They are the giants of the rhododendron world, soaring to heights of 36m or more in the wild; paragons whose trunks exceed 2.5m in circumference; and that bear branches lavishly bedecked with magnificent foliage and spectacular blooms. Very much alike, as the recently applied synonymy makes clear; yet equally, subtly different. Most especially with regard to the presence and coverage of the indumentum on their leaves. And how this relates to when they begin flowering. But are they one species, or two, as first thought?

Or would they be better classified as two varieties of the same taxon?

Each was discovered by George Forrest: *R. protistum* in May 1918 on the mountains of the Mekong-Salween Divide in northwest Yunnan; *R. giganteum* in September 1919 on the eastern side of the N'Maikha-Salween Divide in southwest Yunnan. Scotland's foremost plant hunter also assisted in writing their botanic descriptions, working with Isaac Bayley Balfour to compile that for *R. protistum* (*Notes from the Royal Botanic Garden, Edinburgh,* Volume 12, 1920) and Harry Tagg for *R. giganteum* (*Notes,* Volume 15, 1926).

Later encounters with these potentates in the wild - awed meetings with Forrest, his contemporaries and many modern-day collectors - show the two leviathans are sporadically distributed within the rain forest that cloaks the steep valleys and mountains of Upper Myanmar, Arunachal Pradesh, Yunnan and southeast Tibet, which means biogeography offers no basis for separation. Across that endemism, their numbers are few, with less than one hundred individuals known to exist within China's vast Gaoligongshan Nature Reserve for instance, a circumstance warranting concern, given the rapid rate of climate change being experienced worldwide. Yet such scarcity, certainly known in 1931, failed to deter Forrest and his native collectors from felling one of the behemoths while in full flower to provide Edinburgh Botanic with a cross-section of the trunk. The ravager reports that his sacrificial lamb was 'at its best, displaying thousands of huge blooms, rose-pink to magenta-crimson, the ground under each tree littered inches deep with huge fallen corollas'. And the demise was even captured on film, which if nothing else, silenced the few sceptical voices still vehemently contending that such a rhododendron could not possibly exist, though one would hope that chainsaws, axes or other such implements are never again - even in the name of science - so employed on such a living nonpareil.

The exposed inner strata of the trunk did allow the plant hunter to judge that his victim was over 200 years old, while an on-the-ground study of its foliage found examples that matched the leaves of both *R. giganteum* and *R. protistum,* varying from glabrous to banded to continuously indumented. In a letter to William Wright Smith at the RBGE, dated March 31st, 1931, and from which the quote in the paragraph above was also taken, George Forrest stated that this examination:

> 'finally proved one thing - that *Rhodos. giganteum* and *protistum* are one and the same species… So you'll have to cut out one name… I should like *giganteum* to stand, for… the name is most fitting! Don't you agree?'

Wright Smith probably did, but pedantically, botanic precedence would not accede to the request, which meant it was the 'first of the first' epithet that got preserved. Yet until quite recently, Forrest's conclusion was one the herbarium-based experts were loathe to accept, despite it coming from the one man with an extensive firsthand knowledge of the species in its native environs.

Cultivated plants - even today, barely half the age of that felled colossus - coalesce into three categories: those without any leaf indumentum, which have never flowered; those with a narrow band of hairs around the leaf margins that sometimes also have a discontinuous scattering of detersile hairs across the remainder of the lower surface; and those with a continuous, but thin indumentum across the entire leaf underside. The latter two groups may have formed flower buds and bloomed, as a clear correlation between the formation of leaf indumentum and the commencement of flowering some 4 or 5 years later has now been established, but equally, this might not have occurred.

Individual specimens of *R. protistum* can begin to bloom in as little as fifteen to eighteen years from germination, or infuriatingly, take upwards of fifty years to do so. Indeed, some of the older plants in British gardens - 10m-tall trees, in fact - have yet to set a single flower bud. And not one garden-grown plant examined to date in the UK's major collections displays the woolly indumentum found on some of the dried specimens Forrest et al. pinned to herbarium sheets. But at least his observation on the lack of any consistency with regard to the presence and spread of that leaf abaxial indumentum has finally been confirmed, with glabrous leaves found amongst the foliage of plants with banded indumentum, and glabrous plus banded leaves mixed in with fully clothed blades.

Of course, some authorities continue to maintain the two previously specific ranked taxa as varieties of a single species, but Peter and Kenneth Cox eloquently make the case in their 1997-published *Encyclopedia of Rhododendron Species* that: 'it is now evident that as originally described, *R. protistum* was simply the juvenile form and *R. giganteum* the adult form of the same species.'

Within the subsection, *R. protistum* is most closely related to *R. magnificum,* although the latter may be no more than a lower-growing, narrower-leaved variant of the former, albeit with a slightly later flowering period - February through April, rather than January to March - which bears unblotched, ventricose-shaped corollas on a sometimes elongated rhachis - instead of obliquely-tubular- through funnel-campanulate blooms - especially as they both have eight nectar pouches set in a ring around the base of the gynoecium. Field study has yet to find a locale where the two 'populations' merge and some cultivated forms of *R. magnificum* differ quite significantly from the descriptions of endemic plants, so any contemplation of synonymy is, for the moment, thankfully, stymied.

The non-glandular ovary, those eight nectar pouches inside each corolla, and the absence of any yellow hues in the pigmentation will, in combination, key the flowering forms of *R. protistum* from the other *Grandia* rhododendrons. The shape and size of the leaf blades - oblanceolate through obovate to oval or elliptic; 12 to 56cm long by 4 to 25cm broad; with a base sometimes slightly decurrent on the petiole - plus a comprehensive lack of any abaxial indumentum on even statuesque specimens, or its manifestation as only a marginal band, are the fallback characteristics to use for non-blooming individuals.

1936 was the last time a Prince of Wales acceded to the throne of Great Britain. It was also when Hitler's Nazi Germany reoccupied the Rhineland in violation of the Treaty of Versailles. At Arduaine however, a fabled woodland nirvana on the west coast of Scotland just down from Oban, it was when *R. protistum* flowered for the first time in UK cultivation. Any rhodophile who missed the event had to bite their nails until 1948, when one of the plants growing at Brodick Castle opened its first truss. Both gardens are within a stone's throw of the sea, but even so, night-time frosts or stalled high pressure systems can wreak havoc with the blooms or destroy the equally early, extending young growth, which means cultivation away from the uplift of the North Atlantic Drift is virtually impossible unless a very big greenhouse is available on a long-term basis to mitigate the H3 hardiness rating. Sturdier forms of the species were introduced from Vietnam's Lào Cai and Hà Giang provinces in the early 1990s, but proved not to be what was written on the tin when, at a very young age, they opened trusses of stunning white flowers, blotched crimson.

They are now classified as *R. suoilenhense*.

R. protistum

R. protistum

R. protistum (F 19335)

R. protistum



R. protistum



R. protistum

R. montroseanum

Hardiness:
H3-4.
Flowering Period:
March-April.
Distribution in the wild:
SE Tibet; NE Upper Myanmar.
Growing in temperate montane rain forest at elevations of 2,400-2,900m.

Identification:
Large shrub or tree, rounded, dome-shaped or broadly upright, 3 to 15m high.
Leaf buds sometimes glandular.
Leaves oblanceolate through oblong-obovate to oblong,
20 to 61cm long by 5 to 23cm wide,
sometimes slightly decurrent on the petiole, retained 1-2 years;
upper surface dark green, shiny, the midrib hairy or glabrous;
lower surface indumentum continuous, shiny, silvery-white through buff.
Petiole 20-40mm long, terete, stout, sometimes narrowly winged,
arachnoid-tomentose or glabrescent.
Inflorescence 15-20-flowered.
Pedicel 20-50mm long, slender or stout.
Corolla 3.5 to 5cm long, 8-lobed, obliquely-campanulate,
ventricose, fleshy,
rose-pink through pink, rarely white,
with crimson veins and a crimson or dark purple basal blotch.
Stamens 15-16.
Capsule 25-45mm long by 10-15mm wide.

Seed Collections:

KW 6261a	1924
KW 9385	1931
LS&E 13568	1947

With the 'first of the first' in the bag, where do you go next? Frank Kingdon-Ward decided to tackle the Tsangpo Gorge and in October 1924, at Pemako - Mêdog County - in the southeast of Tibet, he chanced upon a group of large-leaved rhododendrons, each around 15m-tall, in fruit, growing in the rain forest and dotted about amongst a sheltering cornucopia of *Abies* trees.

They were initially thought to be *R. sinogrande* and recorded as such, under the field number KW 6261, which covered dried material and seed, so it was not until some of those plants reached flowering size in cultivation many years later that a brand new species was revealed to be at hand. One that unlike *R. sinogrande,* which has creamy-white through pale yellow corollas, was blessed with what are widely accepted to be the finest rose-pink blooms to grace any large-leaved rhododendron. Those superlative flowers then prompted a more detailed inspection, which brought to light a number of other 'minor' differences: there were fewer stamens in the corollas - 15 or 16, rather than 16, 17 or 18 - and no nectar pouches at all - zero, instead of the usual 8 to 10; and the leaf blades were shorter and much narrower - 20 to 61cm long by 5 to 23cm wide, dimensions that are well below the *R. sinogrande* maxima of 70 through 100cm, by up to 30cm across. And to date, those distinctions have kept the Synonymy Aurors at bay.

Kingdon-Ward's 1924 find finally received its botanic description in 1954, a mere three decades after its discovery. Penned by Edinburgh's foremost rhododendron experts of the time, John MacQueen Cowan and Hagop Haroutune Davidian, the morphology that was published in Volume 8 of *The Rhododendron and Camellia Yearbook* relied solely on a specimen germinated from the type gathering that was happily ensconced on the Isle of Arran, within the sheltered realms of the woodland garden at Brodick Castle. It was therefore christened *R. mollyanum,* for the Dowager Duchess of Montrose, who owned the estate and was known within her family as 'Molly', though as the seedlings had been a gift from Sir John Ramsden at Muncaster Castle, a more reflective choice might perhaps have been *R. frechevillianum,* which would also have avoided the later epithet contretemps.

However:

The reason for utilising a cultivated plant was down to the discovery that a filing mix-up had compromised the herbarium plates, with the KW 6261 designation in consequence wrongly associated with a specimen of *R. exasperatum.* A diligent and thorough search produced no trace of the plant hunter's original pressed material, but the Brodick plant agreed completely with Frank Kingdon-Ward's field note description, so new dried samples were prepared from it and filed under the holotype designation KW 6261a.

Yet regrettably, the boo-boos continued to amass:

Because in 1909, Sijfert Hendrik Koorders had named one of the New Guinea tropical Vireya species, *R. mollianum,* and when this came to light, it was considered to be too close to *R. mollyanum* for both appellations to stand. Of course, the Koorders moniker had precedence, so Lady Mary Louise Hamilton's 'pink sinogrande' was put through yet another name change, emerging from its second redesignation under the epithet *R. montroseanum.* The botanic equivalent of an apology for this misnomer appeared first in the *Quarterly Bulletin, American Rhododendron Society,* Volume 32, Number 2, Spring, 1978, and then, in Volume 37 of *Notes from the Royal Botanic Garden, Edinburgh,* published in 1979.

Fast-forward to 1996 and intriguingly, a plant hunting team carrying out field studies near Pemako, came upon a natural hybrid between *R. lanigerum* and *R. sinogrande* that mirrored the characteristics of *R. montroseanum* close enough to allow those botanists to hypothesise that the species probably came into existence as a result of just such a cross. Proof positive is currently lacking as the three recorded populations within the confines of the Tsangpo Gorge - the Kingdon-Ward 1924 and 1931 visited sites (at Pemako and Gompo

Ne), plus the locale between Nyuksang and Senge Dzong explored and botanised by Frank Ludlow, George Sherriff and Henry Elliot in April 1947 - have not yet been rediscovered, so any judgement on speciated natural hybrid status must be held in abeyance.

Pink flowers, the absence of any nectar pouches, and a silvery-hued abaxial leaf surface indumentum are the key characteristics that separate *R. montroseanum* from all the other members of Subsection *Grandia* except for *R. praestans* and *R. pudorosum,* which can share all three features. The former taxon is easily identified by its distinctly winged petioles, while the nodal point below the latest flush of growth does so for the latter, as this will be seen to be shrouded in persistent bud scales.

Rhododendron enthusiasts who garden close to the south and west coasts of the UK will be able to provide the H3-4 rated *R. montroseanum* with the best mix of environmental conditions to allow the longterm development of free-flowering, tree-like specimens that would not be out of place if transplanted back into a Himalayan setting. Those who reside inland, or along the east coast - the most favoured sites excepted - will observe plants that are clearly unhappy with their lot and find that these often succumb to bark split from early or late frosts, despite the growth buds not expanding until early May. A better alternative by far is to gaze in awe at the mature specimens established in the collections at Benmore, Brodick Castle, Crarae, Edinburgh, Plas Newydd on the Isle of Anglesey, or at Muncaster Castle Gardens in Cumbria, where again, just like the majestic exemplars of *R. sinogrande* that populate the grounds, *R. montroseanum* in full flower will blow you away.



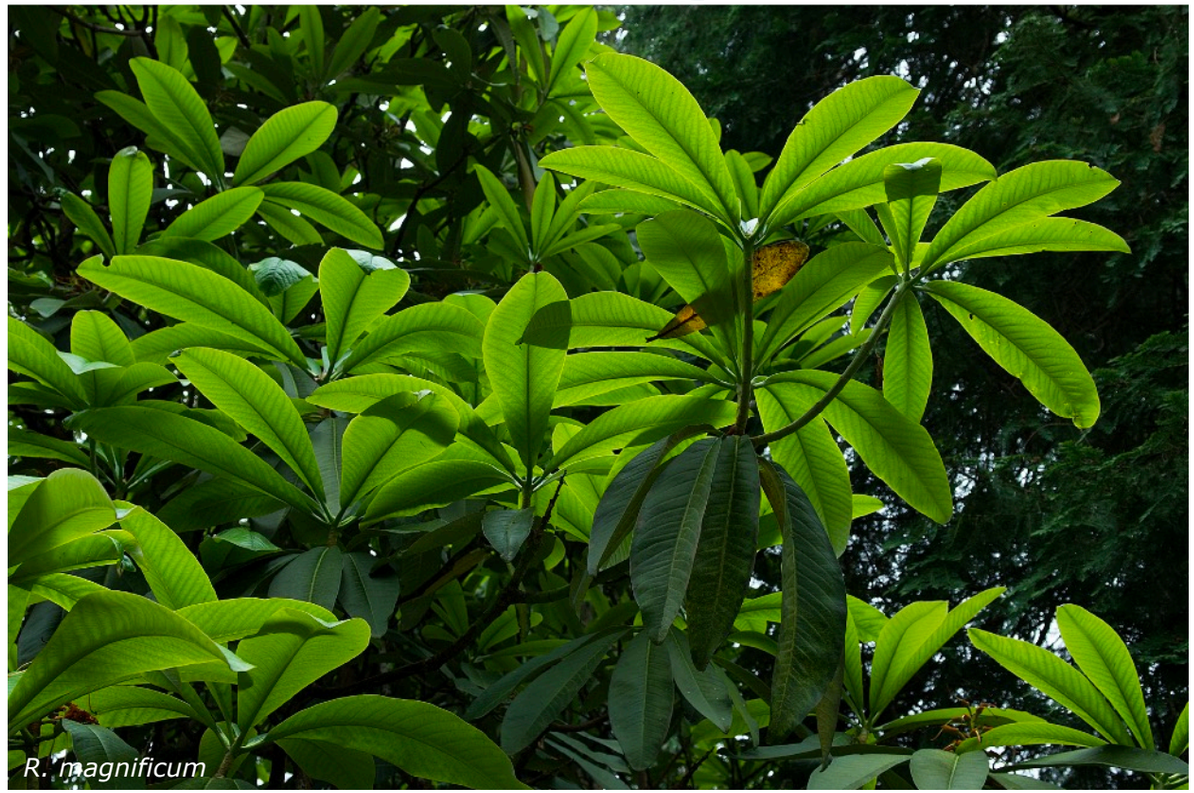
R. montroseanum (KW 6261a)



R. montroseanum

R. montroseanum (KW 6261a)


R. magnificum


R. magnificum

R. magnificum

Hardiness:
H3.
Flowering Period:
February-April.
Distribution in the wild:
SE Tibet; Arunachal Pradesh, India; NE Upper Myanmar;
and the adjoining border areas of W Yunnan, China.
Growing scattered throughout the rain forest and in thickets alongside streams,
at elevations of 1,500-2,500m.

Identification:
Tree, broadly upright, 3 to 18m high.
Leaves oblanceolate through oblong-obovate to broadly obovate,
20 to 46cm long by 6 to 17cm wide,
sometimes slightly through broadly decurrent on the petiole, retained 2-3 years;
upper surface mid-green, matt;
lower surface indumentum continuous, somewhat plastered, matt, grey-white to fawn.
Petiole 13-38mm long, flattened when winged, stout,
the margins sometimes ridged, or narrowly through broadly winged,
tomentose or glabrescent.
Inflorescence occasionally loose and open-topped, 12-30-flowered.
Rhachis long.
Pedicel 10-28mm long.
Corolla 4.5 to 7.5cm long, 8-lobed,
obliquely-tubular-campanulate through funnel-campanulate,
ventricose, fleshy,
rose through reddish- to pinkish-purple, fading,
dark purple nectar pouches present.
Stamens 15-16.
Capsule 35-48mm long by 14-15mm wide.

Seed Collections:

KW 9200	1931
KW 9301	1931
KW 13550	1937
KW 13681	1937
KW 213	1938/1939
KR 8385	2006
KR 9356	2008

R. magnificum was discovered on February 4th, 1931, in the rain forest that cloaks Myanmar's Adung Valley, close to the border with Tibet, dotted about higgledy-piggledy amongst the other trees. The plant hunter who made the find and described the species in September 1935 - writing in Volume 73 of the *Journal of Botany* - was Frank Kingdon-Ward, and his field notes detail specimens that had attained 18m in height with trunks that had a 2m circumference at the base.

Two separate batches of seed were gathered on that 1931 expedition, one linked with the type specimens under KW 9200, and another assigned the field number KW 9301. In 1937, KW 13550 and KW 13681 were added to list, with a fifth collection - KW 213 - made in 1939. However, both of the 1937 collections are now believed by the doyens to be of doubtful provenance. The first is suspected of being a natural hybrid, while the second may be a new and as yet undescribed species, or alternatively, a *hodgsonii* x *falconeri* cross. At least, that is how the Valley Gardens registered 'Himalayan Child' after it won an Award of Merit from the RHS in 1981. Whatever proves to be the case, all the KW 13681 offspring found in UK cultivation are substantially hardier than the given H3 rating.

Only one other Western collector has encountered the true species in the wild, Keith Rushforth doing so first in 2006, then again in 2010, and in the process, extending the known endemic distribution into Arunachal Pradesh.

Closely related to *R. protistum,* some expert opinion suggests that like *R. giganteum, R. magnificum* too should be made synonymous under that taxon. However, currently, far too little is understood of the wild populations to validate such a conclusion, especially as there are significant differences between what is grown in cultivation and the descriptions of those native plants. Kingdon-Ward's Adung Valley field notes, for instance, detail ash-white bark and wine-red young foliage, neither characteristic being apparent on any of the garden-grown UK specimens.

As cultivated, *R. magnificum* generally has a narrower leaf than *R. protistum,* begins to open its flowers two or three weeks later in the season, and has a thin, semi-plastered abaxial indumentum, which begins to appear on the blades of much younger plants. Some accounts detail a continuous but loose, cobwebby upper layer to that tomentum, which over time reduces to small patches or tufts of hair, and is totally absent from older leaves. Yet none of the living plants studied have to date matched the woolly indumentum present on some of the dried herbarium specimens, so this detersile 'arachnoid' layer could be a mid-stage in the development process. As the timeframe *R. protistum* takes to mature and completely covers its lower leaf surface with indumentum is excessive, approaching sixty years or more, such could also be the case for *R. magnificum,* so despite the earlier arrival first of the thin, semi-plastered layer of hairs, and then a seemingly fleeting upper layer, both are likely to be precursors for that full monty, woolly covering. The fact that flowering is taking place before this sequencing has reached its conclusion, is a trait that mirrors the behaviour observed on some of the *R. protistum* clones.

Without a doubt, as Kingdon-Ward's epithet makes crystal clear, *R. magnificum,* in foliage and flower, is another undisputed monarch of the genus, indeed, one of its most impressive members. Yet the true species can only flourish in the mildest coastal gardens fringing the UK's western seaboard, and then, only where shelterbelt protection has already been well established. This has meant that the stunning spectacle of a mature plant in full bloom, covered in crimson-purple, football-sized trusses, is a sight few get to experience in person, especially as holiday trips to the seaside are not usually contemplated during the months of February or March.

For the Brodick Castle specimens of *R. magnificum,* an exception should be made and passage booked on CalMac's Ardrossan ferry.



R. magnificum



R. magnificum (KW 13681)

R. magnificum (KW 9200)

R. magnificum (KW 9200)

R. pudorosum

Hardiness:
H4-5.
Flowering Period:
February-April.
Distribution in the wild:
S Tibet; Arunachal Pradesh, India.
Growing in conifer forests and rhododendron thickets at elevations of 3,300-3,800m.

Identification:
Large shrub or small tree, rounded or upright, leggy in shade, 6 to 15m high.
Leaf bud scales persistent for 2 or more years.
Leaves oblanceolate through oblong-obovate to oblong,
8 to 35cm long by 3 to 13.2cm wide,
sometimes slightly decurrent on the petiole, retained 2-3 years;
upper surface dark green, shiny, the margins recurved;
lower surface indumentum continuous, somewhat spongy, shiny, whitish, silvery or fawn,
or glabrous (especially on young plants).
Petiole 25-45mm long, terete, stout, with or without a groove,
the margins sometimes narrowly winged.
Inflorescence 10-25-flowered.
Rhachis relatively short.
Pedicel 15-32mm long.
Corolla 3 to 4cm long, 6-8-lobed, obliquely-campanulate,
ventricose, fleshy,
pink through rose-pink to mauve-pink,
with or without a darker magenta basal blotch.
Stamens 12-16.
Capsule 25-40mm long by 10-15mm wide.

Seed Collections:

L&S 1386	1936	LS&T 3792	1938	KR 8302	2005
L&S 1612	1936	CER 9906	1999	KR 9573	2008
L&S 2752	1936	CER 9931	1999	KR 9608	2008

R. pudorosum was discovered by Frank Ludlow and George Sherriff at the end of April 1936, when collecting at Chayul Chu, near Lung, in southern Tibet. It differs from the other *Grandia* species in having persistent leaf bud scales, which remain on the branchlets for well over two years. Three seed gatherings made later that same year are documented in Part 1 of the 1967 RHS *Rhododendron Handbook* - from the type population, and from two other groups of plants growing nearby - but only the L&S 2752 field number is referenced in other publications. Moreover, the herbarium sheet at Edinburgh Botanic has a penciled note - '1386 = 2752 = 1612' - so the Collectors' Numbers subtitle - 'Rhododendrons in Cultivation in Great Britain and Ireland' - may not be entirely accurate. A fourth/second batch of seed was added in 1938, this sourced from plants found in Kongbo Province, in the southeast of the country, which Ludlow and Sherriff were exploring with George Taylor.

The species botanic description was written by John MacQueen Cowan in 1937 and published in Volume 19 of *Notes from the Royal Botanic Garden, Edinburgh,* with two additional facets not reported in that text, outlined elsewhere: a glandular leaf underside, in the online *Flora of China* entry; and fragrant corollas, in Volume 2 of H. H. Davidian's *The Rhododendron Species.* Yet neither trait is readily apparent on cultivated plants, nor highlighted by other doyens.

Post that 1938 assignation, the next encounter between Western plant hunters and *R. pudorosum* took place in 1999, when Kenneth Cox, Philip Evans and Garratt Richardson rediscovered the species in Tibet's Tsari Valley, securing two seed lots. Keith Rushforth has also chanced upon the taxon, in 2005, and again in 2008, these happenings extending the endemic distribution into the Tawang and West Kameng districts of Arunachal Pradesh.

In cultivation, *R. pudorosum* is not only an extremely rare find in UK rhododendron collections, it is also very slow growing. At the RBGE, on the east coast of Scotland, plants grown from the L&S 2752 introduction of 1936 vintage, took between 36 and 43 years to flower, with one of the three individuals cultivated in the garden opening a solitary bud in 1972. The trio then all bloomed in 1979, mystifying the gardening staff, especially as they then continued to flower, freely, on an almost annual basis, and still do. February through April is the timeframe when those inflorescences open, and it has been reported that each shrub was barely two metres in height when that initial flower bud was set.

Despite *R. pudorosum* being rated as one of the hardiest large-leaved rhododendrons to have been introduced into British gardens, occasionally, the young growth emerges from that ring of persistent bud scales twisted out of shape or otherwise contorted.

Expert opinion is still divided on the cause, split between two possible culprits, frost or heat.

R. pudorosum (L&S 2752)



R. pudorosum (L&S 2752)

R. pudorosum (L&S 2752)

R. kesangiae* var. *kesangiae

Hardiness:
H4.
Flowering Period:
April-May.
Distribution in the wild:
C & W Bhutan; Arunachal Pradesh, India.
Growing in fir or hemlock forest, amongst bamboo and other rhododendrons,
at elevations of 2,900-3,500m.

Identification:
Large shrub or small tree, rounded or upright, 3 to 12m high.
Leaf buds rounded.
Leaves obovate through broadly elliptic, 15 to 30.5cm long by 7 to 16cm wide,
retained 2 years;
upper surface medium through dark green, shiny,
thinly white tomentose at first, the covering discontinuous and mica-like, detersile;
lower surface indumentum continuous,
matted and floccose, sometimes woolly or plastered,
white, silvery or fawn at first, turning grey-white or brownish-fawn with age.
Petiole 20-35mm long, terete, tomentose or glabrous.
Inflorescence 15-30-flowered.
Pedicel 15-25mm long, glandular.
Calyx glandular.
Corolla 3 to 4.7cm long, 7-8-lobed, campanulate or funnel-campanulate,
rose through deep pink, fading to pale pink or white,
with a dark purple basal blotch,
mauve-purple nectar pouches present.
Stamens 14-16.
Ovary glandular.
Style straight or declinate.
Capsule 35-40mm long by 1cm wide.

R. kesangiae* var. *saktengianum

Hardiness:
H4
Flowering Period:
April-May.
Distribution in the wild:
E Bhutan; Arunachal Pradesh, India.
Growing in fir or hemlock forest, amongst bamboo and other rhododendrons,
at elevations of 2,900-3,500m.

Identification:
as var. *kesangiae* except:
Leaf buds elongated.
Corolla pure white.

Seed Collections - var. *kesangiae:*

Bowes-Lyon 9703	1967	C&S 1573	1990
S&L 5671	1984	C&S 1608	1990
KR 958	1985	C&S 1618	1990
KR 1084	1987	C&S 1632	1990
KR 1091	1987	C&S 1662	1990
KR 1100	1987	Fox 9	1990
KR 1130	1987	Fox 41	1990
KR 1136	1987	Kinmouth 92	1990
KR 1175	1987	KR 1629	1990
KR 1226	1987	KR 1727	1990
KR 1242	1987	KR 1737	1990
KR 1308	1987	KR 1767	1990
Bowes-Lyon 425	1987/1989	Heasman 18a	1992
CHM 3006	1988	Bowes-Lyon 10139	1994
CHM 3058	1988	KCSH 034*	2003
CHM 3115	1988	NAPE 0121	2003
EGM 61	1988	AC 5343	2004
EGM 65	1988	AC 5346	2004
AC 102	1990	AC 5349	2004
C&S 1514	1990	AC 5331	2004
C&S 1516	1990	AC 5406	2004
C&S 1517	1990	AC 5410	2004
C&S 1562	1990	KR 8600	2006
C&S 1563	1990		

Seed Collections - var. *saktengianum:*

KCSH 0347	2003
KCSH 0362	2003
KCSH 0382	2003

R. kesangiae was described by David Long and Keith Rushforth in Volume 45, Part 2, of *Notes from the Royal Botanic Garden, Edinburgh,* during in 1989, yet unknowingly, it had been discovered and collected much earlier than that, probably close to seventy-five years earlier; so, long before the two plant hunting botanists put pen to paper.

Roland Cooper was likely the first collector to have secured seed, doing so on his 1914 expedition to Bhutan, the gathering made under the field number 2088a, which he described as a *R. hodgsonii* x *R. falconeri* hybrid. Technically, *R. kesangiae* almost certainly arose from just such a random pairing, but its populations have now stabilised to such a degree that they have become fully speciated and even produced natural hybrids of their own - from pollinator contrived matings with both original parents. And it was because of this fecundity that, despite being the most widespread large-leaved species on the ground in Bhutan, it was overlooked for so long.

Wandering up one of the Bhutanese hillsides where the big fellas are growing could be compared to scaling a multi-layered sponge cake, with two bands of cream. At the base is *R. falconeri,* next a hybrid swathe of *falconeri* x *kesangiae* (or vice versa), then comes a wider belt of pure *R. kesangiae,* followed by another hybrid layer, this one composed of *kesangiae* x *hodgsonii* offspring (or the reverse), which is itself crowned by a pristine population of *R. hodgsonii*. From not too far a distance away, they all look remarkably similar, and it is only up close that differences in indumentum colour, bark and bud shape become clear. Plants in the two hybrid bands have a darker hued abaxial indumentum than their parents, in whatever combination, while *R. kesangiae* itself, is bereft of peeling bark, conical buds with long-tailed scales, and most importantly, cup-shaped hairs, this latter denudation a surprising enigma, given the parentage.

Cooper's *R. hodgsonii* x *R. falconeri* seed, as well as gatherings obtained on treks by other collectors, including Frank Ludlow and George Sherriff, appear not to have resulted in 'true' specimens of *R. kesangiae.* At least, none have been found to date in British gardens. Two groups of seedlings therefore, presented to Simon Bowes-Lyon in 1967 by HRM The Grand Queen Mother of Bhutan, Ashi Kesang Wangchuck - after whom the species is named - were the first official entrants into UK cultivation, and one of these, under the Bowes-Lyon field number 9703, flowered at Wakehurst Place in 1985.

Field study has discovered that the *R. kesangiae* populations are not consistent across their wild distribution, Peter Cox detailing this in the 1990 revised edition of his book *The Larger Rhododendron Species*. The leaf abaxial indumentum, for instance, is variable in the west of Bhutan - floccose through plastered, and pale brown to greyish-white - yet uniform in the east - plastered and grey. Equally, the terminal vegetative bud shape changes as you progress west to east, a rounded outline becoming conical, with this especially evident on individuals forming the easternmost group. These plants also have flowers that open pure white, and it is this characteristic that has given rise to the varietal classification.

Simon Bowes-Lyon was the first western plant hunter to encounter these shrubs in early May 1994, returning herbarium material from a population in flower at Trashigang Sakteng under the field number Bowes-Lyon 10036. More recently, the variety has also been found not all that far away, just across the border in Arunachal Pradesh, by Kenneth Cox and Steve Hootman, with seed returned from their 2003 collecting trip. This new taxon was jointly described by D. G. Long and P. Namgyel in Volume 2, Number 2, of the *New Plantsman,* which was published in 1995, and designated *R. kesangiae* var. *album*. Which was unfortunate as, like a number of other accepted names listed within *The Genus Rhododendron: its classification and synonymy* - the 1996 summary publication of the Edinburgh Revision - their epithet falls foul of the nomenclature rules in that 'album' is not unique within the genus, being duplicated at both specific and varietal ranking, with the former - dating to 1823 - taking precedence. For this reason, a new name is required, and *R. kesangiae* var. *saktengianum,* reflecting the Bhutanese locale where the species was first discovered, is proposed and adopted herein.

Like the majority of large-leaved rhododendrons, *R. kesangiae* is best suited to a sheltered site along the west coast, but gifted a H4 hardiness rating, it will also thrive in east coast gardens when protected from the worst of the elements, the April-May flowering period helping in this regard. Field study has also shown that in the wild, *R. kesangiae* has a decided preference for damper soil conditions than any of its relatives would tolerate, often growing in areas referred to as 'boggy'. While this may be so, the technique of mound planting newly purchased specimens when beautifying such ground within a domesticated west coast woodland environment, best not be abandoned.



R. kesangiae (S&L 5671)

R. kesangiae
- three examples of the leaf abaxial indumentum -

R. kesangiae (KR 1100)

R. kesangiae (C&S 1662)



R. saktengianum



R. suoilenhense
Hardiness:
H3-4.
Flowering Period:
March-April.
Distribution in the wild:
Lào Cai & Hà Giang, Vietnam.
Growing in evergreen and mixed forest at elevations of 1,800-3,100m.

Identification:
Large shrub or tree, rounded or upright, 3 to 15m high.
Leaves oblanceolate through obovate to elliptic or broadly oblong,
20 to 54cm long by 9 to 28cm wide, retained 2-3 years;
upper surface dark green, shiny, almost flat,
or somewhat convex with distinctly wavy margins, the midrib without a groove;
lower surface indumentum matt, whitish-grey, brownish or fawn,
continuous or restricted to a narrow band along the margins,
or developing between the midrib and veins from the base upwards,
or completely glabrous.
Petiole 30-45mm long, terete, stout, without a groove, tomentose along the margins,
otherwise glabrous.
Inflorescence 15-25-flowered.
Rhachis long.
Pedicel 42-53mm long.
Corolla 4 to 6cm long, 8-10-lobed, broadly tubular-campanulate, ventricose, fleshy,
white through cream to pale yellow,
with a crimson or purple basal blotch.
Stamens 16-20.
Style declinate.
Capsule 20-50mm long by 8-16mm wide, the base distinctly oblique, glabrous, or glabrescent.

Seed Collections:

AC 221	1990	KR 2002	1991	KR 2205	1992
Kinmouth 197	1991	AC 432	1992	KR 3112	1994
KR 1986	1991	AC 448	1992	KR 3114	1994
KR 1992	1991	KR 2178	1992	CWT 6410	2011
KR 1998	1991	KR 2199	1992	CWT 6498	2011

- opposite left -
Three examples of the *R. suoilenhense* leaf abaxial indumentum.

Recent publications have suggested that *R. suoilenhense* was discovered in Vietnam's Lào Cai province by Alan Clark, Tom Hudson and Keith Rushforth in the autumn of 1992 and introduced into UK cultivation on their return, but unfortunately, this reporting does not take account of AC 221, which was found in the same area, but two years earlier in 1990, nor five other gatherings made in 1991.

The AC 221 collection was initially thought to be a hardier form of *R. protistum,* as were all the finds made in Vietnam under AC, Kinmouth and KR field numbers between 1991 and 1994. Yet when these began to flower at a surprisingly young age, opening white-blotched-crimson blooms, it became immediately apparent that a new taxon was to hand. The epithet that now identifies the species, jointly devised by Keith Rushforth and David Chamberlain, incorporates the actual location where the first population of plants was found - Mount Suoilen, a subsidiary peak of the 3,147m-high Fansipan, which is part of the Hoang Lien Son mountain range. A second, disjunct population, was later discovered further to the east, on Mount Tay Con Linh, in the adjacent Hà Giang Province.

Nagoya Protocol ramifications delayed publication of a botanic description until 2020, with the text, written jointly by David Chamberlain, Nguyen Huong and Keith Rushforth, finally appearing in Volume 36, Issue 4, of *Curtis's Botanical Magazine,* so the observations that follow and the identification bullet points are largely based on the group of cultivated plants growing at Muncaster Castle in Cumbria, these germinated from seed that Alan Clark collected under the field numbers AC 432 and AC 448, at an altitude of 1,950m, on the mountains 8km north-north-west of Sa Pa, in Lào Cai province, during the autumn of 1992.

As with *R. protistum,* the indumented state of the leaves on a flowering-size plant varies: some have no tomentum at all; others form a narrow rim of compacted hairs around the edge of the leaf or, beginning at the base, develop a thin tomentum between the midrib and the veins on either side that slowly extends upward and which occasionally also evolves along the margins; and a few blades have a continuous covering.

The hairs are dendroid, but not the signature rosulate type found on the majority of Subsection *Grandia* species, nor are they cup-shaped, as would be the case with members of Subsection *Falconera*. DNA evidence, when available, may suggest a placement within a wholly new subsection, but for now, morphologically, the best fit is within *Grandia*.

Leaf shape, including the various options for tip and base displayed across a single shrub, is no more or less varied for *R. suoilenhense* than it is for any of the other Subsection *Grandia* rhododendrons. What is perplexing, however, is the blade cross-section, with the majority virtually flat, but a sizeable minority - glabrous or indumented - having edges that curve down, as well as displaying distinctly wavy margins. Both of these traits are mirrored by some clones of *R. macabeanum*.

Away from sheltered west coast gardens, the very cold winters experienced a decade or so ago around 2010-2011, inflicted significant bark split on some specimens when the temperature fell below -10°C. In many cases, this ultimately resulted in the death of a wounded plant, although other individuals escaped apparently unscathed. Provenance was the critical factor, as seed of the survivors had been gathered from plants growing halfway up Fansipan - Phan Xi Păng - as well as from shrubs found even closer to the mountain's summit. The distribution range on Mount Tay Con Linh is narrower, extending from the 2,200m contour up to an altitude of 2,400m, so the hardiness of these collections will not match the toughest Fansipan plants. Protection within a woodland canopy, age, or the sudden, unpredicted onset of the cold snap and its prolonged duration, were all factors that played a part in how well an individual plant coped with the challenging weather conditions. In hindsight, a H3-4 mild-through-average winter hardiness figure would better reflect this biogeography rather than the H5 designation *R. suoilenhense* and some other Vietnamese introductions have been given under the new RHS ratings scheme.

R. suoilenhense has been blooming in UK cultivation since the early noughties and the specimens at Muncaster are now well over 4m tall, multi-stemmed, with an upright and open habit.



R. suoilenhense (AC 221)



R. suoilenhense (AC 432 or AC 448)

R. suoilenhense (AC 432 or AC 448)

Subsection *Griersoniana:*


R. griersonianum



Taxa:

R. griersonianum

Taxonomic Revision:

A monotypic subsection, it remains as described in the Edinburgh Revision classification, the Section *Ponticum* to Section *Leiorrhodium* transfer excepted.

Subsection Morphology:

R. griersonianum is a shrub, spreading or broadly upright, 1.5 to 3m high; its branchlets moderately through densely setose-glandular and densely floccose; the bark rough, brown.

Leaf buds long, conical, the outer scales with long tapering tips.

Leaves coriaceous, lanceolate through narrowly-elliptic, 6 to 20cm long by 1.2 to 5.3cm wide, apex acute through acuminate, base obtuse, retained 1-2-3 years; upper surface pale green, matt, at maturity glabrescent, glabrous or with the vestiges of a juvenile tomentum, the margins somewhat revolute, the midrib grooved and setose-glandular towards the base, the veins deeply impressed; lower surface indumentum continuous or patchy, thick and dense, woolly, whitish through pale brown, composed of dendroid hairs, the midrib prominent, glandular and tomentose, the veins prominent.

Leaf anatomy comprises a 2-layered upper epidermis, with the cells in either layer equal in size; the cuticle is around half as thick as the cells are deep; water tissue is absent; the lower epidermis cells are not prolonged into papillae. Sclereid cells are present.

Petiole 10-50mm long, purple, rounded, grooved above, densely setulose-glandular and moderately through densely floccose.

Inflorescence lax, racemose-umbellate, 5-12-flowered; the buds large, long, conical and tapering, the outer scales with long tapering tips.

Rhachis 10-40mm long, densely setulose-glandular and moderately through densely floccose.

Pedicel 15-40mm long, deep red, variably setulose-glandular and whitish-tomentose.

Calyx small, 5-lobed, these triangular or rounded and 1-3mm long, their outer surface and margins setulose-glandular and moderately through densely tomentose.

Corolla 5 to 8cm long, 5-lobed, tubular- to funnel-campanulate, brick-red, geranium-scarlet to deep rose, rarely pink, with or without deeper spotting; the tube fluted, the inner surface puberulent, the outer surface densely whitish-tomentose, the hairs branched.

Stamens 10, unequal, 25-57mm long, anthers reddish-brown; filaments deep red, pubescent at the base or along the lower half or two-thirds.

Ovary conoid, 5-7mm long, 5-6-locular, densely whitish-tomentose,
the hairs branched, and sometimes sparsely short-stalked glandular,
these scattered amongst the dendroid hairs when present.

Style 50-63mm long, deep red, longer than the stamens,
either or both long-stalked glandular or floccose at the base, rarely glabrous or eglandular;
the stigma small and lobulate.

Capsule oblong to oblong-oval, 15-30mm long, straight but occasionally slightly curved,
moderately through densely tomentose, though sometimes with just the vestiges of a
covering, and with or without glands, these long- or short-stalked when sparsely present.

Seeds elongate, narrowly winged, each end with appendages.

Hardiness:
H4.
Flowering Period:
May-July.
Distribution in the wild:
NE Upper Myanmar; W Yunnan, China.
Growing in open Pine woodland and mixed forests, in thickets and open glades,
at elevations of 1,600-2,700m.

Seed Collections:

F 15815	1917
F 17696	1917/1919
F 18049	1917/1919
F 24116	1924/1925
F 26048	1924/1925
F 29762	1930/1931
F 30392	1930/1931

R. griersonianum was discovered in June 1917 growing on the mountains of the Shweli-Salween Divide in the west of China's Yunnan Province and to date, only seven collections of the species have ever been made. George Forrest and his well-trained and experienced teams of locally-recruited assistants secured each and every one, and the last two - gathered in 1931 on the N'Maikha-Salween Divide - extended the known distribution into northeast Upper Myanmar. No other plant hunter or botanist-explorer has found the species since, despite a veritable diaspora of interested parties scouring those very same Chinese hills in the past forty years.

Forrest was also responsible for writing the species botanic description, a joint appraisal made with Sir Isaac Bayley Balfour that appears in Volume 11 of *Notes from the Royal Botanic Garden, Edinburgh,* published in 1919, and he named the plant for Ralph C. Grierson, an Assistant Commissioner in the Chinese Maritime Customs Service, resident at Tengyueh (now Tengchong), where the Scotsman was often based.

Only a few rhododendron species are instantly recognisable when encountered in the wild or in cultivation, and *R. griersonianum* is one of these, for both its leaf and flower buds



R. griersonianum

are highly distinctive, being long, conical and tapered, with scales that have extended, attenuating tips or tails. Add in the leathery, long and very narrow, pointed leaves, and those glaringly coloured late-blooming flowers and the only entity likely to mar a successful identification will be one of the taxon's own hybrids. Unfortunately, as there are upwards of 2,200 of these registered to date, this has the potential to occur fairly frequently, though the majority stray far enough away from the species identikit picture given above to avoid a complete muddying of the waters. Checking the lower leaf surface indumentum will often separate-out the few that are near mirror-image facsimiles: thick, dense and woolly, with any sticky hairs confined to the midrib, and the true species will be to hand, even if the covering is discontinuous; any hint of granularity or a more widespread scattering of those glands, reveals the doppelgänger, as will the lack of a dense covering of whitish-coloured hairs extending from the pedicel onto the corolla tube.

Pigeonholing *R. griersonianum* within Genus *Rhododendron* has proved a classification nightmare since the species was first found, as nothing else quite like it exists. Until the mid-1960s, the foliage and flower bud characteristics were considered similar enough to those of *R. auriculatum* for the two to be placed in the same Series, but very little else was common. Indeed, the term 'aberrant' was commonly used to refer to the taxon's status within that dyad, which in the context of a duopoly must have rankled.

The matter was resolved in 1964, when H. H. Davidian installed Forrest's find into its very own, monomorphic Series, a placement maintained by David Chamberlain for the Edinburgh Revision, albeit with a Subsection upgrade. Goetsch, Eckert, Hall did not include the species as a test subject for their 2005 phylogeny, but the Milne-Chamberlain 2010 chloroplast study confirmed its standalone presence - between *R. glischrum* and *R. irroratum* - in the *degronianum-smirnowii* derived clade.

The first batch of Forrest's *R. griersonianum* seed was sown in British gardens during late 1917, with young plants blooming concurrently at Borde Hill in West Sussex, and Caerhays Castle on the south coast of Cornwall, just six years later in 1923. Some open their flowers towards the end of May, while the majority go for June or July, apart from those consigned to a heavily shaded locale, who instead opt for early August. Growth is therefore late and prone to damage if caught by an early autumn frost. Compound that with the almost lowland environs from which the species was gathered and east coast gardeners will need to provide a very well-sheltered planting spot for their H4 purchase to succeed long-term. By contrast, on the west coast, un-pruned specimens sited in even half-shade will often be found as an unruly and tangled sprawl, with only those grown in the open adopting a broadly upright, sometimes tree-like habit. The flowers, of course, are simply eye-catching magnets, luminescent in the woodland when backlit.



R. griersonianum



R. griersonianum

Subsection *Irrorata:*



R. ramsdenianum (KR 6033)



Taxa:

R. aberconwayi
R. annae
R. anthosphaerum
R. araiophyllum
R. gongshanense
R. irroratum
R. irroratum ssp. *irroratum*
R. irroratum ssp. *pogonostylum*
R. irroratum ssp. *yiliangense*
R. kendrickii
R. lukiangense
R. ramsdenianum
R. tanastylum
R. tanastylum var. *pennivenium*
R. tanastylum var. *tanastylum*

Taxonomic Revision:

Subsection *Irrorata* remains as designated in the 1996 Edinburgh Revision classification of Genus *Rhododendron* apart from the Section *Ponticum* to Section *Leiorrhodium* transfer.

Subsection Morphology:

Shrubs or small trees, upright, 1 to 12m high;
young shoots usually short-stalked glandular, often floccose,
becoming glabrescent or glabrous;
bark brown, reddish-brown or greyish-brown, usually rough and striate,
but sometimes cracking into oblong plates or flaking somewhat.

Leaves coriaceous, lanceolate through oblanceolate to elliptic, ovate to oblong,
2.5 to 21cm long by 0.8 to 6.5cm wide,
apex acute, acuminate or obtuse, rarely rounded, and sometimes mucronate or apiculate,
base obtuse, cuneate, rounded or tapered, retained 1-2-4 years;
upper surface pale green, olive-green or dark green, usually matt,
tomentose at first, glabrous at maturity,
rarely with a thin waxy coating,
the midrib grooved, occasionally floccose, the veins deeply impressed,
the margins usually slightly recurved and undulate;
lower surface pale green or whitish, matt or shiny, usually glabrous when mature,
but often with persistent reddish punctate hair bases and sometimes papillate,
or occasionally with a thin veil of dendroid hairs,
the midrib and veins prominent, the midrib sometimes floccose.

Leaf anatomy comprises a 2-layered upper epidermis, with the cells in either layer roughly the same size; the cuticle is around half to as thick as the cells are deep; water tissue is usually present; the lower epidermis cells are not prolonged into papillae.
Sclereid cells are present in all the species.

Petiole 5-30mm long, cylindric, grooved above, usually floccose,
often short-stalked glandular.

Inflorescence lax or dense, racemose umbellate, 2-21-flowered.

Rhachis 5-40mm, but usually to 10mm long, usually floccose and short-stalked glandular.

Pedicel 4-45mm long, usually floccose and short-stalked glandular.

Calyx minute, reduced to a rim, or cupular, 5-lobed, rarely 6-7-lobed, these rounded, ovate or triangular and 1-3mm long, the outer surface and margins floccose or glabrous, short-stalked glandular or eglandular.

Corolla 2 to 5.9cm long, 5-lobed, rarely 6-7-lobed, campanulate, tubular-campanulate or openly-campanulate, sometimes saucer-shaped, white, pink, creamy-yellow to mauve or deep crimson, with or without both or either darker spotting and a basal blotch, with or without nectar pouches, the lobes emarginate.

Stamens 10, rarely 12-14, unequal; filaments often puberulent at the base.

Ovary conoid, oblong or slender, 3-8mm long, 5-11-locular, glabrous or moderately through densely floccose, and moderately through densely short-stalked glandular, or eglandular.

Style glabrous, rarely hairy, often glandular to the tip, but not at the base; stigma small.

Capsule oblong-cylindric, slender or stout, 10-40mm long by 0.2-1.2cm wide, straight or slightly curved, grooved, floccose or glabrous, short-stalked glandular or eglandular.

Seeds elongate, winged, each end with appendages.



R. ramsdenianum (KW 6284)



R. ramsdenianum (KW 6284)

R. kendrickii

Hardiness:
H3.
Flowering Period:
April-May.
Distribution in the wild:
Bhutan; SE Tibet; Arunachal Pradesh & Assam, India.
Growing in dense and open evergreen forest, in deciduous and mixed forest, in thickets, and sometimes on heavy clay soils, at elevations of 2,100-2,800m.

Identification:
Shrub or small tree, broadly upright, open and sparse, 1 to 8m high.
Leaves subcoriaceous, stiff, oblong-lanceolate through narrowly-lanceolate, 7 to 17cm long by 1.7 to 4cm wide, the apex long acuminate; lower surface shiny, the midrib floccose.
Inflorescence dense, 7-20-flowered.
Rhachis and pedicel densely floccose.
Calyx floccose or glabrous.
Corolla 2.6 to 4cm long, 5-lobed, tubular-campanulate, fleshy, pink through deep rose to red, crimson and scarlet, with or without darker spots, with 5 nectar pouches.
Ovary variably floccose, the hairs sometimes strigose, eglandular.
Capsule 14-30mm long.

Seed Collections:

Cooper 4086	1915	C&H 416	1965	KCSH 034*	2003
Cooper 4160	1915	Bowes-Lyon 60	1970	AC 5268	2004
Cooper 4978	1915	KR 1472a	1987	AC 5272	2004
KW 11378	1935	EGM 93	1988	AC 5284	2004
L&S 1206	1936	C&S 1623	1990	AC 5285	2004
L&S 1227	1936	C&S 1683	1990	KR 8100	2005
L&S 1280	1936	Kinmouth 90	1990	KR 8347	2005
L&S 2748	1936	Kinmouth 91	1990	KR 8614	2006
KW 13606	1937	KR 1712	1990	KR 9464	2008
LS&H 16123	1949	MH 62	1992	KR 10359	2012
LS&H 18710	1949	Sinclair 1742	1993	KR 10395	2012
		HECC 10011	2002		

The first of the subsection's species to be discovered, *R. kendrickii* and William Griffith had their chance encounter in Bhutan sometime between 1837 and 1839. Resident at the British Embassy, officially an assistant surgeon with the Robert Pemberton-led British East India Company's diplomatic mission to the landlocked Himalayan country, the good doctor was also a trained naturalist and botanist. Three cards of his dried material for *R. kendrickii* are still held in the herbarium at the Royal Botanic Garden, Kew, with the earliest field number - 656 - indicating a probable collection date early-on in the posting. Yet this is not listed as the type specimen for the species, because like many of Griffith's finds, another plant hunter was initially credited with the discovery. In this case, the kudos went to Thomas Booth, whose 1849 gathering of specimens also reside at the RBGK. These were described by Booth's uncle, Thomas Nuttall, in Series 2, Volume 12, Part 10, of the *Annals and Magazine of Natural History (including Zoology, Botany, and Geology),* which was published in 1853, and the chosen epithet for the new-to-science rhododendron honours the author's friend and fellow botanist, Doctor James Kendrick of Warrington.

Nuttall's outline, plus a similar précis included in a paean he wrote on his nephew's collecting prowess - published in Volume 5 of *Hooker's Journal of Botany and Kew Garden Miscellany* that same year - were considered inadequate by Sir Isaac Bayley Balfour, who in 1917 substantially augmented the description using specimens collected by Roland Cooper two years previously (*Notes from the Royal Botanic Garden, Edinburgh,* Volume 10).

A plant found by Frank Kingdon-Ward on his 1935 expedition to Assam, named as *R. pankimense* by the plant hunter and John MacQueen Cowan in 1936's Volume 19 of *Notes,* is now considered identical to *R. kendrickii* and has been made synonymous with it.

The fairly stiff and narrow leaves, with their tapering, sharply-pointed tips and wavy, somewhat revolute margins, along with the usually crimson-red flowers, quickly identify the species from all but three of the other members of the subsection - *R. ramsdenianum, R. tanastylum*, and the newly introduced *R. gongshanense*.

The latter, despite a somewhat distant geographic distribution across the northwest of Yunnan, is clearly related to *R. kendrickii,* with similarly shaped foliage. However, the upper surface of the *R. gongshanense* leaf is distinctly rugose, while the underside is matt, rather than shiny, plus, it is often covered in setose-glandular hairs. Despite these being detersile, their papillate or punctate bases remain post that departure, features that are not found on the abaxial surface of the *R. kendrickii* blades.

Fewer corollas in a looser truss - 4-8-10, rather than 7-20 - distinguish both varieties of *R. tanastylum* from *R. kendrickii,* as does the presence of red punctate glands on the underside of their leaves, which are also much wider - 2 to 6cm across instead of 1.7 to 4cm. *R. ramsdenianum* too has slightly wider leaves that are usually punctate below, and are without a long tapering tip, yet the main distinction between the pair, is a lack of hairs on the rhachis and pedicel, *R. kendrickii* boasting a dense covering of such.

A merger between *R. kendrickii* and *R. ramsdenianum* has been suggested by some authors, as both species are found in southeast Tibet and are clearly closely related. To date however, no published field study reporting has identified a population overlap, any mixing on the ground, or the presence of intermediates, therefore the specific status of both rhododendrons is maintained herein.

The wild distribution of *R. kendrickii* is restricted to relatively low elevations across its entire range, which means cultivation outdoors in the UK is only really possible longterm in gardens fringing the west coast, as the H3 hardiness rating makes clear. Moreover, floral and vegetative bud break is often synchronous, with those new extending shoots impairing what would otherwise be a fine display of flowers. So despite multiple seed gatherings, as a consequence of both frailties, *R. kendrickii* is a rare presence in British gardens.




R. kendrickii


R. kendrickii


R. kendrickii

R. irroratum* ssp. *irroratum

Hardiness:
H4.
Flowering Period:
March-May.
Distribution in the wild:
NW Guizhou, SW Sichuan, & N, W & C Yunnan, China.
Growing in and at the margins of conifer, mixed and rhododendron forest
at elevations of 1,800-3,700m.

Identification:
Shrub or small tree, bushy, spreading or broadly upright, 1.5 to 9m high.
Leaves fairly rigid, narrowly elliptic through oblanceolate to lanceolate,
5 to 15.5cm long by 1.5 to 5cm wide;
lower surface matt, papillate,
with red punctate hair bases overlying the veins.
Inflorescence dense or lax, 7-17-flowered.
Calyx glabrous, densely short-stalked glandular.
Corolla 3 to 5.5cm long, 5-lobed, tubular-campanulate through campanulate,
white through cream to violet-pink, rose-pink or deep pink, or pale yellow,
variably greenish, crimson or purple spotted, often on every lobe, rarely without spots,
with 5 nectar pouches.
Ovary glabrous, densely short-stalked glandular.
Style not hairy, glandular to the tip.
Capsule 10-30mm long, often short-stalked glandular.

Seed Collections:

F 5851	1910	R 11273	1923/1924	SBEC 721	1981
F 11074	1912/1914	R 11274	1923/1924	SBEC 898	1981
F 13853	1917/1919	R 11297	1923/1924	SICH 943	1992
F 13864	1917/1919	R 11310	1923/1924	AC 982	1995
F 15097	1917/1919	R 11380	1923/1924	AC 1225	1995
F 16631	1917/1919	R 11381	1923/1924	AC 1243	1995
KW 5002a	1921	F 25984	1924/1925	SHE 143	1996
KW 5005	1921	F 28304	1930/1931	AC 4284	1999
F 20678	1921/1922	R 25386	1932	JN 987	1999
F 21323	1921/1922	R 25395	1932	ZH-G 082	2006
F 21475	1921/1922	R 25400	1932	NN 0946	2009
R 6259	1923/1924	R 25451	1932	JN 11045	2011
R 6294	1923/1924	R 185	1948/1949	JN 12189	2012
R 6308	1923/1924	R 192	1948/1949	JN 12348	2012
R 11266	1923/1924	SBEC 64	1981	FB3-2018	2018
		SBEC 100	1981		
		SBEC 239	1981		

R. irroratum was a Jean-Marie Delavay find, the priest ditching his devotions during early April 1886 to go on a botanic jolly around the wooded hills of Peetsaolo, above Mosoyn, near Langkiung, in northwest Yunnan. Seed and herbarium material were gathered and swiftly despatched to Paris, where staff at the Jardin des Plantes successfully germinated the former and Adrien Franchet used the latter to formulate the species botanic description that appears in Volume 34 of the *Bulletin de la Société Botanique de France,* published in 1887. Delavay also gets the credit for the first UK introduction thanks to the skill of those 5th arrondissement horticulturalists, as one of their juvenile plants was despatched to Kew Gardens in 1890, and flowered under glass in September 1893.

Within the subsection, *R. irroratum* is most likely to be mistaken for the 5-lobed form of *R. anthosphaerum*. Separating one from the other when in flower is easy, a sticky-to-the-touch ovary and style providing the key even though the second taxon mentioned can also, on occasion, have a slightly adhesive gynoecium below the junction. Yet above it, the style of *R. anthosphaerum* is never glandular. Out of flower, a coin toss would be as likely to give a correct identification as any detailed examination, although the leaves of *R. irroratum* do have a tendency to be a little more rigid and are without an apiculate tip.

George Forest was responsible for introducing the species wholesale into British gardens when the first of his fully documented seed collections arrived from Yunnan in 1910. A previous trio of gatherings from 1904-1906 are only represented today by dried specimens on sheets of card, for the contents of any capsules went to the expedition's principal sponsor, Arthur Kilpin Bulley, and their fate post receipt is unknown. Numerous batches followed however, from Forrest himself, from Kingdon-Ward and Rock, and from a myriad of modern-day collectors, with the endemic distribution now known to be extensive and at least ten different forms of *R. irroratum* established in cultivation. All flower from early March into May and are generally - horticulturally - problem free, although those that bloom and grow early in the season will suffer if hit by a heavy Spring frost. The spate of severe winters the UK experienced a decade on from the millennium, as well as more recently, also took their toll, cutting some specimens to the ground, killing others outright.

With so many different introductions, floral quality varies enormously. Clones where the colour is pure are eye-catching, but at the other end of the scale, some decidedly murky pinks are really only fit for the bonfire. Two white-flushed-pink, heavily-spotted named clones - 'Polka Dot' and 'Spatter Paint' - are the result of selective breeding programmes respectively pursued by Lionel de Rothschild at Exbury Gardens, Hampshire, and Cecil Smith at his home near Newberg, Oregon.

The 1996 Edinburgh Revision classification rightly recognised the close relationship that exists between *R. irroratum* and *R. pogonostylum,* and in consequence, reduced their status ranking to that of subspecies, with ssp. *yiliangense* formally joining the fold in 2011 following its discovery and misidentification in the mid 1990s.

R. irroratum



R. irroratum (F 5851)



R. irroratum (R 11266)



R. irroratum (F 15097)



R. irroratum (R 11381)



R. irroratum (SBEC 064)



R. irroratum (SBEC 100)



R. irroratum ‘Polka Dot’

R. anthosphaerum

Hardiness:
H4.
Flowering Period:
February-May.
Distribution in the wild:
NE Upper Myanmar; SE Tibet; SW Sichuan & Yunnan, China.
Growing in evergreen, deciduous and mixed woodland,
in thickets and scrub on open slopes, amongst bamboo, and in open rocky gorges
at elevations of 2,000-4,000m.

Identification:
Shrub or small tree, broadly upright, 1.2 to 12m high.
Leaves oblong-elliptic through oblong to obovate and oblanceolate,
5.2 to 18.5cm long by 1.5 to 5cm wide, the apex apiculate;
lower surface matt, papillate,
sparsely floccose, the hairs scattered and appearing glabrous, occasionally glaucous,
with or without some red punctate hair bases overlying the veins.
Inflorescence dense, 7-15-flowered.
Calyx 5-7-lobed.
Corolla 3 to 5.9cm long, 6-7-lobed, but occasionally 5-lobed, tubular-campanulate,
pale lavender-blue through lilac and mauve to purple or deep magenta-blue,
rose-magenta or rose, crimson, crimson-rose or crimson-magenta,
pink, white flushed pink or darker, and occasionally pale peach,
with or without either or both spotting or a basal blotch in crimson, purple or black,
and with 7 nectar pouches, but occasionally only 5.
Stamens 10-14.
Ovary usually glabrous and eglandular.
Capsule 12-30mm long.

Seed Collections:

F 5848	1910	F 17943	1917/1919	KW 5458	1922
F 10651	1912/1914	F 18168	1917/1919	R 7664	1923/1924
F 11503	1912/1914	Farrer 814	1919	R 10942	1923/1924
F 12889	1912/1914	F 19468	1921/1922	R 11217	1923/1924
F 13387	1912/1914	F 20085	1921/1922	R 11256	1923/1924
F 13438	1912/1914	F 20814	1921/1922	R 11257	1923/1924
F 13852	1917/1919	F 20865	1921/1922	R 11346	1923/1924
F 15095	1917/1919	F 21686	1921/1922	R 11354	1923/1924
F 16354	1917/1919	F 21700	1921/1922	R 11358	1923/1924
F 16591	1917/1919	F 21773	1921/1922	R 11366	1923/1924
F 16688	1917/1919	F 21981	1921/1922	R 11369	1923/1924
F 16713	1917/1919	F 22884	1921/1922	R 11376	1923/1924
F 17495	1917/1919	F 22885	1921/1922	R 11377	1923/1924
F 17827	1917/1919	KW 5415	1922	R 11390	1923/1924
F 24600	1924/1925	R 22095	1932	CNW 364	1994
F 25984a	1924/1925	R 22649	1932	AC 1852	1996
F 26430	1924/1925	R 25340	1932	AC 1893	1996
F 26432	1924/1925	Yu 10937	1937	AC 1910	1996
F 26433	1924/1925	Yu 14987	1937	AC 1929	1996
F 26436	1924/1925	Yu 19510	1937	Henriksen 078	1997
F 26443	1924/1925	Yu 20745	1937	Henriksen 080	1997
F 26452	1924/1925	Yu 20844	1937	Henriksen 081	1997
F 26454	1924/1925	Yu 22957	1937	Henriksen 082	1997
F 26480	1924/1925	Yu 7934	1937	Henriksen 124	1997
F 27456	1924/1925	R 121	1948/1949	DGEY 283	2001
F 27464	1924/1925	R 163	1948/1949	KR 7632	2002
F 27478	1924/1925	SBEC 163	1981	ZH-G 072	2005
F 27607	1924/1925	SBEC 484	1981	JN 12127	2012
F 27608	1924/1925	SBEC 840	1981	JN 12187	2012
F 27612	1924/1925	SBLE 438	1987	BE 15-30	2015
F 27653	1924/1925	AC 624	1993	BE 15-43	2015
F 27671	1924/1925	AC 630	1993	BE 15-46	2015
		KGB 680	1993		


R. anthosphaerum

Little more than a year after his encounter with *R. irroratum,* Jean-Marie Delavay, off on yet another non-religious jaunt, became the first Western plant hunter to discover and collect *R. anthosphaerum,* finding a population of the plants at Mosoyn, in the Dali valley of northwestern Yunnan, during May 1887. As usual, the dried material was despatched to Adrien Franchet in Paris, but at the Muséum National d'Histoire Naturelle, a mistake was made and the herbarium plates were mislabeled as *R. irroratum*. In consequence, the species remained undescribed and in abeyance until Ludwig Diels began an examination of a George Forrest 1906 collection made on a climb up to the Sungkwei (Songgui) Pass from the Lankiung valley. This material facilitated the German botanist's text, published in *Notes from the Royal Botanic Garden, Edinburgh,* Volume 5, during 1912, at which point Delavay's find officially came into being.

Today, that description has been broadened a touch to encompass a sextet of species previously given specific status ranking, but which are now considered to be synonymous, namely *R. chawchiense, R. eritimum, R. gymnogynum, R. heptamerum, R. hylothreptum* and *R. persicinum,* although two of these are doggedly maintained at group status:

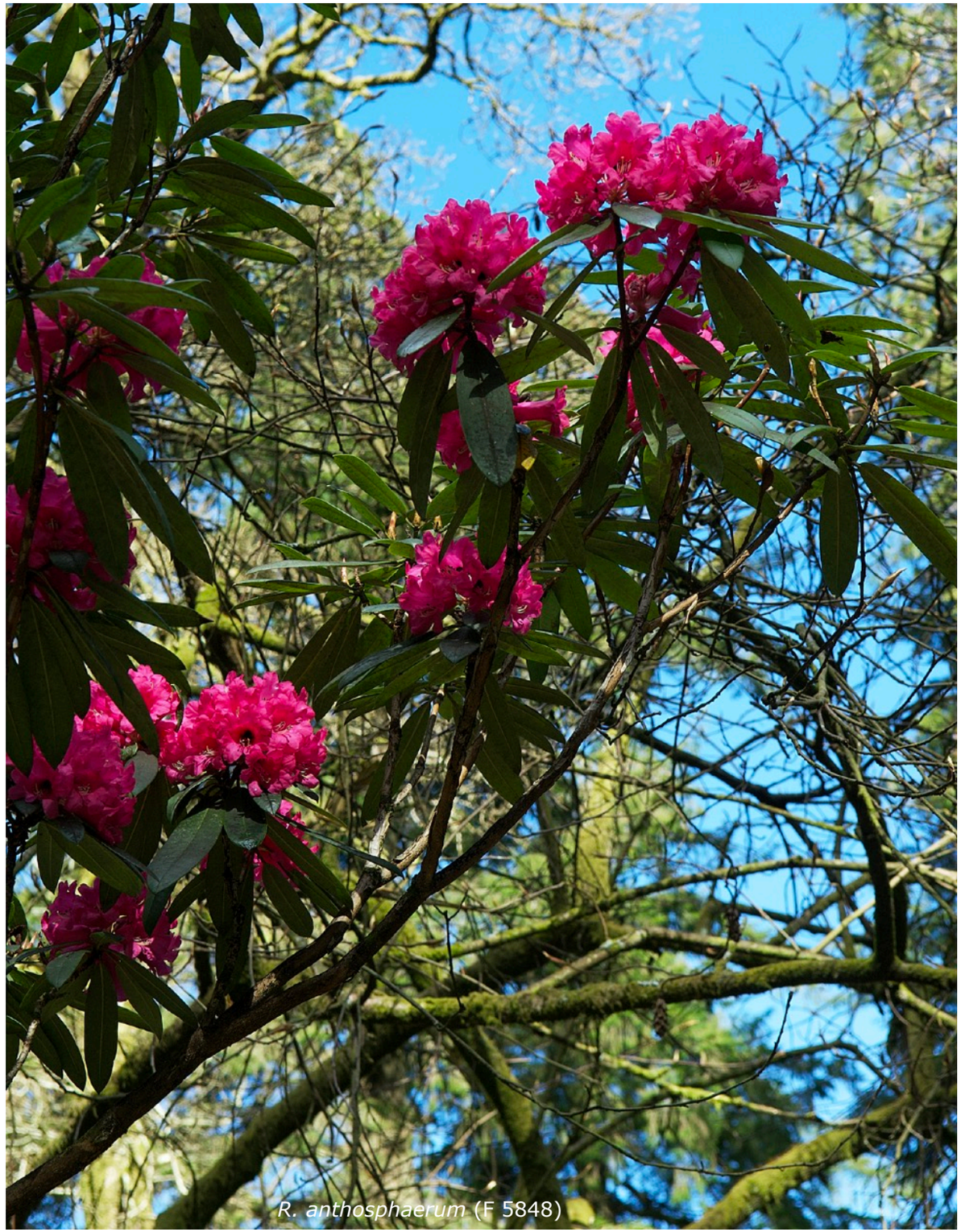
Eritimum Group plants are supposedly taller - to 12m - have longer, narrower foliage with a rounded leaf apex, and 7-lobed, crimson, rose-crimson or rose-magenta corollas, which are blotched but without any conspicuous spotting.

Members of Gymnogynum Group - considered synonymous under *R. eritimum* by no less an authority than ingrained splitter H. H. Davidian - have smaller leaves than those plants actually housed in Eritimum Group, as well as a lower stature, to just 3m in height, and they are also restricted to 7-lobed crimson corollas.

Yet none of these features are linked to a geographic niche distribution, nor are they in any way categoric within the ensemble as a whole.

What are unique, at least within Subsection *Irrorata* in that they have 6 or 7 lobes, are the *R. anthosphaerum* corollas. Which would be a fine key if other forms of the species didn't sport 5-lobed corollas, and so as previously highlighted, this means they can readily be mistaken for *R. lukiangense* or one of the three *R. irroratum* subspecies despite the matt upper and lower leaf surface, plus their non-sticky style.

No seed is traceable to Forrest's 1906 gathering, so the premier introduction - also secured by the Scotsman - entered UK gardens in 1910. Close to a hundred collections followed, meaning bloom time, flower colour and form are almost as diverse in cultivation as in the wild. Growth comes early, along with the flowers, which means both are likely to be hit by night-time frosts, though specimens do succeed in sheltered spots along the east coast. All are free-flowering once mature, many abundantly so, and the colour range on offer is extensive, with a few clones extending that pigmentation palette into what can only be described as avant-garde-neon.



R. anthosphaerum (F 5848)

R. anthosphaerum



R. anthosphaerum (R 11354)



R. anthosphaerum (F 25984a)



R. anthosphaerum (SBEC 163)



R. anthosphaerum (Farrer 814)



R. lukiangense



R. lukiangense (CNW 408)

R. lukiangense

Hardiness:
H3-4.
Flowering Period:
March-April.
Distribution in the wild:
SE Tibet; SW Sichuan & NW Yunnan, China.
Growing in conifer, rhododendron and mixed forest, in thickets,
amongst rocks, on cliffs, and alongside streams at elevations of 2,100-4,000m.

Identification:
Shrub or small tree, rounded or broadly upright, 1 to 7.5m high.
Leaves elliptic through oblanceolate to oblong-lanceolate,
8 to 19cm long by 1.8 to 6cm wide;
upper surface somewhat glossy, waxy when mature, the coating thin;
lower surface shiny,
with red punctate hair bases overlying the veins.
Inflorescence 6-15-flowered.
Rhachis, pedicel and calyx eglandular.
Corolla 3 to 4.8cm long, 5-lobed, tubular-campanulate,
pale or deep rose, magenta-rose through lilac, darkening on the lobe margins,
with or without either or both darker crimson or purple spotting and a basal blotch.
Ovary and style eglandular.
Capsule 10-30mm long, usually glabrous.

Seed Collections:

F 12899	1912/1914	F 20934	1921/1922	R 11275	1923/1924
F 13380	1912/1914	F 20978	1921/1922	R 11357	1923/1924
F 13896	1917/1919	F 21478	1921/1922	R 11505	1923/1924
F 14181	1917/1919	F 21682	1921/1922	KW 7426	1926
F 16353	1917/1919	F 21683	1921/1922	R 23591	1932
F 16367	1917/1919	F 21685	1921/1922	McLaren D273	1932/1939
F 16378	1917/1919	F 21774	1921/1922	Yu 19642	1937
F 17461	1917/1919	F 21977	1921/1922	R 72	1948/1949
F 17463	1917/1919	F 22733	1921/1922	SBLE 423	1987
F 19554	1921/1922	F 22735	1921/1922	CNW 408	1994
F 19772	1921/1922	R 11015	1923/1924	AC 1900	1996
F 19781	1921/1922	R 11138	1923/1924	AC 1918	1996
F 19819	1921/1922	R 11139	1923/1924	CCHH 8087	1997
F 20008	1921/1922	R 11140	1923/1924	JN 12128	2012
		R 11272	1923/1924		

Jean-Andre Soulié was the next plant hunter to bump into one of the subsection's undiscovered members, an understanding employer allowing the day job to be temporarily abandoned in favour of an exploration of the Lukiang Valley, west of Tseku, in northwestern Yunnan, where *R. lukiangense* was encountered during March 1895. The species was first described by Adrien Franchet in Volume 12 of the *Journal de Botanique,* published in 1898, with that outline later broadened slightly to accommodate the presence of *R. adroserum* and *R. ceraceum,* which were correctly consigned to synonymy under *R. lukiangense* in the Edinburgh Revision taxonomic reworking, any character differences being minor and the natural distributions of all three species found to coalesce.

R. adroserum was a 1914 Forrest find that trended toward a more rounded leaf apex, while *R. ceraceum,* discovered by Père Jean Théodore Monbeig-Andrieu in 1907, was only distinguished by its darker coloured flowers.

Closely related to *R. irroratum, R. lukiangense* can quickly be identified from that species when in flower by the non-sticky pedicel, ovary and style, and a lack of nectar pouches. At all other times, reliance must be placed on the leaves, which are shiny underneath, not matt, and when mature, have a thin coating of wax on their upper surface, a feature not found on any other Subsection *Irrorata* rhododendron. A clear resemblance to *R. anthosphaerum* might also cause problems when that species is presenting 5-lobed corollas, especially as the flowers share a non-sticky countenance, but again, the absence of any nectar sacs is an obvious key. When not in bloom, the shiny-matt distinction works for the abaxial leaf surface, aided by the presence of papillae, which are absent from *R. lukiangense*. Plus of course, the waxy or not hallmark.

George Forrest was the first plant hunter to introduce seed of *R. lukiangense* into British gardens, the premier consignment of his seventeen viable gatherings arriving in 1912/1914, though at the time this was designated as an affinity form of *R. ceraceum.* An earlier collection, assigned the field number F 5071, which was made on the Scotsman's 1904/1906 expedition, was actually his first one-on-one encounter with the species. This was described by Ludwig Diels as *R. gymnanthum* in 1912 (*Notes from the Royal Botanic Garden, Edinburgh,* Volume 5), and it likely consisted of herbarium material only, as the contents of any associated capsules failed to emerge from the bowels of Bees Seeds Ltd. At least, with any connective labelling. Twenty or so additional lots have been sourced by Forrest's contemporaries and successors.

Common and widespread in the wild, specimens of *R. lukiangense* are rarely found in UK gardens today outside those botanical institutes that concentrate on the genus. One of the reasons for this is hardiness, which varies and is dependent on the form grown. Those collected from the distribution's lower elevations will only thrive longterm in west coast gardens, while gatherings from the uppermost contours of the altitudinal range do fine in the milder, well-sheltered establishments along the east coast, which means a provenance check before purchase. Of far greater consequence is the taxon's preference for early growth, with frost protection an absolute must if the new shoots are to avoid being damaged. Yet quality of bloom is top of any prospective purchaser's evaluation-selection process, and in this. case, there is a lack of such. For while free-flowering from a young age, many clones of *R. lukiangense* have been judged florally, to be decidedly mediocre.



R. lukiangense (Yu 19642)



R. lukiangense (Yu 19642)

R. irroratum* ssp. *pogonostylum

Hardiness:
H4.
Flowering Period:
March-May.
Distribution in the wild:
W Guizhou, SW Sichuan, & S, SE & W Yunnan, China; N & SE Vietnam.
Growing in and at the margins of evergreen forest, and on rocky slopes
at elevations of 1,700-3,000m.

Identification:
Shrub or small tree, bushy, spreading or broadly upright, 1.5 to 9m high.
Leaves fairly rigid, narrowly elliptic through oblanceolate to lanceolate,
6 to 12.3cm long by 1.8 to 4.5cm wide;
lower surface matt, papillate,
with red punctate hair bases overlying the veins.
Inflorescence dense or lax, 8-14-flowered.
Calyx floccose, moderately through densely short-stalked glandular.
Corolla 3.5 to 4.5cm long, 5-lobed, tubular-campanulate through campanulate,
white through cream to violet-pink, rose-pink or deep pink, or pale yellow,
variably greenish, crimson or purple spotted, often on every lobe, rarely without spots,
with 5 nectar pouches.
Ovary moderately through densely tomentose,
moderately through densely short-stalked glandular, rarely eglandular.
Style hairy or not, glandular to the tip.
Capsule 10-40mm long, sparsely short-stalked glandular.

Seed Collections:

McLaren V 33	1932/1939	AC 1156	1995
McLaren V 71	1932/1939	AC 1199	1995
Kinmouth 152	1991	C&H 7185	1995
Kinmouth 204	1991	CWT 6341	2011
KR 3121	1994	CWT 6494	2011
KR 3284	1994	JN 11073	2011
KR 3295	1994		

R. irroratum ssp. *pogonostylum* was an Augustine Henry find, made near Mengtze, a town in the southeast of Yunnan that is now spelt and pronounced, Mengzi. The most likely date for the gathering is the spring of 1897, when the Irish plantsman, sinologist and Imperial Customs Service Assistant was visiting the Great Black Mountain, a range of hills some twenty miles north of the city that climb to the 2,700m contour. The herbarium at Kew was quickly in receipt of those dried specimens - under the field numbers 11066 and 11067 - though the doyens then took almost twenty years to realise their significance, an Isaac Bayley Balfour and William Wright Smith botanic description finally appearing in Volume 27 of *Transactions of the Botanic Society of Edinburgh,* this published in 1917.

Three pseudo doppelgängers must also be considered:

R. langbianense was first described in 1930 by Auguste Chevalier and Paul Dop, the authors writing in Volume 3 of *Flore Générale de l'Indo-Chine* and working from specimens gathered on the Lang Biang Plateau - alternatively the Lâm Viên Plateau, but more correctly the Da Lat Plateau - in southeast Vietnam, by Chevalier. Two Keith Rushforth 1994 introductions - under the field numbers KR 3284 and KR 3295 - were gathered from this area and prosper in Cornwall, but are unlikely to survive outdoors anywhere else in the UK without significant help from the Gulf Stream. The taxon was sunk under *R. irroratum* ssp. *kontumense,* a tropical Sumatran species, by the authors of *A Preliminary Synopsis of the Genus Rhododendron* (*Notes from the Royal Botanic Garden, Edinburgh,* Volume 36, 1978), but will almost certainly prove to be more closely related to *R. mengtszense,* this another variant on the *R. pogonostylum* theme that is now known to be endemic to the province of Làо Cai, in the north of Vietnam.

This taxon too was discovered and first collected by Augustine Henry, sometime between 1896 and 1897, under the field number 10275, in woodland just a few miles from Mengzi, only on this occasion, to the southeast of the city. Again, the gathering was of herbarium specimens, for until 2011, no seed had ever been introduced, as lots tentatively identified as *R. mengtszense* were, on later inspection, found to match other forms of *R. irroratum*. A collection made by Alan Clark, Hannah Wilson and Jamie Taggart, at a site 15km north of Sa Pa, in the Ban Khoang region of Làо Cai - under the field number CWT 6494 - may yet buck the trend, but breaths should not be held.

The species botanic description for *R. mengtszense,* like that for *R. langbianense,* appears within the same *Rhododendrons of the Irroratum Series* dissertation published in Volume 27 of *Transactions*.

R. ningyuenense was also known from just one collection of dried material, this made by Heinrich von Handel-Mazzetti during April 1914, in mixed woodland near Ningyuen in Sichuan. The Austrian botanist also described his find in Volume 57 of *Anzeiger der Akademie der Wissenschaften in Wien,* published during 1920. A slew of seed collections made in 1995 in northeastern Yunnan, which at the time were thought to have been *R. ningyuenense,* have since been formerly recognised as a new taxon, *R. irroratum* ssp. *yiliangense,* so the only documented UK introduction are plants bearing a McLaren V 33 label, the provenance of which is now regarded as questionable (apparently).

Detailed field study reporting is currently lacking for all three rhododendrons, yet two have already been reduced to synonymy by the doyens and a similar fate likely awaits the third, pre-empted herein. Equally, prior to 1991, only one documented introduction of *R. pogonostylum* seed had taken place, the McLaren V 71 gathering made by George Forrest's trained Chinese assistants in the years immediately after the plant hunter's death in 1932 when employed by Lord Aberconway of Bodnant. These trend towards pink flowers, but again, doubts have been expressed about their provenance, despite the plants ticking all the appropriate identification boxes.



R. pogonostylum (AC 1199)



R. pogonostylum (C&H 7185)



R. pogonostylum (McLaren V 71)

R. annae

Hardiness:
H4.
Flowering Period:
May-June.
Distribution in the wild:
NE Upper Myanmar; C & W Guizhou & W Yunnan, China.
Growing in and at the margins of evergreen and mixed forests, and in thickets,
at elevations of 1,200-3,300m.

Identification:
Shrub or small tree, rounded, spreading or broadly upright, 0.5 to 6m high.
Leaves stiff but supple, oblong-elliptic through oblanceolate,
6.5 to 15.3cm long by 1.5 to 4.5cm wide;
lower surface matt, papillate,
with red punctate hair bases overlying the veins.
Inflorescence lax, 6-17-flowered.
Corolla 2.5 to 4cm long, 5-lobed, open-campanulate through cup-shaped,
white through cream, often flushed rose or crimson, with or without crimson, pink or purple spots.
Style densely short-stalked glandular to the tip.
Capsule 10-25mm long, usually sparsely through moderately short-stalked glandular.

Seed Collections:

F 15734	1917/1919	F 27416	1924/1925	R 172	1948/1949
F 15954	1917/1919	F 27703	1924/1925	AC 586	1993
F 24117	1924/1925	F 27705	1924/1925	PW 85	1994
F 27415	1924/1925	F 27706	1924/1925	JN 11079	2011
		F 27713	1924/1925		



R. annae (PW 85)

Named for an otherwise unknown and so therefore mysterious French mademoiselle, *R. annae* was first encountered by the Reverend Émile Marie Bodinier during May 1897 whilst out on a perhaps semi-sacrilegious exploration of Mount Lou-tsang-koan, this located in what was then Kweichow Province, but is now modern-day Guizhou. Volume 12 of the *Journal de Botanique,* published in 1898, contains Adrien Franchet's description, although this has now been reconfigured to cover two former specific species:

R. hardingii hails from western Yunnan. It was discovered and collected in March 1925 near Huang-tsao Pa by H. I. Harding, then H. M. Consul at Tengyueh (Tengchong), who was 'moonlighting' for a certain Scottish plant hunter in-between his official duties. Forrest's botanic appraisal of his friend's find appears in Volume 16 of *Notes from the Royal Botanic Garden, Edinburgh,* published in 1931.

R. laxiflorum had been found a few years earlier by the great man himself, during May 1919, while he was exploring the western side of the Shweli-Salween Divide, and its morphologic portrait, jointly written with Sir Isaac Bayley Balfour, can be found in *Notes,* Volume 13, which was published in 1920.

However, there is still an ongoing debate concerning that applied synonymy - meted out in the Edinburgh Revision *Preliminary Synopsis* paper (*Notes,* Volume 36, 1978) - which is fuelled by an apparent dearth of herbarium specimens in Western botanic institutions. Adoption of the minority opinion would see all three rhododendrons retained as subspecies of *R. annae,* while separation on the basis of corolla size and leaf apex shape is the alternative to formulation as a single taxon, this approach already espoused by Chinese botanists in their *Flora of China* online entry. Such surrogate keying would formulate *R. annae* ssp. *annae* - with an acuminate leaf tip and flowers between 2 and 3cm long - and *R. annae* ssp. *laxiflorum* (including *R. hardingii*) - these having an obtuse blade tip, plus 3 to 4.5cm long corollas. Unfortunately for the 'splitters', David Chamberlain, principal author of those Subgenus *Hymenanthes* changes, has reported that specimens collected from the type locality of *R. annae* bear flowers up to 4.5cm in length, while others of *R. hardingii* have been found carrying blooms that are no more than 2cm long.

The enactment of full synonymy is therefore maintained herein.

Visually, specimens of *R. annae* can easily be confused with those of *R. araiophyllum* or *R. lukiangense,* but on closer inspection, the papillate and punctate lower leaf surface of the former swiftly keys it from the latter pair, as does a sticky ovary and a somewhat sticky seed capsule. Larger, more flexible leaves - 6.5 to 15.3cm long, rather than 2.5 to 7cm - distinguish the species from *R. aberconwayi,* which is also lower growing, to just 2.5m in height as opposed to 6m.

Who first introduced seed or seedlings of *R. annae* into UK cultivation is unknown, as all of the Forrest collections were of *R. hardingii* or *R. laxiflorum,* so the type form growing in many British gardens today most likely originated as a gift from across the Channel, perhaps germinated from the Bodinier collection under the field number 1588. Equally, it could have come from one of the other Missions Étrangères priest-botanists, or even from a gathering made by Cai Xitao (Hse-Tao Tsai) in northwestern Yunnan during 1934. Confusion also reigns over George Forrest's initial 1917-19 introductions, as F 15954 was originally designated *R. hardingii* in the official records, so precedes the actual discovery date by almost six years, while F 15734 was listed as *R. laxiflorum,* the first introduction of which is usually slated to have occurred in 1924 under F 24117.

Worth noting is the fact that the type form of *R. annae* is actually tougher than the H4 hardiness rating suggests, with the species able to be grown in gardens along the east coast where good shelter is already established. Such plants successfully came through the series of recent hard winters without any major harm.

All the other documented collections of *R. annae* are exclusively for southern or west coast gardens, with Peter Cox at Glendoick (to the east of Perth in Scotland) and Alan Hardy at Sandling Park (near Folkestone in Kent), both reporting the loss of the Laxiflorum Group 'Folks Wood' clone due to the severe weather. And even in milder locations, despite the May-June bloom time, the flower buds and young growth can still be lost if heavily frosted at the wrong time. Otherwise, cultivation is without problem and established, mature plants, usually free-flowering.



R. annae



R. annae (PW 85)



R. annae

R. araiophyllum

Hardiness:
H4.
Flowering Period:
April-May.
Distribution in the wild:
NE Upper Myanmar; W Yunnan, China.
Growing in and at the margins of pine and mixed woodland, and in thickets
at elevations of 2,300-3,400m.

Identification:
Shrub or small tree, narrowly or broadly upright, 1.5 to 9m high.
Leaves subcoriaceous, thin, narrowly-elliptic through lanceolate,
5 to 13cm long by 1.6 to 3.2cm wide, the apex usually long acuminate;
lower surface shiny, the midrib usually densely floccose.
Petiole eglandular.
Inflorescence 5-10-flowered.
Rhachis, pedicel and calyx eglandular.
Corolla 2.5 to 4cm long, 5-lobed, open-campanulate through broadly cup-shaped, fleshy,
white, creamy-white, white flushed pink or rose,
with or without either or both spotting or a basal blotch in crimson or purple,
the spots few or many.
Ovary eglandular.
Capsule 10-22mm long.

Seed Collections:

F 15706	1917/1919	F 26792	1924/1925	F 27746	1924/1925
F 15732	1917/1919	F 26797	1924/1925	F 27766	1924/1925
F 16000	1917/1919	F 27367	1924/1925	F 27771	1924/1925
F 17836	1917/1919	F 27368	1924/1925	F 27775	1924/1925
Farrer 811	1919	F 27374	1924/1925	AC 589	1993
F 26421	1924/1925	F 27376	1924/1925	AC 607	1993
F 26438	1924/1925	F 27426	1924/1925	KR 4029	1996
F 26445	1924/1925	F 27427	1924/1925	BASE 9698	2000
F 26481	1924/1925	F 27460	1924/1925	C&N 5784	2007
F 26483	1924/1925	F 27610	1924/1925	C&N 5786	2007
F 26490	1924/1925	F 27620	1924/1925	C&N 5793	2007
F 26491	1924/1925	F 27698	1924/1925	C&N 5796	2007
F 26492	1924/1925	F 27700	1924/1925	C&N 5802	2007
F 26494	1924/1925	F 27702	1924/1925	C&N 5813	2007
F 26528	1924/1925	F 27744	1924/1925		

June 1913 saw George Forrest and his trained assistants exploring the mountains of the Shweli-Salween Divide in western Yunnan, and it was there, growing in the woodland that cloaks those hills, where *R. araiophyllum* was found. Isaac Bayley Balfour and William Wright Smith would later write the botanic description, their prose appearing in Volume 27 of *Transactions of the Botanic Society of Edinburgh,* published in 1917.

The chosen epithet - 'with slender leaves' - denotes one of the characteristics used to key *R. araiophyllum* from the three *R. irroratum* subspecies, its blades 5 to 13cm long by 1.6 to 3.2cm wide, theirs between 5 and 17cm in length and 1.5 to 5cm in width. All four plants sport thinly textured foliage, so the woolly covering of hairs on the *R. araiophyllum* abaxial midrib, plus a lack of any glands on the petiole, pedicel, calyx, ovary, style and capsule, will provide additional confirmation that a correct identification has been made. The *R. araiophyllum* leaves also come with a tapering tip.

Separating the species from *R. lukiangense* relies on the presence of those midrib hairs, plus the lack of a shiny and waxy upper leaf surface, while an absence of any punctate hair bases on the non-papillate lower leaf surface cleaves the taxon from *R. annae,* as does its overall non-sticky nature.

George Forrest introduced three batches of *R. araiophyllum* seed into British gardens during 1917, and then a further slew of lots during 1924-25, with Reginald Farrer the only one of his contemporaries to also secure viable seed, a population discovered in Upper Myanmar during 1919 providing the capsules. A drought of almost seventy years followed that flood, and it was not until 1993, when Alan Clark rediscovered the species in Yunnan, that a reintroduction took place. Three separate expeditions then encountered the taxon over the following decade, the last in 2007, with ten batches of seed returned in total.

The status of *R. araiophyllum* ssp. *lapidosum,* native to Guizhou and northeastern Yunnan, is doubtful, and the association likely wrong, as the tubular-campanulate corolla shape is totally at variance with the openly-campanulate through broadly cup-shaped bowls of the true species. In addition, the leaves are shorter and the abaxial midrib is glabrous. The online *Flora of China* entry confirms these shortcomings.

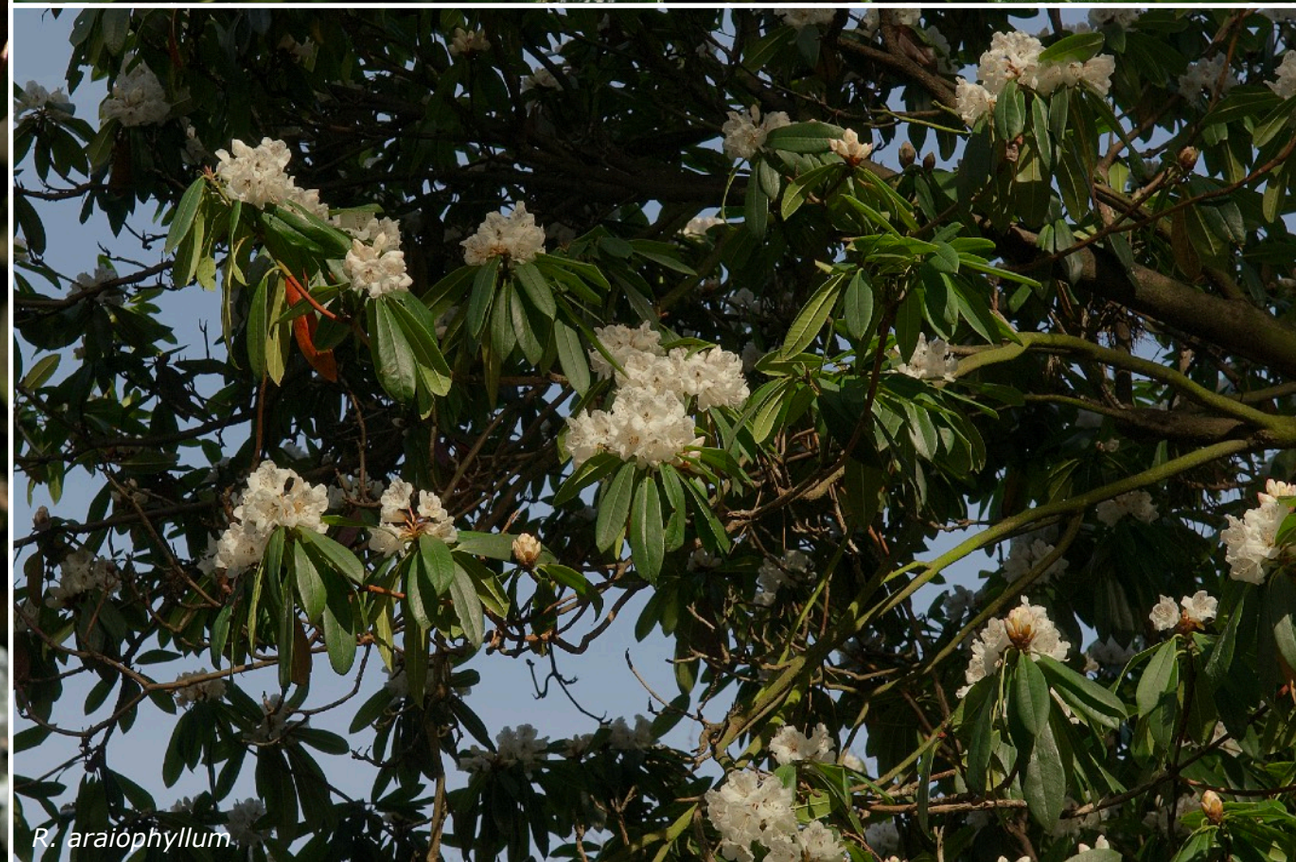
To date, Alan Clark, is the only collector to have secured seed of the taxon, a single gathering introduced into the UK at the end of 1999 under the field number AC 4311, which given the ongoing character debate, does not feature in the table opposite.

Despite growing at elevations between 2,300 and 3,400m, *R. araiophyllum* has been found to be fairly tender in UK cultivation, its hardiness rating requiring the milder climatic conditions on offer along the west coast and in the south, which protect the scarlet-coloured new growth from late spring frosts along with the blooms, which open in April-May. Specimens are not as hardy as those of *R. annae* Laxiflorum Group, for instance, so will need extra fortifications to survive an exceptionally cold east coast winter without the benefit of protection under glass. But given such a woodland surround, as at Edinburgh's Botanic Garden, specimens will prosper.

R. araiophyllum


R. araiophyllum


R. araiophyllum


R. araiophyllum

R. tanastylum* var. *tanastylum

Hardiness:
H3-4.
Flowering Period:
March-May.
Distribution in the wild:
NE Upper Myanmar; SE Tibet; W Yunnan, China; Arunachal Pradesh, India.
Growing in evergreen broad-leaved, pine or mixed forests, in thickets,
amongst scrub on rocky slopes, and along valley floors at elevations of 1,700-3,700m.

Identification:
Shrub or small tree, broadly upright, sometimes spindly, 1 to 12m high;
branchlets sometimes thinly floccose at first, becoming glabrescent, then glabrous.
Leaves elliptic through oblanceolate to broadly lanceolate,
6 to 19cm long by 2 to 6.5cm wide;
lower surface shiny, with red punctate hair bases overlying the veins.
Inflorescence lax, 4-8-flowered.
Calyx glabrous.
Corolla 4 to 5.5cm long, 5-lobed, tubular-campanulate, fleshy,
deep pink through rose-purple to crimson-scarlet, magenta-crimson, purple-crimson or
black-crimson, usually variably darker spotted, with 5 black nectar pouches.
Ovary 6-8-locular.
Capsule 10-25mm long.

Seed Collections:

F 15766	1917/1919	F 26437	1924/1925	KW 10950	1933
F 17829	1917/1919	F 26484	1924/1925	Yu 20997	1937
F 17835	1917/1919	F 26489	1924/1925	KW 416	1938/1939
Farrer 812	1919	F 27372	1924/1925	KW 438	1938/1939
F 24060	1924/1925	F 27457	1924/1925	LS&E 12137	1946/1947
F 24070	1924/1925	F 27627	1924/1925	LS&E 12246	1946/1947
F 24312	1924/1925	F 27632	1924/1925	LS&E 12280	1946/1947
F 26023	1924/1925	F 27714	1924/1925	LS&E 12510	1946/1947
F 26040	1924/1925	F 27757	1924/1925	KW 20680	1953
F 26347	1924/1925	KW 7625	1926	Tran 32	1993
F 26424	1924/1925	KW 8044	1927/1928	KR 3021	1994
F 26427	1924/1925	KW 9236	1931	KR 9744	2010

R. tanastylum* var. *pennivenium

Hardiness:
H3-4.
Flowering Period:
March-May.
Distribution in the wild:
NE Upper Myanmar; SE Tibet; W Yunnan, China; Arunachal Pradesh, India.
Growing in evergreen broad-leaved, pine or mixed forests, in thickets,
amongst scrub on rocky slopes, and along valley floors at elevations of 1,700-3,700m.

Identification:
As var. *tanastylum* except:
Height to 6m;
branchlets often sparsely through moderately floccose, short-stalked glandular.
Leaf upper surface midrib often floccose;
lower surface matt,
with a thin, cobwebby veil of fawn or whitish hairs,
the midrib often sparsely through moderately floccose and short-stalked glandular.
Inflorescence 8-10-flowered.
Pedicel short-stalked glandular.
Calyx floccose, short-stalked glandular.
Ovary 9-10-locular, short-stalked glandular.
Style occasionally short-stalked glandular at the base.

Seed Collections:

F 15745	1917/1919
F 24149	1924/1925
F 26078	1924/1925
F 26477	1924/1925
F 27377	1924/1925

R. tanastylum was discovered on May 19th, 1914, by Frank Kingdon-Ward while he was exploring the Kachin Hills, near Hpimaw, in northeast Upper Myanmar. Ripe capsules were absent that early in the season, so the shrub's introduction into UK cultivation was delayed until 1919, when George Forrest and Reginald Farrer both secured seed. Ward jointly described the new species with Sir Isaac Bayley Balfour in 1917, their outline published in Volume 27 of *Transactions of the Botanic Society of Edinburgh*.

In June of that same year, *R. pennivenium* was found on the mountains of the Shweli-Salween Divide in western Yunnan, Forrest and his Chinese assistants securing both herbarium material and seed. Jointly written by the plant hunter and Bayley Balfour, the species botanic description appears in Volume 13 of *Notes from the Royal Botanic Garden, Edinburgh,* which was published in 1920.

Over time, further collections of both species revealed mirrored distributions without any niche enclaves: in southeast Tibet, western Yunnan, Arunachal Pradesh and northeast Upper Myanmar. There was also an apparent wholesale mix of plants on the ground. This field reporting, along with the clear similarity in their morphologic characteristics, provided sufficient botanic justification for a status reduction, with varietal ranking deemed the most appropriate, and this was applied in the pages of the preliminary texts of the Edinburgh classification revision that features in 1978's Volume 36 of *Notes*.

The sticky branchlets, abaxial midrib, petioles, pedicels, calyx and ovary that are found on *R. tanastylum* var. *pennivenium* are often listed as the key features when deciding which near twin is to hand, but the presence of those glands is not quite as clear-cut and decisive as the botanic portrait might imply, because each of those listed integrants can also come without an adhesive covering. Moreover, on occasion, var. *tanastylum* itself will be found to have glands on most of these components. The salient differences between the two are, therefore: an often-hairy midrib (on both the upper and lower leaf surface); a persistent, thin, abaxial indumentum of fawn or whitish hairs, which may be veil-like or cobwebby; flower trusses with more than eight corollas; and an ovary-capsule with 9 or 10 chambers. This distinguishing quartet of features are only ever present on specimens of *R. tanastylum* var. *pennivenium.*

The lax rather than dense and compact inflorescence, which is never populated by more than ten corollas, immediately distinguishes either of the varieties from their closest relatives in the subsection, *R. gongshanense, R. kendrickii* and *R. ramsdenianum*. So too will the generally much broader leaves - in both size and proportion - these 2 to 6.5cm wide, rather than 1.7 to 4.5cm. Plus, of course, the arachnoid indumentum found on var. *pennivenium*.

Either form of *R. tanastylum* is only reliably hardy outdoors in southern or west coast gardens, though specimens grown from seed collected from populations at the highest reaches of the distribution have survived for many years in sheltered woodland sites along the east coast. Both varieties are usually free flowering once mature, their buds opening from March into May, meaning late spring frosts will clearly be a bugbear. Be aware too that many of the individuals cultivated as var. *tanastylum* or var. *pennivenium* are intermediates with either *R. kendrickii* or *R. ramsdenianum,* some eight affinity seed collections being returned between 2006 and 2011 alone. There are also one or two more obvious natural hybrids masquerading as the true species, complete with incorrect botanic labels, so careful selection at the time of purchase is essential to procure the real McCoy, especially if the lax flower truss is unseen. Narrow leaves are the giveaway that the genuine article is not to hand or being offered for sale.



R. tanastylum (KW 8044)



R. pennivenium



R. pennivenium



R. pennivenium

R. ramsdenianum

Hardiness:
H3.
Flowering Period:
March-April.
Distribution in the wild:
SE Tibet.
Growing in and at the margins of conifer, deciduous and mixed woodland,
and in rhododendron forest, at elevations of 2,000-3,000m.

Identification:
Shrub or small tree, rounded or broadly upright, 1.5 to 12m high.
Leaves oblong-elliptic through oblong-lanceolate to oblanceolate,
8 to 14cm long by 2.5 to 4.5cm wide, the apex cuspidate;
lower surface somewhat shiny,
sometimes with the vestiges of a brown indumentum,
with red punctate hair bases overlying the veins,
the midrib floccose, partially so, or glabrous.
Inflorescence dense, 10-20-flowered.
Rhachis, pedicel and calyx glabrous.
Corolla 2.8 to 4cm long, 5-lobed, tubular-campanulate, fleshy,
deep rose, scarlet through deep crimson to blood red,
with or without either or both darker crimson spots or a basal blotch,
but with 5 conspicuous nectar pouches.
Ovary usually glabrous, rarely stalked-glandular.
Capsule 13-30mm long, often short-stalked glandular.

Seed Collections:

KW 6284	1924/1925	CC 7567	1996
LS&T 3677	1938	AC 3644	1997
LS&E 13561	1946/1947	AC 3646	1997
LS&E 13596	1946/1947	AC 3652	1997
LS&H 16009	1949	KR 6033	1999

Frank Kingdon-Ward was the first Western plant hunter to encounter a population of *R. ramsdenianum,* finding an almost pure forest of 12m-tall, tree-like specimens during his exploration of the Tsangpo Gorge in southeastern Tibet. The date was October 19th, 1924, the gathering of both seed and herbarium material, made under the field number KW 6284. Yet after examination, the botanic experts of the day decided to categorise the find as just another collection of *R. kendrickii* and filed it away as such.

That misjudgement was only corrected when flowering plants at Muncaster Castle in Cumbria were seen by John MacQueen Cowan, who swiftly gave the dried specimens type status and conjured-up a new name, his epithet honouring the garden's owner, Sir John Ramsden. A full botanic description arrived subsequently in 1936, Volume 19 of *Notes from the Royal Botanic Garden, Edinburgh,* containing that text.

Somewhat wider leaves - 2.5 to 4.5cm across as opposed to 1.7 to 4cm - devoid of a long tapering tip, but usually with red punctate hair bases below, are the features that can be used to key *R. ramsdenianum* from its closest ally, *R. kendrickii.* Identification becomes much easier when the plants are in bloom, as the rhachis and pedicel of *R. ramsdenianum* are hairless, this in complete contrast to the densely floccose and occasionally sticky components of the *R. kendrickii* flower truss. Mature specimens of the former will also be found to be taller growing.

A dense inflorescence of 10-20 corollas offers a swift distinction from the 5-10 of the two *R. tanastylum* varieties, while the rugose foliage of *R. gongshanense* speaks for itself if the setose-glandular hairs on the papillose abaxial surface of the leaf blades are not immediately apparent.

Kingdon-Ward's premier gathering was followed by a quartet of reintroductions from Frank Ludlow and George Sherriff between 1938 and 1949, the pair partnering with George Taylor in 1938, Henry Elliot in 1946-47 and John Hicks in 1949. Modern-day reintroductions began with a Peter and Kenneth Cox 1996 find, then a trio of Alan Clark collections from Po Tsangpo, above Showa La, in 1997, and finally, a Keith Rushforth gathering in 1999. All, as previously, were made in southeast Tibet, the only locale where the species is endemic.

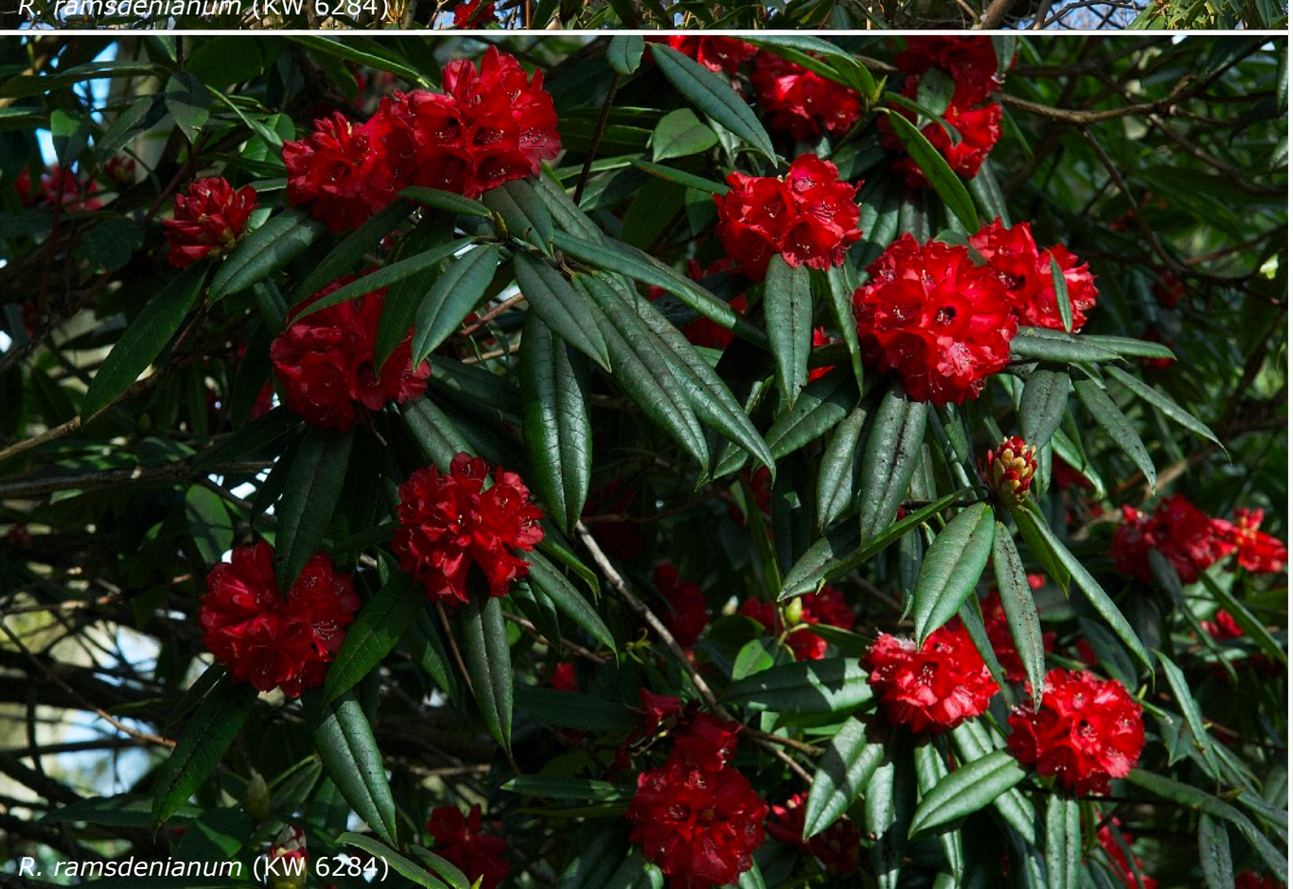
The altitudinal spread of the distribution, between the 2,000 and 3,000m contours, dictates that in UK cultivation, *R. ramsdenianum* is exclusively a resident of mild south or west coast gardens, where winter's bite is moderated enough to accommodate the H3 hardiness rating and ensure the March-April blooms and newly emerging shoots can escape any late spring frosts. Within such a micro-climate, bushy specimens to around 4m high are the norm, though plants can grow much taller and wider in the most favoured locales. Such mature specimens, in open woodland, when bedecked from head to toe with backlit blood-red goblets, will stop you in your tracks. As annually, do those at Muncaster.

R. ramsdenianum (KW 6284)

R. ramsdenianum (KW 6284)



R. ramsdenianum (KW 6284)



R. ramsdenianum (KW 6284)



R. ramsdenianum


R. aberconwayi

R. aberconwayi
Hardiness:
H5.
Flowering Period:
April-May.
Distribution in the wild:
Guizhou, S Sichuan & NE Yunnan, China.
Growing in thickets on mountains slopes
at elevations of 2,200-3,000m.

Identification:
Shrub, broadly upright, 1.5 to 2.5m high.
Leaves thick and rigid, oblong-elliptic through ovate-lanceolate,
2.5 to 7cm long by 0.8 to 3.3cm wide, the apex distinctly mucronate;
upper surface shiny and the margins strongly recurved;
lower surface whitish, matt, papillate,
with red punctate hair bases overlying the veins.
Inflorescence lax through erect, 5-12-flowered.
Corolla 2 to 3.5cm long, 5-lobed, open-campanulate through saucer-shaped,
white, sometimes white flushed pink, occasionally pale rose,
variably crimson or purple spotted.
Style short-stalked glandular to the tip.
Capsule 12-21mm long, sparsely through moderately short-stalked glandular.

Seed Collections:

McLaren T 41	1932/1939
McLaren U 35a	1932/1939
CNW 1136	1994
ZH-G 049	2006
JN 12013	2012
JN 12346	2012

When George Forrest succumbed to a massive heart attack and died in the field while out hunting - for game rather than plants - on January 6th, 1932, the British Vice-Consul at Tengyueh - now, Tengchong - Humphrey Ingelram Prideaux-Brune, not only telegraphed the news to the Foreign Office in London and organised the burial service at the town's small foreign cemetery, but supervised the Scotsman's team of Chinese assistants to ready twelve boxes of herbarium and seed collections for shipment to Edinburgh Botanic. In the midst of the packing, a letter arrived for Forrest from one of the expedition's sponsors, Henry McLaren of Bodnant in North Wales, confirming an arrangement the two men had discussed to employ the Scotsman's trained helpers after he himself had returned home. Prideaux-Brune was pivotal in putting that compact into place, becoming the link between McLaren and Lao Chao, Forrest's headman, and his participation at that crucial moment allowed seven further seasons of botanic exploration and collecting in Sichuan and Yunnan to go ahead. One of the rhododendrons the Forrest-McLaren team found in 1937 - on Lo Shiueh, a mountain in northeastern Yunnan - was new to science and it was later named for their new employer, the MP, industrialist, horticulturalist and hybridiser, who, on the death of his father in 1934, had become the 2nd Lord Aberconway.

In fact, *R. aberconwayi* is the gem amongst their finds.

Within the subsection, it is most closely related to *R. annae* and *R. araiophyllum,* but is easily identified from both by the near saucer-shaped white flowers, stiff branches, a usually lower habit, and the rigid, markedly recurved, ovate-lanceolate through oblong-elliptic leaves. The latter are half the size of those found on *R. annae* - 2.5 to 7cm long instead of 6.5 to 15.3cm - which also has stiff, but supple foliage, while the presence of red punctate hair bases on the underside of those leaves keys *R. aberconwayi* from specimens of *R. araiophyllum,* whose foliage is devoid of such.

Two batches of seed arrived in the UK during 1937 under the McLaren numbers T41 and U35a, with first-flowering occurring in the spring of 1943. Two years later, one of the T41 clones scooped an Award of Merit from the RHS and was christened 'His Lordship'. John MacQueen Cowan then formally described and named the species in the Royal Horticultural Society's 1948 edition of their *Rhododendron Year Book,* which was entirely appropriate given that Henry McLaren was then that gardening organisation's President.

Cultivation is straightforward, the species fully hardy with a H5 rating, so succeeding in gardens along the east and west coasts, but not in the coldest locales inland. Despite flowering in six or seven years from seed, one of the named clones should be sought out from the specialist nurseries, as the quality of the blooms, along with the degree of spotting, is disparate.

Seed from a cultivated plant of *R. aberconwayi,* growing at the Kunming Institute of Botany in Yunnan, was collected in 1994 by Alan Clark, Jens Nielsen and Murray Wilson under the 'field' number CNW 1136, with wild capsules gathered and reintroduced into the UK during 2006 by Zha Hong-Guang, one of the rhododendron-savvy botanists at KIB.

In 2012, Jens Nielsen became the first modern-day Western plant hunter to encounter the species in its natural environment, finding two populations - one group growing on the mountains of southern Sichuan, the other in north central Yunnan - from which viable seed was secured and introduced, beating the unworkable restrictions of the Nagoya Protocol by a whisker.



R. aberconwayi (McLaren T 41)



R. aberconwayi (McLaren U 35a)

R. aberconwayi (McLaren U 35a)

R. gongshanense

Hardiness:
H3-4.
Flowering Period:
February-March.
Distribution in the wild:
Gaoligongshan, NW Yunnan, China.
Growing in and at the margins of evergreen broad-leaved forest
at elevations of 2,100-2,600m.

Identification:
Shrub or small tree, rounded through broadly upright, 2.5 to 10m high.
Leaves narrowly lanceolate through oblanceolate,
10 to 21cm long by 2.5 to 4.2cm wide;
upper surface rugose;
lower surface matt, sparsely setose-glandular, the brown hairs scattered or in tufts,
the covering thin and often detersile,
leaving papillate or punctate hair bases overlying the veins.
Inflorescence dense, 17-21-flowered.
Corolla 3 to 3.5cm long, 5-lobed, funnel- through tubular-campanulate, fleshy,
deep red, paling, or deep pink,
with 5 darker-coloured nectar pouches.
Capsule around 20mm long.

Seed Collections:

CCHH 8100	1997
BASE 9657	2000
DGEY 224	2001

The penultimate member of Subsection *Irrorata* to be discovered, *R. gongshanense,* was described and named by Tien Lu Ming, of the Kunming Institute of Botany, in Volume 6 of *Acta Botanica Yunnanica,* this published in 1984. First encountered by a Western plant hunting expedition in 1997, with specimens located in woodland on the eastern and western slopes of the Gaoligongshan, the southern end of the Hengduan mountain range, in Gongshan County, northwest Yunnan, the species has so far only been found in this one small area, growing in the same evergreen broad-leaved forest as *R. sinogrande*.

The taxon is most closely related to two other red-flowering and specific ranked occupants of the subsection, but is swiftly distinguished from both *R. kendrickii* and *R. ramsdenianum* - as well as from the two *R. tanastylum* varieties - by the long, narrow leaf blades - 10 to 21cm in length and 2.5 to 4.2cm in width, rather than 6 to 19cm and 1.7 to 6.5cm - especially as these have a heavily wrinkled upper surface. Just like its kindred cousins, the new growth is coloured bronze when it first extends, but when the flower buds of *R. gongshanense* swell and open, they will be found to be more populous, with all the trusses holding between 17 and 21 corollas, instead of 7 through 20.

Wild-collected seed, supposedly of *R. gongshanense,* was available to members of the American Rhododendron Society through its Seed Exchange in 1990 and 1991 - ARS 064 and ARS 070, respectively, are the numbers - the two lots supplied in good faith by the Rhododendron Species Foundation of Seattle, Washington State, so the taxon might also have been introduced into a few British gardens at the same time. However, there is doubt over the authenticity of the gathering.

The material was part of a larger collection made for the RSF by Chinese botanists, most of which proved unviable and any seedlings that did germinate, were unfortunately not as advertised, this confirmed with Steve Hootman, the RSF Executive Director and Curator. The first pedigreed gathering to arrive in the UK therefore came courtesy of a Chamberlain, Cox, Hootman and Hutchison expedition to northwestern Yunnan that took place in the autumn of 1997, with seed filed under the field number CCHH 8100.

Not unsurprisingly, with just two other seed batches returned, *R. gongshanense* is a decided rarity in UK cultivation, though its popularity should increase substantially when knowledge of those deep red flowers becomes more widespread. Regrettably however, the species will exclusively be a plant for western seaboard gardens given its proclivity for low altitude, warm-temperate evergreen forest. New vegetative growth emerges very early in the season and Peter Cox has already reported that the species is effectively useless in cultivation at Glendoick, his garden set above the River Tay, east of Perth, in Scotland, because of this irredeemable facet.

R. irroratum* ssp. *yiliangense

Hardiness:
H3-4.
Flowering Period:
April-May.
Distribution in the wild:
Yiliang, NE Yunnan, China.
Growing in broad-leaved forests and thickets on mountain slopes,
at elevations of 1,800-2,000m.

Identification:
Shrub or small tree, bushy, spreading or broadly upright, 1.5 to 9m high.
Leaves fairly rigid, narrowly elliptic through oblanceolate to lanceolate,
7 to 17cm long by 1.9 to 4cm wide;
lower surface matt, papillate,
with red punctate hair bases overlying the veins.
Inflorescence dense or lax, 8-12-flowered.
Calyx glabrous, moderately through densely short-stalked glandular.
Corolla 4.5 to 5.5cm long, 5-lobed, tubular-campanulate through campanulate,
white through cream to pale pink, or pale yellow,
variably crimson or purple spotted, rarely without spots,
with 5 nectar pouches.
Ovary densely puberulous, the hairs adpressed and setose,
and sparsely short-stalked glandular, the glands often in clumps.
Style not hairy, glandular to the tip.
Capsule 10-30mm long, short-stalked glandular at first, with only the vestiges remaining.

Seed Collections:

AC 1142	1995	AC 1172	1995	C&H 7100	1995
AC 1152	1995	AC 1175	1995	EGM 339	1995
AC 1162	1995	AC 1211	1995	EGM 340	1995

R. yiliangense is the most recent addition to the ranks of Subsection *Irrorata,* being discovered and introduced by a plant hunting team that included Peter Cox and Peter Hutchison, Steve Hootman and Ted Millais, all of whom were on the same expedition in northeast Yunnan during early October 1995. The population of plants they found growing near Xiaocoaba, in Yiliang County, had previously been identified as *R. irroratum* ssp. *ningyuenense* by Chinese botanists and photographs of their pale yellow flowers had been included in the second volume of *Rhododendrons of China,* published in 1992. A second Western expedition, this lead by Alan Clark, would also visit the same site to gather seed just a couple of weeks later. All told, nine batches of capsules were gathered up and these remain the only lots returned to date.

Fast-forward to when those plants began to flower in UK gardens and knowledgeable observers spotted that the calyx was glabrous-glandular, and the ovary, hairy-glandular, a combination that until then had not been covered by any existing botanic description within the Subsection *Irrorata* family of species. John McQuire and Mike Robinson were the two rhododendron experts who noted those different morphologic characteristics, and with Neil Lancaster, a botanist based at RHS Wisley, formerly described the new taxon in Volume 62 of *Rhododendrons, Magnolias and Camellias,* which was published in 2011.

The corolla colour of those cultivated plants was pale yellow, yellow-white, or white shading to pink, with some forms of the latter also displaying longitudinal pink stripes along the lobes. On clones where this occurred, the pedicels were also stained red.

Several specimens sported decidedly ‘muddy’ blooms, and most exhibited spots.

All the introduced seed was gathered at altitudes around the 1900m contour, which for northeast Yunnan, equates to a mild east coast, southern or west coast site in the UK, so the subspecies as currently known, is not as hardy as specimens of ssp. *irroratum,* or those of ssp. *pogonostylum*.

Keying the three taxa from each other relies solely on the presence or not of non-sticky hairs amongst the short-stalked glands found on the calyx and ovary. The matrix of possibilities has glabrous-glandular on both, for ssp. *irroratum;* hairy-glandular on both, for ssp. *pogonostylum;* and a glabrous-glandular calyx, but hairy-glandular ovary for the last, ssp. *yiliangense*.

On the ground, a north-south distribution progression exists that transits from one extreme to the other, from ssp. *irroratum* to ssp. *pogonostylum,* with ssp. *yiliangense* placed off to one side in northeastern Yunnan. Yet plant populations have been found that boast both antonyms, plus there are intermediates, which likely means a full synonymic consolidation under one specific species once the geneticists report back.

Identifying the three *R. irroratum* subspecies from *R. anthosphaerum* when out of flower is, as previously indicated, as near to an impossibility as you can get, but the glandular ovary and style provide sufficient distinction once those corollas open.

R. yiliangense

Subsection *Lanata:*


R. lanatum (KW 8288)



Taxa:

R. lanatoides
R. lanatum
R. lanatum ssp. *flinckii*
R. lanatum ssp. *lanatum*
R. lanatum ssp. *tsariense*
R. luciferum

Taxonomic Revision:

Post-publication of the 1996 Edinburgh Revision classification of Genus *Rhododendron,* field study reporting indicated that three of the five specific ranked taxa should be reduced to subspecies status. The transfer from Section *Ponticum* to Section *Leiorrhodium* reflects the 2010-published Milne-Chamberlain chloroplast phylogeny dataset.

Subsection Morphology:

Shrubs or small trees, bushy and compact, rounded, spreading or broadly upright,
0.3 to 7.5m high;
branchlets densely woolly-tomentose,
the hairs rusty-brown, dark or pale brown, fawn, cinnamon or whitish;
bark greyish-purple, moderately rough.

Vegetative buds densely tomentose.

Leaves evergreen, coriaceous, obovate through elliptic to lanceolate,
1.8 to 14 cm long by 1 to 5.4cm wide,
apex acute through acuminate, rounded or obtuse,
base rounded, cuneate or obtuse, retained 1-3 years;
upper surface dark through pale green, shiny or matt,
often with persistent indumentum at first, usually becoming glabrous,
the hairs rarely remaining beyond the growing season,
midrib grooved, often tomentose at the base or part way along its length,
the veins deeply impressed, flat or with slightly recurved margins;
lower surface with a dense and continuous lanate tomentum, unistrate,
cinnamon, fawn, light brown to rusty-brown, sometimes white or creamy-white at first,
thick or thin, the branched dendroid hairs straight or crispate,
the midrib and veins prominent and densely hairy,
though usually hidden under the indumentum.

Leaf anatomy comprises a 3-layered upper epidermis, with the cells in all three layers of roughly equal size; the cuticle is around half as thick as the cells are deep; water tissue is absent; the lower epidermis cells are not prolonged into papillae.
Sclereid cells are absent.

Petiole 5-30mm long, densely tomentose.

Inflorescence terminal, lax or dense, 2-15-flowered; the buds densely tomentose.

Rhachis 2-20mm, moderately through densely tomentose.

Pedicel 6-18mm long, moderately through densely tomentose.

Calyx minute, 5-lobed, rarely a mere rim,
the lobes triangular, ovate or rounded and 0.5-2mm long,
the outer surface and margins usually densely tomentose, rarely glabrous.

Corolla 2.5 to 5cm long, 5-lobed,
campanulate through openly-campanulate, rarely saucer-shaped, or funnel-campanulate,
pale yellow, white through pink,
with or without a varying degree of crimson, purple or red spotting,
the lobes emarginate.

Stamens 10, unequal;
filaments white-pubescent at the base, usually densely so.

Ovary ovoid, conoid or oblong, 4-6mm long, 5-locular, densely tomentose,
the hairs rusty-brown, brown, fawn or whitish.

Style glabrous.

Capsule elongate-cylindric, oblong or conoid, 10-25mm long,
straight through moderately curved, moderately through densely tomentose,
the hairs rusty-brown, brown, cinnamon or fawn.

Seeds elongate, unwinged, but each end with appendages.



R. flinckii (Hedegaard B112)



R. lanatoides (KW 5971a)

R. lanatum* ssp. *lanatum

Hardiness:
H5-6.
Flowering Period:
April-May.
Distribution in the wild:
S Tibet; Sikkim & Arunachal Pradesh, India; W Bhutan.
Growing in birch, bamboo, conifer or rhododendron forests,
in rhododendron thickets, and on steep banks and cliffs,
at elevations of 3,000-4,400m.

Identification:
Shrub or small tree, bushy through broadly upright,
0.5 to 3m high.
Leaves thick, oblong-obovate through obovate and ovate to narrowly elliptic,
6 to 12cm long by 1.8 to 5cm wide,
apex obtuse through rounded;
upper surface dark green and shiny,
variably rusty-brown tomentose at first, but soon becoming glabrous,
the midrib densely woolly throughout;
lower surface indumentum thick,
grey-fawn, pink-brown, rusty-brown or coffee-brown,
the hairs crispate,
with medium to long stems and very long but narrow, filamentous branches.
Inflorescence lax, 5-10-flowered.
Corolla 3 to 5cm long, campanulate through open-campanulate,
creamy-yellow through sulphur-yellow.

Seed Collections:

Cooper 3484	1914	LS&H 20628	1949
Cooper 3490	1914	LS&H 20648	1949
KW 8288	1927/1928	Bowes-Lyon 3152	1966
KW 13750	1937	Bowes-Lyon 3232	1966
L&S 3063	1937	Bowes-Lyon 15040a	1969
L&S 3074	1937	Bartholomew 185b	1974
LS&T 3620	1938	KR 873	1985
LS&T 6549	1938	KR 885	1985
LS&T 6652	1938	ESIK 220	1992
LS&H 16155	1949	DSE 76	1995
LS&H 16324	1949	DSE 87	1995
LS&H 18890	1949	TDA 025	2011
LS&H 18998	1949		

The first member of the quintet to be discovered was in fact *R. lanatum,* though not in 1848 as the official records would have you believe, but much earlier, in 1830, and by Colonel William Henry Sykes, not Sir Joseph Dalton Hooker, although the species received its formal botanic description in the second part of Hooker Jr.'s *The Rhododendrons of Sikkim-Himalaya,* which was published in March 1851. By then however, specimens of *R. lanatum* were already flowering in at least one British garden:

> 'I have here a good many Himalayan species between seventy and eighty years old, including *falconeri, niveum, barbatum, thomsonii, lanatum, fulgens, campanulatum* of several varieties, *hodgsonii and arboreum.*'

So wrote Colonel John Middleton Rogers for an article entitled *Notes on the Garden of Riverhill, Sevenoaks,* published during 1916, in Volume 1, Number 1, of *The Rhododendron Society Notes*. As mentioned previously, the author was the grandson of another John Rogers (1807-1867), who was a scientist and botanist, and sponsor of many plant hunting expeditions. He had a passion for Himalayan plants and rhododendrons in particular, and obtained seed from Colonel Sykes in 1831 while the British East India Company employee was on furlough and had returned to the UK. Independent confirmation of the age of the Himalayan plantings at Riverhill House is provided through a number of other sources, *Rhododendrons and the Various Hybrids,* written by John Guille Millais and published in 1917, being one of these. That corroboration may be found in the text discussing a natural hybrid found growing in the grounds that was exhibited as early as 1882 and finally given the epithet 'Colonel Rogers' on being formally introduced during 1926. So yet again, as with many of the overshadowed William Griffith finds, Sir Joseph is only due an also-ran credit, with the actual kudos for the discovery going to William Sykes.

Subsequent seed and herbarium collections on the ground in southern Tibet, western Bhutan, and the northeastern Indian states of Sikkim and Arunachal Pradesh, along with the field study reporting associated with these gatherings, have shown a merging of the *R. lanatum* populations with those of *R. flinckii* and *R. tsariense,* each overlap giving rise to a swarm of intermediates. This, and their obviously close morphology, has necessitated a status reduction for all three taxa, with placement at subspecies ranking under the earliest of those described plants, *R. lanatum*.

Relatively sturdy and shiny leaves, plus a thick abaxial indumentum are the principal features that distinguish *R. lanatum* ssp. *lanatum* from *R. lanatum* ssp. *flinckii,* while larger leaves and pale yellow flowers are the integrants needed to key specimens of the former from those of *R. lanatum* ssp. *tsariense*. Shorter though wider blades than those borne on *R. lanatoides,* which also has smaller and white coloured corollas, do the cleaving trick for that pair, *R. luciferum* having leaves with a blunt or rounded tip, instead of a sharply pointed apex. Less decisively, the leaf and flower buds of ssp. *lanatum* bear a denser, more pronounced covering of tomentum than resident on the other subsection members.

Mature specimens of *R. lanatum* will be found in most specialised collections despite cultivation being far from straightforward unless an understock is employed. Lacking such, two rather critical soil preferences will need to be met: the rooting medium composition should be near wholly organic, composed of leaf mould, rotting twigs and bark; and the drainage of such must be exemplary. A grafted plant solves those issues, but even before the demise of so many specialist nurseries, very few enthusiasts would have been able to secure a scion impeccably fused to an alternate rootstock because the success rate for such bonding was extremely low. Mound planting, therefore, remains the best option for west coast gardeners lacking a steepish hillside, and despite the H5-6 hardiness rating, along the east coast or inland, shelter will still need to be provided.

R. lanatum (KW 8288)



R. lanatum (KW 8288)



R. lanatum (KW 8288)



R. lanatum (Bartholomew 185b)

R. lanatum* ssp. *tsariense

Hardiness:
H5-6.
Flowering Period:
March-May.
Distribution in the wild:
S & SE Tibet; Arunachal Pradesh & Assam, India; E Bhutan.
Growing in conifer or mixed forests, in bamboo or rhododendron forests or thickets, on open rocky hillsides and on cliff edges, at elevations of 3,000-4,500m.

Identification:
Shrub, bushy and compact, rounded, spreading or broadly upright, 1 to 3.6m high.
Leaves thick, obovate through elliptic-oblong,
1.8 to 6.2cm long by 1 to 3cm wide,
apex shortly acuminate through obtuse;
upper surface dark green and shiny, slightly rugulose,
brown-tomentose at first, remaining so often beyond the growing season,
then becoming glabrous,
the midrib usually tomentose, the margins often slightly recurved;
lower surface indumentum thick, white or creamy-white at first,
turning rusty-brown, pale fawn or cinnamon,
the hairs with long stems and very long but narrow, filamentous branches,
or with short stems and shorter branches.
Inflorescence lax, 2-5-flowered.
Corolla 2.5 to 4cm long, campanulate through open-campanulate,
white through pale pink, cream flushed pink.

Seed Collections:

Cooper 2148	1914	LS&T 4757	1938
L&S 1083	1934	LS&T 5581	1938
KW 12404	1935	LS&T 6657	1938
L&S 1305	1936	LS&T 6661	1938
L&S 1364	1936	LS&E 12498	1946/1947
L&S 1636	1936	AC 5443	2004
L&S 2210	1936	KR 9623	2008
L&S 2766	1936	KR 8195	2005
L&S 2858	1936	KR 8201	2005
L&S 2894	1936	KR 8222	2005
KW 13663	1937	KR 8228	2005
LS&T 3645	1938	KR 8231	2005
LS&T 3769	1938	KR 8287	2005

R. tsariense was first found by Roland Cooper at Lhabja, in the Bumthang District of Bhutan, during September, 1914, though an initial determination mistakenly identified it as *R. lanatum,* which meant a botanic description was not forthcoming until 1937. This was written after additional dried material and seed had been received from Frank Ludlow and George Sherriff in 1934 - L&S 1083, gathered while they were exploring in the south and southeast of Tibet - and from Frank Kingdon-Ward in 1935 - KW 12404, a collection made in north-east India. John MacQueen Cowan's text appears in Volume 19 of *Notes from the Royal Botanic Garden, Edinburgh,* and his chosen epithet, which reflects the population of plants discovered in the Tsari valley by Ludlow and Sherriff, indicates Cooper's find was still being misconstrued at the time of writing.

The corollas of *R. lanatum* ssp. *tsariense* have a white through pink instead of pale yellow pigmentation, while the leaf blades of the true species are no more than 6.2cm in length, these the distinguishing features that cleave the taxon from its subspecies sisters. However, a named trio of 'stabilised' if not fully speciated intermediate forms, bridging the differences with those two relatives - although their morphologic feature set is closest to that of ssp. *tsariense* - are currently maintained at group status:

Magnum Group plants are taller growing to a height of 3m, at least in cultivation, with leaves that are 8.5cm long and 4cm wide. Cooper's 1914 collection is the type specimen and the only UK introduction to date, even though this is currently filed as *R. flinckii* in the Edinburgh Botanic herbarium. The record indicates both a past and modern-day determination as *R. lanatum,* although the holotype inscription names it *R. tsariense* var. *magnum*. Such verification yo-yoing may yet gift the premier species discovery to Ludlow and Sherriff unless the equally volatile 1915 gathering under Cooper 3990 - currently lodged as *R. flinckii* - comes to the rescue.

Poluninii Group plants have more corollas in the inflorescence, 5 to 11 instead of 2 to 5, and their leaves vary from 6.2 to 8cm in length. The flowers are creamy-white and fairly heavily spotted red on the upper lobe. Ludlow and Sherriff made the first gathering in May 1937 in central Bhutan, at Dunshinggang, in the Black Mountains (now within the Jigme Singye Wangchuck National Park). Opinions regarding the taxon's morphology are split, with H. H. Davidian opting for specific status, while David Chamberlain suggests that it could be a natural hybrid between *R. flinckii* and either *R. campanulatum* or *R. wallichii.* The original dried material is categorised as 'inadequate', so the description was based on the characteristics exhibited by a cultivated plant, this grown from seed returned by Ludlow and Sherriff that bore *R. tsariense* labels - one packet of two 'proved' to be *R. poluninii,* the other *R. tsariense* var. *trimoense* (as each was then classified). The epithet is an honorific for author, botanist, collector and Hellenic tour guide, Oleg Vladimirovitch Polunin, and two recent gatherings made by Keith Rushforth in the West Kameng district of Arunachal Pradesh - KR 8228 and 8231 - may yet sort out the confusion.

Trimoense Group plants hail from the northerly reaches of the distribution in southern Tibet. They also have leaves that are slightly larger than the type and display a paler green pigmentation, but more significantly, come with a pale fawn to near white tomentum on the branchlets, petioles, rhachis, pedicel, calyx, ovary and capsule. Credit for the November 1936 discovery goes to Ludlow and Sherriff, with the specimens and seed they found at Trimo, in the Nyam Jang Chu valley, returned under L&S 2894. The four remaining Keith Rushforth 2005 collections, again made in West Kameng, are also members of the group.

R. tsariense flowers from March into May, has the same H5-6 hardiness rating as the other two subspecies, but happily, is a mite less finicky with regard to soil conditions, though very swift drainage is still a prerequisite. Specimens are quite slow growing, taking a fair few years to reach flowering size, and again, east coast and inland gardens will need to provide a sheltered nook for the best results, despite the plants being fully hardy.

Two forms of the true species are in cultivation: a low growing, compact bush, shy flowering, but a superb foliage plant for small gardens; and a larger, free-flowering plant, rounded or spreading, to around 1.5m high. Vegetative propagation is on the wrong side of exactingly awkward, so the divine and award-winning 'Yum-Yum' clone will only rarely be available for purchase.



R. tsariense

R. tsariense (L&S 2766)

R. tsariense



R. tsariense (Cooper 2148) Magnum Group



R. tsariense Poluninii Group



R. tsariense Poluninii Group




R. tsariense Trimoense Group


R. tsariense Trimoense Group


R. tsariense Trimoense Group

R. flinckii (Hedegaard B 112)

R. lanatum* ssp. *flinckii

Hardiness:
H5-6.
Flowering Period:
April-May.
Distribution in the wild:
Arunachal Pradesh, India; E Bhutan.
Growing in Abies forest, at forest margins, and on cliffs, at elevations of 3,000-4,150m.

Identification:
Shrub or small tree, broadly upright, 1.5 to 2.5m high.
Leaves somewhat thin, oblong-lanceolate through oblong-oval to oblong-elliptic or elliptic,
4 to 10cm long by 2 to 4.5cm wide,
apex shortly acuminate or rounded;
upper surface pale green and matt,
densely rusty-brown tomentose at first,
remaining moderately hairy or with the vestiges of hairs,
the midrib densely woolly throughout or along the lower half;
lower surface indumentum thin,
white or creamy-white at first, turning bright rusty-brown,
the hairs with very short stems and numerous, narrow, medium-length branches.
Inflorescence lax, 3-8-flowered.
Corolla 3.3 to 5cm long, campanulate,
pale yellow through sulphur-yellow to near white.

Seed Collections:

Cooper 3990	1915	Kinmouth 85	1990
L&S 3089	1937	Sinclair 1735	1993
Hedegaard B112	1983	Bowes-Lyon 10141	1994
KR 1234	1987	KCSH 0323	2003
KR 1442	1987	KCSH 0371	2003
KR 1465	1987	NAPE 0137	2003
KR 1496	1987	AC 5425	2004
CHM 3080	1988	AC 5429	2004
CHM 3136	1988	AC 5433	2004
EGM 77	1988	AC 5441	2004
EGM 79	1988	AC 5443	2004
EGM 90	1988	KR 8577	2006
AC 101	1990	KR 8578	2006
C&S 1594	1990	KR 8585	2006
C&S 1639	1990	KR 9535	2008
C&S 1647	1990	KR 9536	2008
Fox 55	1990	KR 9537	2008

An examination of the Edinburgh Botanic herbarium plates for *R. flinckii* will show a varied set of determinations made over the years by the institute's botanists. Dated labels on the dried material - gathered first by Roland Cooper in 1915, then by Frank Ludlow and George Sherriff in 1937, and reintroduced by Johannes Hedegaard in 1983 - indicate a lack of consensus between the genus-savvy doyens both before and after specific status was awarded in 1975 - *Quarterly Bulletin, American Rhododendron Society,* Volume 29, No. 3 - with H. H. Davidian choosing an honorific for Karl Evert Flinck, a respected Swedish botanist and expert on cotoneasters, as the epithet.

Prior to that reassessment, the specimens had been filed under *R. lanatum,* a position still endorsed by David Chamberlain and maintained on the *Flora of China* website.

Without a doubt, the two species are very closely related and field studies have found that they merge in Bhutan, but at either end of their morphologic spectrum, the character differences between them are clear:

R. flinckii has a relatively thin leaf, pale green and matt above, which is densely rusty-brown-tomentose at first. The blade's underside has a thin, felted, bright rusty-brown indumentum that is white or creamy-white at first, this composed of multi-limbed hairs with very short stems and narrow, medium length branches. In comparison, *R. lanatum* has a relatively thick leaf, dark green and shiny above, which is sparsely through moderately rusty-brown tomentose at first. The underside has a thick, woolly, grey-fawn, pink-brown, rusty-brown or coffee-coloured indumentum, composed of multi-limbed hairs with medium to long stems, which have very long and slender, filamentous branches. These hairs do not change colour does as the leaf matures and they are also crisped - bending back to almost touch their point of origin.

Similar or even starker character arcs regularly occur in the wild populations of other rhododendron species that are encompassed within a single botanic description, but where warranted, geographic discrimination determines that such a taxon may be subdivided if morphological intermediates exist in a transitional area. That is the case here, evidenced by field study, which determines that subspecies ranking is the taxon's correct status.

As indicated above, Roland Cooper was the first plant hunter to discover *R. lanatum* ssp. *flinckii* while exploring the hills of Bhutan on a collecting expedition sponsored by A. K. Bulley, the owner and founder of Ness Nurseries, which later became Bees Seeds Ltd. Field number 3990, a gathering made on June 18th, 1915, is the type herbarium specimen, but the cultivated plants grown from this introduction display considerable variability in foliage dimensions and tomentum depth, and open pink pigmented corollas, which all indicate the probability of natural hybridity in the pollination process. Treatment of these as such is the most appropriate course, reflecting the presence of pink-flowering natural hybrids on the ground in the wild - the likely parents being either *R. campanulatum* or *R. wallichii* - and the consistency of corolla colour observed across the ssp. *flinckii* and ssp. *lanatum* endemic distributions. Hands-on doyens Peter and Kenneth Cox, writing in their 1997-published *Encyclopedia of Rhododendron Species,* have suggested that similar introductions with pink flowers might be referable to *R. lanatum* ssp. *tsariense* Magnum Group.

Within Subsection *Lanata,* the leaves of *R. lanatoides* and *R. luciferum* are sufficiently distinct to preclude misidentification with ssp. *flinckii,* being longer or larger, as well as, respectively, narrowly lanceolate-shaped or sharply pointed.

In cultivation, *R. flinckii* has proved the easiest of the three subspecies to grow, eschewing the need for a 100% organic compost, though drainage still needs to be swift. It also does fine on its own roots. Fully hardy, the flush of recent gatherings from Bhutan and Arunachal Pradesh do best when given a site sheltered from the wind, especially in gardens along the east coast or inland.



R. flinckii (CH&M 3136)



R. flinckii (AC 5429)



R. flinckii (Hedegaard B 112)

R. lanatoides

Hardiness:
H5.
Flowering Period:
February-April.
Distribution in the wild:
Kongbo, SE Tibet.
Growing in conifer forest, on rocky slopes and in gullies, at elevations of 3,200-3,700m.

Identification:
Shrub or small tree, bushy through broadly upright, 2 to 4m high.
Leaves lanceolate through narrowly-oblong,
9 to 11cm long by 2 to 3.2cm wide,
apex acuminate;
upper surface dark green and shiny,
greyish-white tomentose at first,
the hairs somewhat persistent, becoming patchy and then glabrous,
the midrib tomentose at the base, the margins somewhat revolute;
lower surface indumentum thick,
fawn through light or dark brown, the hairs with long straight branches.
Inflorescence dense, 10-15-flowered.
Corolla 3.5 to 4cm long, campanulate,
white, often with some pink flushing.

Seed Collections:

KW 5971	1924	AC 4581	2000
LS&E 13746	1947	AC 4582	2000
LS&E 15006	1947	AC 4586	2000
CC 7540	1996	AC 4645	2000
CC 7574	1996	AC 4659	2000
CC 7577	1996	AC 4660	2000
KC 9702	> 1997	AC 4662	2000
AC 4527	2000	TARRVS 142	2002
AC 4532	2000		

Towards the end of July 1924, while exploring the slopes of Namcha Barwa below the Nam La pass in southeast Tibet, Frank Kingdon-Ward found a group of rhododendrons that for almost sixty years would reside under the catch-all cloak of *R. roxieanum* aff. Bizarrely, cultivated plants from the collection - under the field number KW 5971 - established and growing at Muncaster Castle (but now sadly lost), would also be deemed to be close to a Subsection *Selensia* species, *R. calvescens* (*The Rhododendron Handbook,* Part 1, 1967). It took until 1982 for the taxon to be formally recognised as unique and given specific status, David Chamberlain re-examining the herbarium material for his Subgenus *Hymenanthes* revision and determining that two 1947 gatherings by Frank Ludlow, George Sherriff and Colonel Henry Elliot (of the Indian Medical Service) - LS&E 13746 and 15006 - were neither *R. luciferum,* nor *R. roxieanum,* as previous pundits had supposed, but as with Kingdon-Ward's earlier find, something new.

R. lanatoides was the name chosen for the taxon - the epithet reflecting the visual resemblance to *R. lanatum* - and its botanic description finally appeared in Volume 39, Number 2, of *Notes from the Royal Botanic Garden, Edinburgh*. Yet despite mature specimens with collector reference details being located in a number of UK gardens, doubts remained over the taxon's veracity and status, alternative opinions suggesting a natural hybrid provenance. Fourteen years would pass before the endemic populations in the wild were rediscovered, mollifying the sceptics, Peter and Kenneth Cox finding a forest of plants in a gorge at the base of Tra La, in southern Tibet, during 1996, and other Western teams reporting that the species was also common on the lower slopes of Gyala Peri, further down the Rong Chu valley.

R. lanatoides is most closely related to *R. luciferum,* the final member of the Subsection *Lanata* contingent to be discovered, but differs in leaf shape - lanceolate as opposed to elliptic through ovate - and flower colour - white flushed pink, rather than pale yellow - characteristics that also distinguish the taxon from *R. lanatum*. A link with *R. vellereum* of Subsection *Taliensia* (sunk under *R. principis,* but restored in Volume 4 of this work), is also apparent, and on the ground both plants have been found to grow in the same area, flower at the same time and hybridise with each other. Yet a glance at the leaf underside will swiftly key them apart, the spongy, bistrate indumentum of *R. vellereum* immediately obvious, especially given the presence of a skin-like pellicle.

The geographic distribution of these three species - *R. lanatoides, R. luciferum* and *R. lanatum* - across southeastern Tibet, shows a clear east to southwest progression in their botanic features, from *R. lanatoides,* through *R. luciferum,* to the more widespread *R. lanatum,* whose diffusion of course extends into Bhutan, Sikkim and Arunachal Pradesh. Sitting behind a desk, the argument might be made that both *R. lanatoides* and *R. luciferum* could be reduced in ranking to subspecies status and placed under *R. lanatum* (the earliest described taxon), but on the ground, field study has yet to produce evidence of any intermediates or population overlaps, as was the case with *R. lanatum, R. flinckii* and *R. tsariense,* which requires the status quo to be maintained.

Before *R. lanatoides* was reintroduced in 1996, only a handful of specimens remained in UK cultivation and these had proved difficult or near impossible to propagate, defying even expert grafters, so youngsters from the ten new seed collections were quickly sought out by aficionados and in time, superb foliage plants will result, though these will require shelter from the wind to develop fully and good frost protection if the smallish, white-pigmented corollas are to escape damage. Flower buds can begin swelling as early as February, with the season often extending to April, so shield accordingly to avoid disaster. Otherwise, the species is fully hardy and suitable for east coast, as well as inland sites, although not the coldest or most exposed residences.

R. lanatoides (KW 5971)

R. lanatoides (KW 5971)

R. lanatoides (KW 5971)

R. luciferum

Hardiness:
H5.
Flowering Period:
April-May.
Distribution in the wild:
SE Tibet.
Growing in bamboo, conifer or rhododendron forest, or on open hillsides,
at elevations of 3,350-4,000m.

Identification:
Shrub or small tree, bushy through broadly upright, 1.5 to 7.5m high.
Leaves oblong through elliptic-oblong to oblong-lanceolate,
8 to 14cm long by 2 to 5.4cm wide,
apex acute through acuminate, sometimes abruptly so;
upper surface dark green and shiny, glabrous,
the midrib densely woolly-tomentose throughout or only at the base;
lower surface indumentum thick, tawny or fawn,
the hairs with short stems and very long but narrow, filamentous branches.
Inflorescence dense, 8-10-flowered.
Corolla 3 to 4.5cm long, funnel-campanulate,
pale yellow.

Seed Collections:

L&S 1389	1936
L&S 1557	1936
L&S 1558	1936
L&S 1608	1936
L&S 1610	1936
L&S 1762	1936
LS&T 3793	1938
LS&T 3976	1938
LS&T 4359	1938
CER 9907	1999
CER 9935	1999

R. luciferum was discovered by Frank Ludlow and George Sherriff on April 29th, 1936, at Chayul Chu, Lung, in southern Tibet, and it was described by John MacQueen Cowan as a variety of *R. lanatum* in *Notes from the Royal Botanic Garden, Edinburgh,* Volume 19, which was published in 1937. The arrival of more dried material - from Ludlow, Sherriff and Taylor in 1938; and from Ludlow, Sherriff and Elliot in 1947 - prompted an upgrade to specific status by the same author in 1953 (*Notes,* Volume 21), though David Chamberlain later designated LS&E 13746 and LS&E 15006 as *R. lanatoides*.

The morphological features of *R. luciferum* place it midway between *R. lanatum* and *R. lanatoides,* this reflected in its natural distribution across Tibet: east of the *R. lanatum* spread; west of the known scattering of *R. lanatoides.* Intermediate subgroup communities - natural hybrid *lanatum* x *luciferum,* or *luciferum* x *lanatoides* pairings - have yet to be documented, but field study reporting from 1998 showed that *R. luciferum* was common in the Tsari area and that specific ranking was therefore warranted.

R. luciferum was first introduced into UK cultivation during 1938, with three batches of seed available from the Ludlow, Sherriff and Taylor expedition. The earlier set of 1936 L&S gatherings have only been reported as including seed in *The Rhododendron Handbook 1967,* so may only have consisted of dried material. Garden-grown specimens are hardy, but require a sheltered site along the east coast and inland.

Back in 1936, George Sherriff reported that local Tibetans 'skinned' the indumentum from dried leaves, rolled it up, and used it as a wick in their butter lamps, with a cottage industry selling the peelings to villages far and wide. Apparently, only *R. luciferum* leaves would do, with those of *R. lanatum* deliberately shunned. Doctor Cowan duly took note, for the Latin epithet he chose for the species name, means 'light bringing'.



R. luciferum

Section *Leiorrhodium* Subsection *Maculifera:*



R. hyperythrum (ETOT 196)



Taxa:

R. anwheiense
R. hyperythrum
R. longesquamatum
R. maculiferum
    R. maculiferum ssp. *maculiferum*
    R. maculiferum ssp. *oligocarpum*
R. morii
R. ochraceum
R. pachysanthum
R. pachytrichum
R. pseudochrysanthum
R. sikangense
    R. sikangense var. *cookeanum*
    R. sikangense var. *sikangense*
R. strigillosum

Taxonomic Revision:

The placement of Subsection *Maculifera* within Genus *Rhododendron*
and the taxa assigned to it have been impacted by the molecular evidence set out
in two scientific studies, the 2010-published paper
A Phylogeny of Rhododendron Subgenus Hymenanthes Based On Chloroplast DNA Markers,
which was written by Richard Milne, David Chamberlain, Chantel Davies, Ruby Prickett and
Lucy Inns, and a 2005-published investigation
The Molecular Systematics of Rhododendron (Ericaceae):
A Phylogeny Based Upon RPB2 Gene Sequences,
this carried out at the University of Washington, Seattle,
by Loretta Goetsch, Andrew Eckert and Benjamin Hall.

In addition, three other scientific texts provide independent molecular-level evidence
confirming the taxonomic placement of *R. hyperythrum.*
All five papers show that instead of being part of the old Subsection *Pontica* grouping
- where the shrub was always regarded as an aberrant -
the taxon's true genetic association is with that of the Subsection *Maculifera* species.

Subsection Morphology:

Shrubs, medium through large, rarely dwarf, or small trees, 0.3 to 12m high;
young shoots tomentose, often becoming glabrescent or glabrous,
more rarely setose, or setose-glandular;
bark rough or smooth, chestnut-brown through grey-brown, striate or shredding.

Leaf bud scales persistent or deciduous.

Leaves coriaceous, elliptic through oblong to oblanceolate,
3 to 18cm long by 1.5 to 7cm wide,
apex acute, more rarely obtuse or rounded, and apiculate or cuspidate,
base rounded or cuneate, sometimes tapered or obtuse,
retained 1-3 years, rarely more;
upper surface green or dark green, shiny or matt, usually glabrous at maturity,

the midrib grooved, sometimes tomentose at the base,
more rarely stalked-glandular or setose,
the veins usually deeply impressed,
the margins often recurved, sometimes hairy, rarely setulose;
lower surface paler, matt or shiny, glabrous, or with minute punctulate hair bases,
sometimes with a continuous indumentum,
more rarely with intermixed branched and glandular bristles,
the usually prominent midrib with a persistent to evanescent tomentum,
the hairs flagellate, folioliferous, long-rayed or stellate,
sometimes stalked-glandular, more rarely setose or setose-glandular,
the veins usually raised.

Leaf anatomy comprises a 2-3-layered upper epidermis,
with the cells in all the layers roughly equal in size;
the cuticle is as thick as the cells are deep; water tissue is present;
the lower epidermis cells are not prolonged into papillae.
Sclereid cells are absent.

Petiole 5-30mm long, slightly to deeply grooved above,
floccose-tomentose, but often becoming glabrous when mature, or rarely glabrous,
sometimes stalked-glandular, more rarely setose or setose-glandular.

Inflorescence racemose or candelabroid (rarely), lax or dense, 3-12-20-flowered;
the bud scales usually deciduous, sometimes sticky.

Rhachis 3-10-20-36mm long,
usually floccose-tomentose, rarely glabrous, often stalked-glandular.

Pedicel 10-35mm long, rarely to 50mm,
usually floccose-tomentose, rarely glabrous,
often stalked-glandular, more rarely setose or setose-glandular.

Calyx usually minute, 5-lobed, these 0.5-2mm long, or rarely 6-15mm long,
often unequal, rounded, triangular or ovate,
their outer surface tomentose or glabrous,
and often stalked-glandular, but rarely setulose-glandular,
their margins ciliate or glabrous, often stalked-glandular, more rarely setulose-glandular.

Corolla 2.4 to 6cm long, 5-lobed,
narrowly to widely-campanulate, funnel- or tubular-campanulate,
white to pink through purple to deep red,
with or without a basal blotch and spots, with or without nectar pouches,
the outer surface usually glabrous, the lobes usually emarginate.

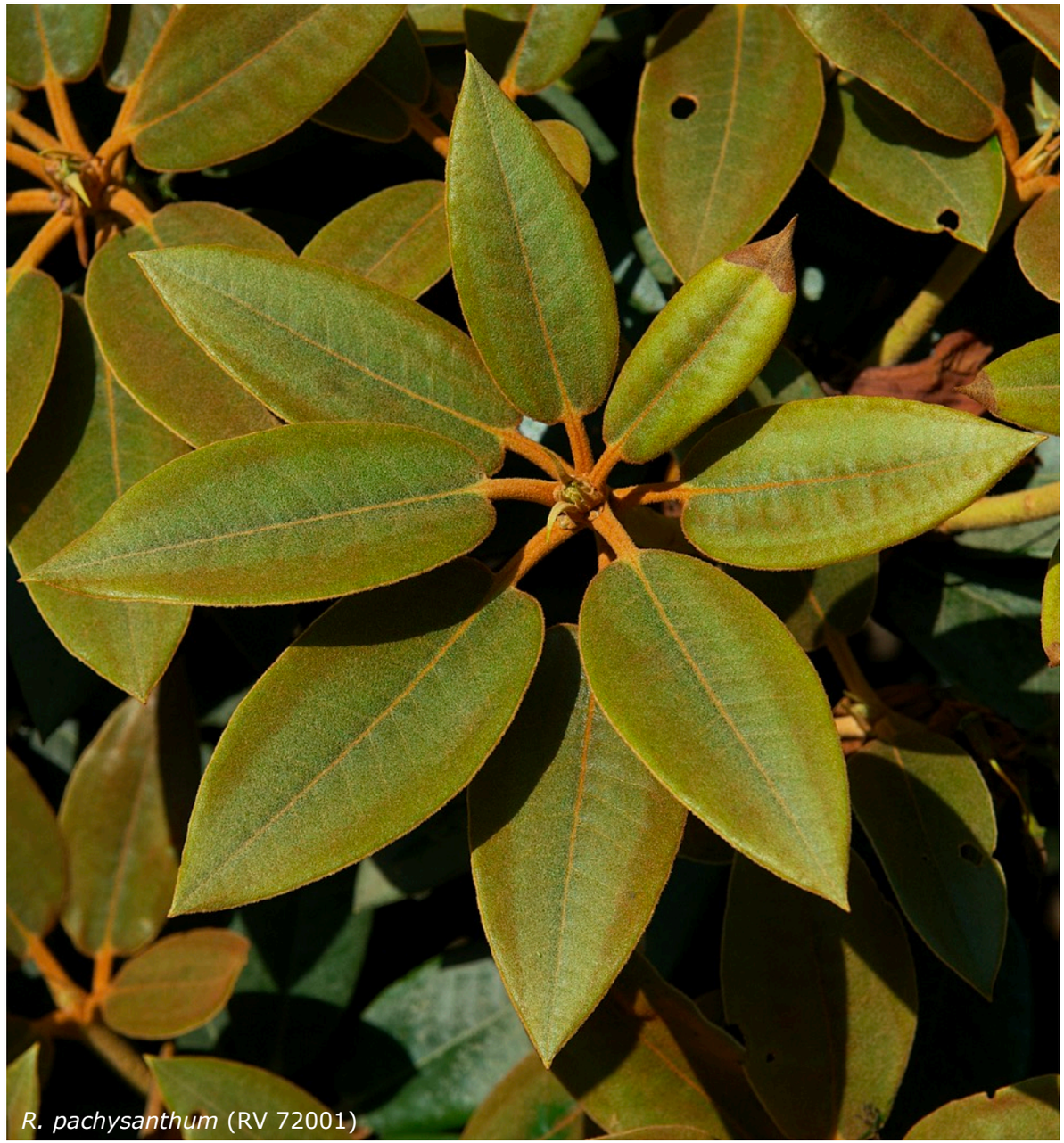
Stamens 10, sometimes 10-12, rarely 9 or 14, unequal;
filaments pubescent at or towards the base, rarely along the lower half,
but sometimes completely glabrous.

Ovary oblong, ovoid or conoid, rarely tapering towards the base of the style,
3-6mm long, 5-8-locular,
tomentose, rarely glabrous, and stalked-glandular or eglandular,
more rarely setose-glandular.

Style glabrous, or sometimes hairy,
more rarely stalked-glandular at the base or along the lower third.

Capsule cylindric or oblong, 10-30mm long,
straight or curved, grooved, glabrous or tomentose, often stalked-glandular,
more rarely setose-glandular, the hairs present usually mirroring those of the ovary.

Seeds elongate, narrowly winged,
each end with appendages, these sometimes very large.



R. pachysanthum (RV 72001)



R. strigillosum (W 1341)

R. strigillosum
Hardiness:
H5.
Flowering Period:
February-May.
Distribution in the wild:
Sichuan & NE Yunnan, China.
Growing in woodland and rhododendron thickets, on open rocky slopes and cliffs,
at elevations of 1,600-3,800m.

Identification:
Shrub or small tree, bushy, rounded and symmetrical, 1.5 to 7m high;
branchlets variably long-stalked setose-glandular,
the hairs glandular or with branched tips, these intermixed, stiff and whitish.
Leaf buds sticky, the scales deciduous.
Leaves elliptic through oblanceolate to oblong-lanceolate,
7.5 to 18cm long by 1.8 to 4.5cm wide;
upper surface dark or olive-green,
the midrib usually setose at the base,
the margins often ciliate and sometimes setulose;
lower surface varyingly crisped-setose,
the hairs glandular or with branched tips, and intermixed,
these usually persistent, especially towards the base, where the setae are rufous,
on the midrib, the bristles become larger and stouter.
Petiole 6-20mm long, stout, crisped-setose,
the hairs intermixed, glandular or with branched tips.
Inflorescence 8-12-flowered;
the buds scales sticky, deciduous or somewhat persistent.
Rhachis 5-15mm long,
moderately through densely pubescent, often short-stalked glandular.
Pedicel 6-15mm long,
setose- or setulose-glandular,
the hairs reddish, often intermixed with setulose hairs.
Calyx outer surface and margins ciliate or setulose-glandular.
Corolla 4 to 6cm long, fleshy, tubular-campanulate,
deep red through crimson-scarlet,
with a black-crimson basal blotch, but no spotting,
deeper coloured nectar pouches present.
Stamens filaments glabrous.
Ovary usually densely setose-glandular,
the hairs long, ascending, reddish and weak.
Capsule 10-20mm long, straight, densely reddish setose-glandular.

Seed Collections:

W 1870	1904	AC 1153	1995
W 1341	1908	AC 1207	1995
W 4258	1910	C&H 7035	1995
W 4267	1910	C&H 7047	1995
CCH 3909	1989	C&H 7108	1995
CCH 3914	1989	EGM 305	1995
CEE 133	1991	EGM 338	1995
CEE 191	1991	AC 4329	1999
CEE 200	1991	C&N 6020	2007
CEE 502	1991	NN 0933	2009
AC 1145	1995	CNC 12123	2012
AC 1150	1995	CNC 12136	2012


R. strigillosum (AC 1145)

The French botanist, zoologist and Vincentian missionary priest, Jean-Pierre Armand David, was the first Western plant hunter to find *R. strigillosum,* discovering a population of the plants near Moupin (Baoxing County), in the centre of Sichuan Province, during 1869. Adrien Franchet at the Muséum National d'Histoire Naturelle in Paris, described the species in 1886, writing in Volume 33 of the *Bulletin de la Société Botanique de France*.

R. strigillosum is unique amongst the Subsection *Maculifera* rhododendrons in that it has bristles on the underside of the leaves. Additional tell-tales are the sticky leaf and flower buds, the red corollas with their black-crimson nectar pouches, the glabrous stamen filaments and the sticky bristles on the pedicel, calyx, ovary and capsule. The first three of these traits are shared with *R. ochraceum,* but to aid identification and keying, this taxon has been gifted a continuous covering of indumentum on the abaxial leaf surface.

In the wild, natural hybrids with *R. pachytrichum* exist wherever the distributions of the two species meet and one of these - *R. x monosematum* - has become stabilised. It has also been introduced into UK cultivation, with mature specimens found in many British gardens. Separating offspring from parent rests on the glabrous rather than bristly abaxial leaf surface (the midrib excepted) and the length of the sticky bristles found elsewhere on both plants, short for *R. x monosematum,* long for *R. strigillosum*.

Ernest Wilson gets the credit for first securing seed of the species, with plants grown from his 1904 collection - made for the Veitch Nurseries of Chelsea - opening their first blooms in Britain early in the Spring of 1915. In fact, simultaneously at three gardens: Caerhays, Compton's Brow and Tregothnan, respectively, the properties of J. C. Williams, John Guille Millais, and the Boscawen family. Additional Wilson gatherings would arrive in 1908 and 1910, but then, a near eighty-year gap would ensue before another batch of capsules was secured, David Chamberlain, Peter Cox and Peter Hutchison rediscovering the species on their 1989 expedition to Sichuan. Since that reintroduction, around twenty more authenticated gatherings have been documented.

R. strigillosum is therefore well-established in the woodland gardens of England, Scotland and Wales, with large, often superb, tree-like specimens lighting-up an otherwise mostly-dormant woodland in February and March. Luckily, the fleshy flowers can shrug-off a degree or two of frost, but will be lost if a colder snap hits. The plant as a whole is fully hardy, though it succeeds best and grows tallest along the west coast, with the revolute and bristly foliage interesting all-year round. Seeking out the best clones however, with the darkest red flowers, is well worth the time and effort.


R. strigillosum


R. strigillosum (W 1341)



R. strigillosum



R. strigillosum (AC 1145)

R. pachytrichum

R. pachytrichum

Hardiness:
H5.
Flowering Period:
March-April.
Distribution in the wild:
Sichuan & NE Yunnan, China.
Growing in mixed forest and on cliffs, at elevations of 2,100-3,600m.

Identification:
Shrub or small tree, rounded and spreading, or broadly upright, 1.5 to 12m high;
branchlets variably tomentose,
the brown folioliferous hairs long, shaggy, curly and branched.
Leaf bud scales deciduous.
Leaves oblong-elliptic through oblanceolate to obovate,
6 to 15cm long by 2 to 4.2cm wide;
upper surface green or bright green, somewhat shiny,
the midrib sometimes long-hairy at the base or throughout;
lower surface shiny, the lamina glabrous except alongside and on the midrib,
where long, brown, shaggy, curly and branched folioliferous hairs are variably present.
Petiole 15-25mm long, tomentose,
the brown folioliferous hairs long, shaggy, curly and branched.
Inflorescence 6-17-flowered.
Rhachis 10-25mm long,
moderately through densely pubescent.
Pedicel 8-15mm long,
moderately through densely tomentose, the hairs branched.
Calyx outer surface usually tomentose,
the lobe margins usually ciliate.
Corolla 2.8 to 5cm long,
campanulate through narrowly-campanulate,
white, white flushed pink, pink, rose, rose-magenta or red,
with or without either or both a maroon or purple basal blotch and spots,
nectar pouches absent.
Ovary densely tomentose, the medium to long hairs ascending.
Style glabrous or glandular at the base.
Capsule 16-30mm long, straight to moderately curved, grooved,
variably tomentose, the long hairs branched or unbranched.

Seed Collections:

W 1435	1903	H&M 1448	1990
W 1525	1903	CEE 171	1991
W 1865	1903/1905	CEE 229	1991
W 1203	1906/1909	CEE 532	1991
W 1326	1906/1909	SICH 786	1991
W 1349	1906/1909	SICH 1650	1994
W 3440	1906/1909	EGM 338	1995
W 4246	1910/1911	AC 4994	2001
W 4270	1910/1911	SICH 2256	2001
McLaren 39/284	1932/1939	C&N 6125	2007
KR 176	1980	C&N 6131	2007
KR 214	1980	C&N 6132	2007
SICH 401	1988	C&N 6139	2007
CCH 3903	1989	C&N 6141	2007
CCH 3907	1989	NN 0943	2009
CCH 3910	1989	CNC 12059	2012
CCH 3919	1989	JN 12057	2012
Cox 5001	1990	JN 12081	2012
EGM 115	1990		

Armand David was also the plant hunter responsible for finding the second entry in the Subsection *Maculifera* inventory, the aforementioned *R. pachytrichum.* This too was resident on the forested mountain slopes near Moupin, though the date of discovery is a less definitive 'during 1869 or 1870'. Dried material was again despatched to Paris for Adrien Franchet to examine and his description appears in Volume 33 of the *Bulletin de la Société Botanique de France* (on page 231, just ahead of that for *R. strigillosum,* on page 232). And history again repeated itself, as it was Ernest Wilson who first introduced seed into British gardens, doing so in 1903, under the field numbers W 1435 and W 1525, one of the many new species secured on his second, Veitch-sponsored expedition to China.

Leaf shape and the brown folioliferous hairs found on the branchlets, petioles and abaxial midrib of *R. pachytrichum,* distinguish the species from one of its closest relatives, *R. maculiferum,* which has fawn to whitish hairs and oblong through elliptic leaves rather than long, narrow and pointed foliage. The deciduous leaf and flower bud scales key it from another ally, *R. longesquamatum,* which shares the same tomentum placement, but sports a much denser and shaggier coat of rusty-brown flagellate hairs.

The corollas of *R. pachytrichum* are without nectar sacs, an absence that quickly keys the species from either *R. ochraceum* or *R. strigillosum* when in bloom, and confirmation of a correct identification is provided by the completely indumented abaxial leaf lamina of *R. ochraceum,* and the long glandular bristles that are found on the branchlets and petioles of *R. strigillosum.*

In the wild, *R. pachytrichum* has been found to interbreed with nearly every other elepidote rhododendron found in Sichuan, producing an array of natural hybrids. One of these, the previously referenced *R. x monosematum,* courtesy of its DNA, is now known to be a complicated backcross with the parentage *R. pachytrichum* x (*R. pachytrichum* x *R. strigillosum*). As you would therefore expect, on the ground in Sichuan and northeastern Yunnan, as well as in gardens, it can easily be confused with both contributing parents, as previously-published associations make clear: *R. strigillosum* var. *monosematum,* made by the Chinese botanist Tien Lu Ming (in *Acta Botanica Yunnanica,* Volume 6, Part 2, 1984); and *R. pachytrichum* var. *monosematum,* made by David Chamberlain of Edinburgh Botanic (in both *The Genus Rhododendron: its Classification and Synonymy,* 1996, and the 1998 *Rhododendron Handbook*). *R. pachytrichum* differs from its hybrid offspring in the setulose-glandular bristles on the young shoots and petioles, its folioliferous hairs, and the stalked-glands amongst the tomentum on its pedicels, calyx and ovary.

Mature specimens of *R. x monosematum,* grown from seed gathered by Wilson on Mount Wu in 1903 under the field number W 1522, now rub shoulders in UK gardens with a scattering of more diminutive individuals, these germinated from seed harvested from plants on Emei Shan in 1989 and 1992, which is also where a second, stabilised hybrid swarm between the two specific species exists. DNA evidence shows that this backcross favours *R. strigillosum* - so, *R. strigillosum* x (*R. pachytrichum* x *R. strigillosum*); detailed in *Sichuan Rhododendron of China* (Science Press, Beijing, 1986) - though the contents of any ripened seed capsules from this natural hybrid have yet to reach British shores.

R. pachytrichum is widely grown in cultivation, with innumerable specimens from the nine original Wilson gatherings, subsequent generations of hand-pollinated seedlings - for propagation by cuttings or grafting is far from optimal - and from a plethora of modern day reintroductions, but frankly, most clones are fit only for the bonfire. The species is easy to establish and happy to grow away without any further assistance from the gardener. It flowers freely between March and April once mature, and with abandon on occasion. But most specimens - to restate the point already made - display truly abysmal blooms; have corollas that are extremely short-lived; which open early in the season; and that the merest hint of frost will decimate. Their pigmentation is often muddy and quickly bleached, and structurally, they will be ruined by even the gentlest shower of rain.

Yet amongst this horde, one or two individuals - the very best forms - are simply outstanding, and it is these that should be sought out and revered. Regrettably however, the 1963 AM-awarded 'Sesame' clone is not one of them, although the original plant at Bodnant may be superior to the commercially distributed specimens.



R. pachytrichum



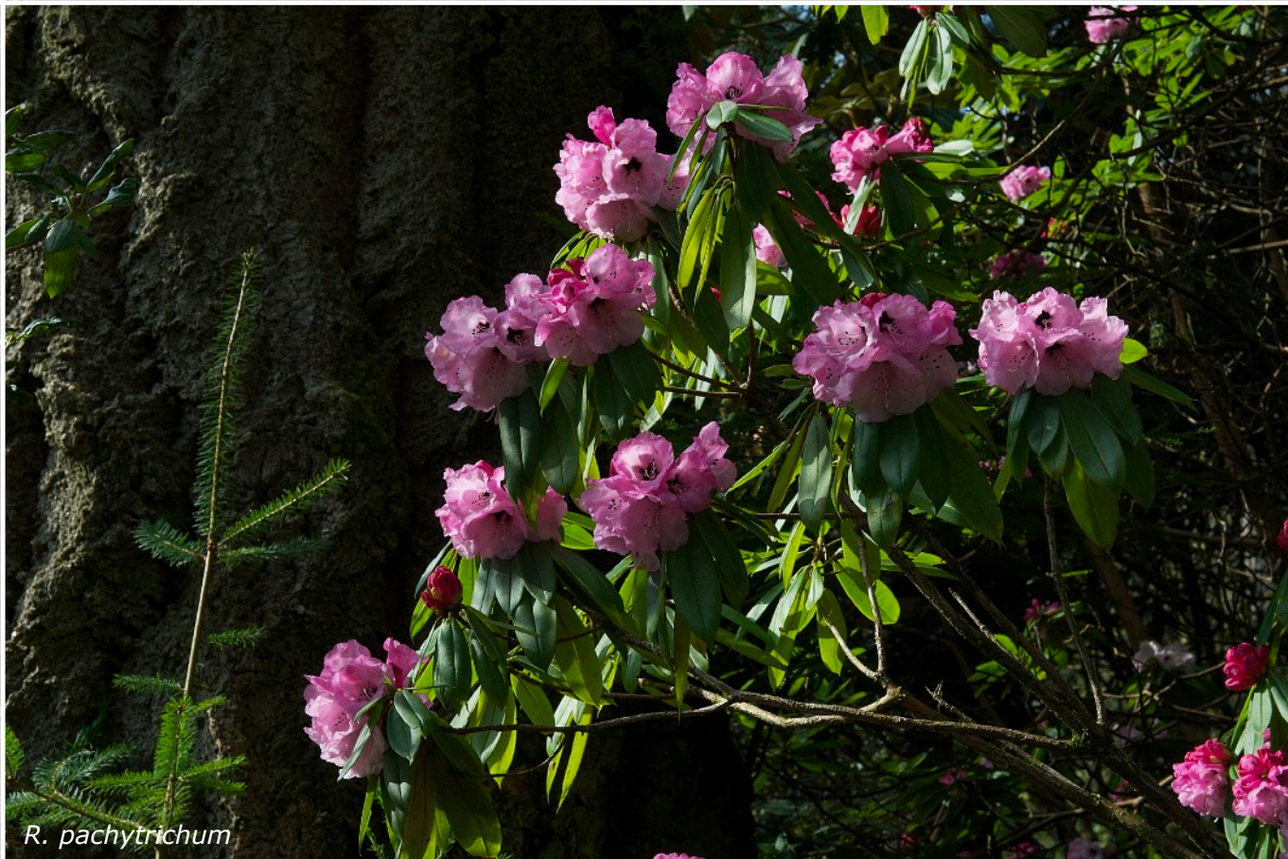
R. pachytrichum



R. pachytrichum (CC&H 3907)



R. pachytrichum



R. pachytrichum

R. maculiferum ssp. *maculiferum*

Hardiness:
H5-6.
Flowering Period:
March-April.
Distribution in the wild:
Anhui, Chongqing, S Gansu, Guangxi, E Guizhou, W Hubei, Jiangxi,
SW Shaanxi, N Sichuan & Zhejiang, China.
Growing in woodlands and on cliffs at elevations of 1,200-3,400m.

Identification:
Shrub or small tree, compact and bushy or upright, 1 to 10m high;
branchlets sparsely through moderately floccose, the hairs pale white or fawn, or glabrous.
Leaf bud scales deciduous.
Leaves obovate through oblong to elliptic or near oval,
4 to 11.6cm long by 2.3 to 4.5cm wide,
their apex obtuse or rounded;
upper surface olive-green, matt, the midrib sometimes hairy at the base,
the margins long-ciliate at first;
lower surface shiny,
the midrib moderately through densely tomentose towards the base,
along the lower half or two-thirds, or entirely obscured,
the long folioliferous hairs buff-white, branched, interlaced and slightly matted.
Petiole 13-30mm long, floccose, the hairs whitish or fawn.
Inflorescence 5-10-flowered.
Rhachis 10-30mm long, moderately through densely pubescent.
Pedicel 10-25mm long, moderately through densely floccose,
the fawn-coloured hairs short, branched and straggling.
Calyx outer surface and margins densely floccose.
Corolla 2.5 to 3.5cm long, campanulate through openly-campanulate,
white, white flushed pale pink, or pink,
with or without either or both darker spotting or a crimson-purple blotch,
or sometimes with pink lines and spots,
nectar pouches absent.
Ovary densely rufous-tomentose, the hairs long and ascending.
Capsule 15-20mm long, curved or straight, grooved, rufous-tomentose, the hairs long.

Seed Collections:

W 944	1901	AC 4782	2001
W 3412	1907	AC 4784	2001
SABE 863	1981	AC 4952	2001
SABE 943	1981	AC 4956	2001
AC 4773	2001	AC 5049	2002
AC 4777	2001	C&N 6178	2007
AC 4781	2001	JN 11024	2011

R. maculiferum ssp. *oligocarpum*

Hardiness:
H5-6.
Flowering Period:
April-May.
Distribution in the wild:
NE Guangxi & E Guizhou, China.
Growing in broad-leaved forests and thickets at elevations of 1,800-2,500m.

Identification:
Shrub or small tree, compact and bushy or upright, 1 to 6m high;
branchlets white-tomentose, becoming glabrous.
Leaf bud scales deciduous.
Leaves oblong through oblong-elliptic to (rarely) obovate-elliptic,
4 to 6.3cm long by 2 to 3cm wide;
upper surface dark green, matt,
the margins long-ciliate at first;
lower surface pale green,
the midrib brownish-floccose towards the base.
Petiole 8-15mm long, white-tomentose becoming glabrous.
Inflorescence 3-7-flowered.
Rhachis 5-6mm long, sparsely tomentose.
Pedicel 10-20mm long, densely tomentose, the hairs whitish or fawn.
Calyx outer surface and margins densely pubescent.
Corolla 2.5 to 4cm long, campanulate through openly-campanulate,
pink through purple,
with a deep purple basal blotch and occasionally some spotting,
nectar pouches absent.
Ovary densely woolly-tomentose.
Capsule 20-25mm long, rough.

Seed Collections:

GUIZ 121	1985
GUIZ 148	1985

Endemic to a vast swathe of China - the list of provinces opposite in alphabetic order rather than geographic progression - *R. maculiferum* was actually the third member of the subsection to be discovered, the French missionary priest Paul Guillaume Farges stumbling on the species in Sichuan Province during the early 1890s. His find was described in 1895 by Adrien Franchet, writing in Volume 9 of the *Journal de Botanique,* and introduced into UK cultivation from western Hubei by Ernest Wilson in 1901, and then again in 1907. A 1981 reintroduction by members of the Sino-American Botanical Expedition occurred after a near three-quarters-of-a-century absence and more recently, Alan Clark rediscovered the species in 2001 on Wawu Shan in Sichuan, and Jens Nielsen found plants in the northeast of Chongqing during the autumn of 2011. Yet despite these recent collections, *R. maculiferum* remains a rare resident of British gardens.

The species is closely allied with *R. anwheiense,* which until publication of the full Edinburgh Revision in 1996 was considered by many botanists to be nothing more than a subspecies of *R. maculiferum,* a placement that is still maintained by the Chinese, as well as some Western doyens. Distinguishing one from the other requires a check of their pedicels, calyx and ovary: densely hairy, *R. maculiferum;* glabrous, *R. anwheiense*. The distinctly rounded leaf and flower buds of the latter are another check. A far thicker covering of brown hairs on the branchlets and petioles of *R. pachytrichum* splits that taxon from *R. maculiferum,* which displays a thin mantle of white or fawn coloured hairs, with the *R. pachytrichum* mane composed of long, multi-branched curly hairs that produce a far shaggier appearance.

In 1983, *R. oligocarpum* was described by Wen-pei Fang and Xue Song Zhang in Volume 21 of *Acta Phytotaxonomica Sinica,* now the *Journal of Systematics and Evolution*. The species has so far only been found on three mountains in southern China: Maoershan, in Xingan County, Guangxi Province; Fanjingshan, the highest peak of the Wuling mountain range in neighbouring Guizhou; and on Leigongshan near Kaili City, also in the east of Guizhou Province. It differs from *R. maculiferum* in having fewer corollas in the truss - 3 to 7, rather than 5 to 10 - these coloured pink through purple instead of white through pink; in sporting smaller, oblong through oblong-elliptic leaf blades; and on a deeper delve, an 8-locular ovary in contrast to one with 6 or 7 cells. Such distinctions however, should warrant subspecies rather than specific status, a rank reduction proposed by Peter and Kenneth Cox in the supplement to the second edition of their *Encyclopedia of Rhododendron Species,* which is endorsed and followed herein.

The only documented introduction of *R. maculiferum* ssp. *oligocarpum* seed into UK gardens occurred in 1985 when John Simmons, Hans Fleigner and James Russell returned from their expedition to Guizhou Province with the contents of two batches of capsules. These were initially identified from the dried herbarium material as *R. maculiferum* ssp. *maculiferum,* but on later examination, the germinated plants - under the field numbers GUIZ 121 and GUIZ 148 - proved the experts wrong.

Specimens of both subspecies growing in British gardens are fully hardy and usually without problem, the RHS gifting them a H5-6 hardiness rating, and a stand of plants sited in a relatively exposed location at the Castle Howard arboretum, shrugged-off the severe winters of a decade or so ago without regard. Free-flowering and showy when covered in bloom - ssp. *maculiferum* in March-April; ssp. *oligocarpum* in April-May - examples of the former with crimson-purple-blotched white corollas, or with a deep pink pigmentation, are outstanding. Foliage is their only let-down, for the leaves of each taxon are prosaic and pedestrian for much of the year, though excellent as a foil for summer perennials.



R. maculiferum



R. oligocarpum (GUIZ 121)

R. maculiferum

R. oligocarpum (GUIZ 148)

R. longesquamatum

Hardiness:
H5-6.
Flowering Period:
May-June.
Distribution in the wild:
Guizhou & W Sichuan, China.
Growing in woodland, on cliffs and on grassy slopes, at elevations of 2,300-3,500m.

Identification:
Shrub or small tree, rounded, bushy and compact,
but becoming upright and leggy, 1 to 6m high;
branchlets densely tomentose, shaggy,
the coarse, very long, multi-branched, flagellate hairs
fawn at first, becoming reddish-brown.
Leaf bud scales persistent for several years.
Leaves thick and fairly rigid, bunched at the ends of the shoots,
oblong or oblong-obovate through oblong-oblanceolate to oblanceolate,
5.5 to 15.5cm long by 2 to 4.5cm wide;
upper surface dark green, shiny,
densely rufous-tomentose at first, the hairs flagellate,
and short-stalked glandular,
these withering away and the remaining hair bases producing a rough texture,
the midrib moderately through densely rufous-tomentose, the hairs flagellate;
lower surface somewhat shiny, rough, glabrous,
but with scattered minute punctulate glands,
the midrib moderately through densely rufous-tomentose, the hairs flagellate,
and sparsely through moderately short-stalked glandular.
Petiole 10-26mm long, stout,
densely rufous-tomentose, the hairs flagellate.
Inflorescence 4-6-12-flowered; the bud scales persistent.
Rhachis 3-8mm long, stout,
densely rufous-tomentose, the hairs flagellate.
Pedicel 20-35mm long, moderately through densely rufous-tomentose,
the hairs flagellate, and medium- or long-stalked glandular.
Calyx large, cupular, pinkish-purple or white,
the lobes often lingulate and 6-15mm long,
their outer surface glabrous or hairy,
and moderately through densely short- or medium-stalked glandular,
their margins glabrous or sparsely hairy, and short- or medium-stalked glandular.
Corolla 3.5 to 4.5cm long, openly-campanulate,
pink through rose-pink to rosy-red,
with a deep crimson basal blotch,
nectar pouches absent.
Stamens filaments pubescent at the base or along the lower half.
Ovary glabrous, densely short- or long-stalked glandular, the glands ascending.
Style glabrous, short- or long-stalked glandular at the base or along the lower half.
Capsule 15-20mm long, curved, long-stalked glandular.

Seed Collections:

W 1520	1904
W 1278	1908
W 1361	1908
W 4263	1910
CCH 3920	1989
Cox 5029	1990
JN 12021	2012



R. longesquamatum



R. longesquamatum

The dense, shaggy cloak of rusty-brown hairs that covers the branchlets, envelops the leaf stalks and extends-on up along the abaxial midrib of *R. longesquamatum,* make it one of the most easily identifiable rhododendron species in the entire genus, though not all forms in cultivation are equally hirsute. Ernest Wilson was the first Western plant hunter to come upon a population of the plants, securing herbarium specimens from the hills above Tatsienlu (now Kangding) in western Sichuan during July 1903 and introducing seed the following year. The species botanic description was written by Camillo Karl Schneider, an Austrian botanist and garden landscape designer, the text appearing in Volume 2 of his book *Illustriertes Handbuch der Laubholzkunde,* which was published in 1909.

The hairs that make up the *R. longesquamatum* tomentum have a long multicellular stalk formed from chains of parallel cells and a head that is a cluster of upward-spreading tentacles. In botanist-speak, they are described as flagellate, and while not unique to this species or subsection, the hair type is not widely distributed across the genus. Long leaf bud scales are also a feature, especially as they remain in place for a number of years and give the plant its epithet. The calyx too is distinctive, whether coloured white or purplish-pink, as its tongue-shaped lobes - at up to 15mm long - are the largest in the subsection and dwarf the 1-3mm sized structures displayed on other members of the clade. Of these occupants, *R. pachytrichum* is considered to be closest to *R. longesquamatum,* but the two will rarely if ever be mixed up, even if the rufous tomentum is discounted.

After the initial batch of seed arrived in 1904, Wilson reintroduced the species on both of his subsequent trips, but there then followed an interlude of almost eighty years before the Chamberlain, Cox and Hutchison expedition of 1989 found *R. longesquamatum* in western Sichuan, growing alongside *R. orbiculare* on Wa Shan and Opien-hsien. It has since only been collected on two occasions, so remains rare in cultivation, despite being an excellent foliage plant. E. J. P. Magor, in his contribution to Volume 1, Number 1, of *The Rhododendron Society Notes,* reported that a plant grown from the Wilson 1520 gathering of 1904 vintage - then known as *R. brettii,* but now synonymous - flowered at Lamellen in 1916, with 'six to eight flowers in a loose truss, corolla dull white, unspotted', although it should be noted that that hue is not encompassed within the accepted botanic description, so it may have been a seedpan rogue that caught the famed hybridiser's attention.

In the UK, the species is slow growing, but comes with a battle tank constitution, as is amply demonstrated by the fine group of plants established at Dawyck Botanic Garden, growing with the hills of Upper Tweeddale rising on all sides, original Wilson introductions now over a hundred years old, but still compact and no more than 3m high. One of these plants quickly discards its leaf bud scales and is a probable natural hybrid, while a form growing in the woodland at Muncaster Castle, Cumbria, displays very little tomentum.


R. longesquamatum


R. longesquamatum


R. longesquamatum

R. pseudochrysanthum

Hardiness:
H5-6.
Flowering Period:
March-May.
Distribution in the wild:
Taiwan.
Growing in conifer forests and on open gravelly slopes above the treeline,
at elevations of 1,800-4,000m.

Identification:
Shrub, dwarf and compact, rounded to broadly upright, but leggy in shade,
0.3 to 3m high;
branchlets moderately through densely floccose-tomentose,
the hairs white, fawn, grey or reddish,
and moderately through densely variably-stalked glandular.
Leaf bud scales usually deciduous.
Leaves thick and rigid,
ovate through elliptic to oblong-lanceolate,
3 to 8cm long by 1.5 to 5cm wide;
upper surface dark green, shiny,
white or greyish floccose at first, intermixed with long-stalked glandular hairs,
usually becoming glabrous and eglandular at maturity,
the midrib sometimes hairy at the base,
the margins sometimes densely white-floccose;
lower surface somewhat shiny,
floccose at first, quickly becoming glabrous, or with the hair bases remaining,
except for a few hairs scattered along the midrib,
these intermixed with a much denser covering of white or fawn folioliferous hairs
and long-stalked glands.
Petiole 5-20mm long, moderately through densely floccose-tomentose,
the hairs white, fawn, grey or reddish,
and moderately medium- or long-stalked glandular.
Inflorescence 5-12-flowered; the bud scales rarely somewhat persistent.
Rhachis 6-20mm long, pubescent, and short- or medium-stalked glandular.
Pedicel 13-30mm long, variably medium- or long-stalked glandular.
Calyx outer surface usually short-stalked glandular,
the margins variably-stalked glandular.
Corolla 3 to 4.3cm long, campanulate through widely-campanulate,
white, white tinged pink, or pale pink,
often with deeper pink or rose coloured lines outside and usually with crimson spots inside,
nectar pouches absent.
Ovary glabrous or sparsely tomentose,
the hairs long, and densely short- or medium-stalked glandular.
Style glabrous,
but sometimes medium- or long-stalked glandular at the base or along the lower third.
Capsule 10-20mm long, straight, ridged,
glabrous or long-hairy, densely medium-stalked glandular.

Seed Collections:

W 10928	1918
RV 681106	1968
RV 69/216	1969
RV 9816	1970
RV 9837	1970
RV 9844	1970
RV 9891	1970
RV 72/001	1972
RV 72/002	1972
RV 72/003	1972
ETOT 174	1992
ETE 412	1993
ETE 439	1993
ETE 442	1993
ETE 443	1993
ETE 444	1993
ETE 452	1993

R. pseudochrysanthum (W 10928)

R. pseudochrysanthum was first found on the mountains of central Taiwan during August 1906 when the island was under Japanese colonial rule. Takiya Kawakami and Ushinosuke Mori were the field botanists who made the discovery and the species was described by Bunzô Hayata, in 1908, when writing in the *Journal of the College of Science, Imperial University of Tokyo,* Volume 25, Part 19. Ernest Wilson collected seed when he visited Formosa, as it was then known, in 1918, on an expedition for the Arnold Arboretum, and a portion of that harvest crossed the Atlantic and was introduced into UK cultivation thanks to the long-standing ties between his sponsors and the Royal Botanic Garden, Kew.

One glance at the foliage is usually enough to key the true species from all the other Subsection *Maculifera* rhododendrons as the thick, pointed, rigid, yet leathery leaves are singularly distinctive, be they on dwarf plants no more 30cm high or on long-established upright bushes hitting the 3m mark. In the wild however, where natural hybrid populations with *R. morii* bridge the altitudinal gap between the two species, additional checks will need to be made. Thinner leaves, also glabrous below, which lack a dense covering of hairs and glands along the abaxial midrib indicate *R. morii,* as does a hairy and sticky ovary, for that of *R. pseudochrysanthum,* though glandular, is devoid of any non-sticky hairs.

In cultivation, *R. pseudochrysanthum* might easily be mistaken for *R. pachysanthum,* as the two species are often placed close to each other. The latter will be found to have larger leaves - 5.8 to 11.8cm long by 2.5 to 4cm wide, as opposed to a length of 3 to 8cm and width of 1.5 to 5cm - these with a dense, continuous indumentum covering the lower leaf surface, so any lack-of-a-label confusion should be short-lived. In the wild, the problem will not arise, as it has now been established that *R. pseudochrysanthum* is geographically separated from *R. pachysanthum,* with no natural hybrids between the pair present on Nanhu Da Shan, the sole mountain locale where *R. pachysanthum* is established. However, an extensive swarm of *R. morii* x *R. pachysanthum* natural hybrids do exist and have been introduced into British gardens, so these may muddy the waters, especially as the cloak of abaxial indumentum is thinner or missing entirely. Most will display corollas with a crimson basal blotch so are swiftly identified when in flower.



R. pseudochrysanthum

Two varieties of *R. pseudochrysanthum* are listed in the 1998 RHS *Rhododendron Handbook,* with var. *nankotaisanense* apparently having longer pedicels, these extending to between 25 and 30mm in length, while those of var. *pseudochrysanthum* max out at just 20mm. The *Handbook's* text declares the former to have stalked-glands on the ovary, but the latter to be devoid of such, a description completely at odds with previously accepted botanic texts and wild-origin authenticated plants.

Shunichi Sasaki was the botanist responsible for the original 1917 collection of var. *nankotaisanense,* finding plants growing around the 3,300m contour on Mount Nankotaisan (Nanhutashan), but no specific seed introductions have been documented and there are no known specimens established in UK cultivation. Bunzô Hayata described the taxon as *R. nankotaisanense* in Volume 9 of *Icones Plantarum Formosanarum,* published in 1920, and associated the species with *R. morii.* That relationship was maintained by Western botanists - from Harry Tagg, writing in *The Species of Rhododendron,* 1930, to H. H. Davidian, in Volume 2 of *The Rhododendron Species,* 1989 - and all describe the plant as basically a less glandular form of *R. morii,* with smaller corollas, and question whether the retention of specific status is justified.

The switch in association, from *R. morii* to *R. pseudochrysanthum,* occurred in 1981. This was when Takashi Yamazaki published the combination *R. pseudochrysanthum* var. *nankotaisanense* in Volume 56, Part 11, of the *Journal of Japanese Botany* (*Shokubutsu Kenkyu Zasshi*) and clearly, this must have influenced the Edinburgh Revision botanists. However, more recently, the authors of *Flora of Taiwan* have chosen to sink the taxon in synonymy under *R. pseudochrysanthum,* which is the position followed herein.

The largest specimens of *R. pseudochrysanthum* to be found in British gardens today will all have been grown from the original Wilson introduction of 1918, with many of these plants now splendid, free-flowering, rounded bushes up to 3m high and much more across. But there are also more compact forms, around one metre high, and a dwarf form, grown from Patrick and Hsu seed introduced in the early 1970s. Such individuals, after twenty years of unchecked growth, will only have attained just 15cm in height.

All the forms of *R. pseudochrysanthum* take many years to reach flowering size, the vertically challenged clones especially so, but are completely hardy, with a H5-6 rating, and easy to grow providing the planting site benefits from light dappled shade and any temptation to apply chemical fertiliser is resisted. Natural leaf fall within a woodland environment should provide all the nutrients the species requires to prosper, while outwith such, a leaf mould or composted bark mulch, topped-up annually, but not to excess, will prove sufficient, even for container-domiciled plants. The application of any kind of off-the-shelf supplement, even slow release N-P-K pellets, will lead straight to varying degrees of leaf-tip burn.

R. pseudochrysanthum is one of the most highly rated species within the genus and a popular garden plant, found not only in all the significant rhododendron collections, but in many suburban plots too, as the foliage is eye-catching all year round and the flowers, completely smothering a mature specimen, breathtaking.



R. pseudochrysanthum (RV 72003)



R. pseudochrysanthum (ETOT 174)



R. pseudochrysanthum



R. pseudochrysanthum

R. pseudochrysanthum (W 10928)

R. ochraceum

Hardiness:
H5-6.
Flowering Period:
April-May.
Distribution in the wild:
Chongqing, C, S & SE Sichuan, & NE Yunnan, China.
Growing in forests and thickets, on cliffs and amongst boulders,
at elevations of 1,700-3,000m.

Identification:
Shrub or small tree, compact and bushy to upright, 1 to 6m high;
branchlets setose-glandular and sparsely whitish tomentose, becoming glabrescent.
Leaf buds sticky.
Leaves lanceolate through oblanceolate,
4 to 10cm long by 0.9 to 2.5cm wide;
upper surface dark green, matt,
near glabrous at maturity, but with the vestiges of hairs,
the midrib usually medium- or long-stalked glandular,
and hairy or with the vestiges of hairs;
lower surface indumentum unistrate and continuous,
dense, woolly or spongy, matted,
the flagellate hairs yellow-brown or pale brown,
any waxy papillae absent from the lamina or poorly developed,
the midrib glandular-hairy and floccose.
Petiole 8-20mm long, setulose-glandular, and usually whitish tomentose.
Inflorescence 6-12-flowered; the buds sticky.
Rhachis 5-14mm long,
moderately through densely pubescent, the hairs fawn or brown.
Pedicel 6-15mm long,
tomentose or glabrous, the hairs when present fawn or brown,
moderately through densely setulose-glandular,
or medium- through long-stalked glandular.
Calyx red,
the outer surface and margins
moderately through densely medium- or long-stalked glandular,
and pubescent or glabrous.
Corolla 2.5 to 4cm long, broadly-campanulate through tubular-campanulate,
dark red through rich crimson, unspotted,
darker nectar pouches present.
Stamens 10-12; filaments glabrous.
Ovary sometimes narrowing towards the base of the style,
densely long-stalked setose-glandular, and strigose-hairy or glabrous.
Capsule 18-25mm long, but sometimes *c.* 13mm,
straight or slightly curved,
sparsely through moderately medium-stalked setose-glandular,
the glands usually persistent.

Seed Collections:

W 3425	1908
AC 1056	1995
C&H 7052	1995
EGM 312	1995
JN 11031	2011



R. ochraceum (C&H 7052)

R. ochraceum was the next member of Subsection *Maculifera* to be discovered. It is most closely related to *R. strigillosum,* and indeed, has been described as a smaller-leaved version of that species by Peter and Kenneth Cox in their 1997-published *Encyclopedia of Rhododendron Species* despite the presence of a usually dense and continuous covering of indumentum on the lower leaf surface. Other doyens have expressed the view that it is also allied to *R. sperabile* in Subsection *Neriiflora,* and this has prompted a debate as to its true and proper placement within Section *Leiorrhodium*.

The species was first encountered by Ernest Wilson during June 1908 on Wa Shan, a mountain in the west of Sichuan province. The plant hunter would later described the find when writing with Alfred Rehder, in Volume 1 of *Plantae Wilsonianae,* which was published in 1913. The two authors compared and associated the new species with *R. strigillosum* and *R. pachytrichum,* a position maintained purely on geographic grounds in 1930's *The Species of Rhododendron,* as Harry Tagg - author of the elepidote species entries - makes plain, specifically noting the morphological similarities with the foliage of some members of Subsection *Neriiflora* (then the Neriiflorum Series). However, very little herbarium material was available to study and although seed was collected - under Wilson 3425 - for whatever reason, *R. ochraceum* was not established in cultivation.

Subsequent herbarium collections - made by F. T. Wang in 1931, T. T. Yu in 1932 and Y. S. Liu in 1937 - failed to advance the classification argument and split the consensus, with David Chamberlain opting for Subsection *Maculifera* in the 1996 Edinburgh Revision texts and H. H. Davidian formerly transferring the taxon into the Neriiflorum Series in Volume 3 of his masterwork *The Rhododendron Species,* published in 1992.

Of course, the answer to a correct subsection placement will be immediately evident when regions along the plant's DNA chain are examined, but as yet, none of the published studies have included *R. ochraceum* in their list of species, so no cladal associations derived from the gene sequences have been made.

To further complicate matters, Chinese botanists have now recognised two varieties of the species: *R. ochraceum* var. *brevicarpum,* which has an endemic distribution restricted to the Nanchuan District of the Chongqing municipality and comes with a thick and spongy abaxial indumentum, tubular-campanulate corollas to 4cm in length and much smaller seed capsules, to around 13mm long; and *R. ochraceum* var. *ochraceum,* which is dotted across southern Sichuan and north-eastern Yunnan, displays a loosely woolly tomentum, broadly-campanulate corollas that supposedly are no longer than 3cm - though this measure is regularly exceeded by flowering plants in cultivation - and bears much larger seed capsules varying between 18 and 25mm long. Western botanists have yet to take the bait, despite the availability of Wen-Kwang Hu's long-published description in the *Bulletin of Botanical Research, Harbin,* Volume 8, Part 3, 1988. Tastes may change however, following the Jens Nielsen introduction of seed from Chongqing in 2011 - at least, once those plants have reached maturity and begun flowering a decade or so on from germination.

Until then, and until the geneticists report in with a cladistic analysis, the position followed herein is one of continuity, maintaining the accepted, though somewhat aberrant, placement within Subsection *Maculifera,* notwithstanding all that contrary morphological evidence.

In combination, the flower colour, nectar pouches and continuous lower leaf surface indumentum of *R. ochraceum* key it from all the other members of Subsection *Maculifera,* while the acuminate leaf apex and absence of any fully developed waxy papillae on the abaxial lamina, plus the more tree-like stature - in the wild, if not presently in cultivation - differentiate the species from its closest associate in Subsection *Neriiflora,* the aforementioned *R. sperabile,* as does the more populous and ball-like inflorescence.

R. ochraceum was finally introduced into British gardens during 1995, two teams independently securing fully developed capsules and viable seed, Alan Clark leading one expedition, the other comprising Peter Cox, Peter Hutchison and Ted Millais. Initial mollycoddling proved unwarranted, as the species was found to be very hardy and easy to grow, with no demonstrative preference as to position in the garden evident, though a modicum of shade is advisable for specimens domiciled in the south. The flowers, when they came - around ten years after sowing - were just as spectacular and eye-catching as the photographs published in 1992's *Rhododendrons of China,* Volume 2, depicted, and most aficionados would agree that *R. ochraceum* tops the 'best new introduction' list.

The species does have two quirks though: new growth can sometimes obscure the flowers; and a few plants display foliage that is decidedly chlorotic, yet continue to flower freely and grow without problem.



R. ochraceum (C&H 7052)

R. ochraceum (C&H 7052)

R. ochraceum (C&H 7052)

R. morii

Hardiness:
H4-5.
Flowering Period:
March-May.
Distribution in the wild:
C Taiwan.
Growing in conifer forests and on gravelly fields at elevations of 1,650-3,500m.

Identification:
Shrub or small tree, compact and spreading or broadly upright,
1.5 to 10m high;
branchlets densely floccose-tomentose at first,
the hairs blackish, but soon becoming glabrous,
or sometimes medium-stalked glandular.
Leaf bud scales deciduous.
Leaves lanceolate through oblong-lanceolate to elliptic,
6.5 to 15cm long by 1.8 to 4.1cm wide;
upper surface dark green,
densely white or fawn floccose-tomentose at first, the hairs branched;
lower surface slightly shiny,
densely brownish floccose-tomentose at first, glabrous at maturity,
the midrib usually persistently floccose-tomentose, the hairs folioliferous,
and sometimes sparsely through moderately short- or medium-stalked glandular.
Petiole 10-30mm long,
glabrous or finely floccose-tomentose, often medium-stalked glandular.
Inflorescence 5-15-flowered.
Rhachis 20-36mm long,
glabrous or pubescent, and short- or medium-stalked glandular.
Pedicel 20-40mm long,
usually glabrous, rarely floccose, but short- or medium-stalked glandular.
Calyx outer surface glabrous,
the lobe margins short-stalked glandular.
Corolla 3 to 5cm long, widely-campanulate,
white, white flushed pink, or white flushed rose,
usually with a red basal blotch and spots,
nectar pouches absent.
Stamens 10-12, more rarely 9 or 14.
Ovary moderately through densely long-haired tomentose,
and variably short- or medium-stalked glandular.
Style glabrous,
rarely densely long-hairy along the lower half,
but densely tomentose and short- or medium-stalked glandular at the base.
Capsule 10-25mm long, straight, grooved,
often densely long-hairy, and usually densely medium- or long-stalked glandular.

Seed Collections:

W 10955	1918	RV 9832	1970
RV 681109	1968	RV 9863	1970
RV 681110	1968	RV 9889	1970
RV 681111	1968	RV 73/100	1973
RV 9809	1970	RV 74/001	1974
RV 9811	1970	RV 74/004	1974
RV 9829	1970	ETOT 90	1992
RV 9834	1970	ETE 42	1993
RV 9840	1970	ETE 67	1993
RV 9890	1970		



R. morii (RV 73100)

R. morii (W 10955)

It was Bunzô Hayata who described *R. morii* in 1911, writing in Volume 30, Part 1, of the *Journal of the College of Science, Imperial University of Tokyo,* and he named the new-to-science species for the man who discovered it: Ushinosuke Mori. A noted Japanese anthropologist, botanist and collector, he, along with his colleague Ryūzō Torii, were the first foreigners known to have climbed Taiwan's highest peak, on whose lower slopes the species is found. The two also gave the mountain its Japanese name, Mount Niitaka, or Niitakayama, meaning 'New High Mountain', a reference to the fact that at 3,952m, the peak was even taller than their own, sacred, Mount Fuji. Of course, the appellation has gone down negatively in history thanks to the Imperial Japanese Navy and Isoroku Yamamoto using it as the instruction to begin the December 7th, 1941, attack on Pearl Harbor, the coded radio signal 'Niitakayama Nobore' transmitted to the carrier fleet, telling them to "Climb the New High Mountain".

Today, Japanese colonial rule having ended rather spectacularly in 1945, the peak is known throughout the world by its Taiwanese name, Mount Yushan, which translates as Jade Mountain, a term that describes the ethereal beauty of the mountain when deep snow covers the summit and it shines like stainless jade. At the time *R. morii* was introduced into American and British gardens by Ernest Wilson in 1918 however, he, together with all the other English-speaking residents of Formosa, would have known the peak as Mount Morrison, this title honouring either the 19th century missionary Robert Morrison - who was the first Christian Protestant proselytiser to enter China (via Macau, on September 4th, 1807) - or Captain W. Morrison, who, fifty years later, became the first Westerner to actually see the mountain, when his ship, the USS Alexander, left the harbour at Tainan City, on the island's south-western Chianan Plain.

Historical digressions aside, *R. morii* is most closely related to *R. hyperythrum, R. pachysanthum* and *R. pseudochrysanthum,* with natural hybrids between the former and the latter three species present on the ground wherever their distributions overlap or are within pollinator flight range. The *R. morii* and *R. pseudochrysanthum* populations have also been observed to merge in a few places, yet keying the type specimens of all four species from each other is relatively straightforward:

- *R. hyperythrum* has a candelabroid inflorescence with unblotched corollas, red punctate hair bases on an otherwise glabrous lower leaf surface, and while some hairs are present on the abaxial midrib, they are only found at its base.
- *R. morii* has a racemose flower truss and corollas with a red basal blotch, the glabrous abaxial leaf lamina are without punctate hair bases while their midrib, though floccose-tomentose and often stalked-glandular throughout its length, is not densely covered, unlike the ovary, which is both densely tomentose and densely stalked-glandular.
- *R. pachysanthum* comes with a thick woolly indumentum covering the entire lower leaf surface.
- *R. pseudochrysanthum* has stiff leaves that are also quite thick, a glabrous abaxial leaf lamina with punctate hair bases and a midrib both densely floccose and densely stalked-glandular, plus the ovary, while densely stalked-glandular, is otherwise glabrous.

In a garden setting, the species might also be confused with *R. irroratum,* but the lack of nectar pouches in the corollas of *R. morii* quickly separate the two when in bloom. Out of flower, a correct identification falls to a check of the leaf lower surface: red punctate gland bases indicate *R. irroratum;* hairs on the midrib, *R. morii.*

Until the American businessman John Patrick and his Taiwanese colleague Chien Chang Hsu began almost yearly seed collections of the island's rhododendrons from 1968 until 1974, the sole Wilson gathering made for the Arnold Arboretum in 1918 remained the only introduction of *R. morii* into Western gardens. Demand therefore usually exceeded supply, as free-flowering from a young age, with scarcely a shoot not sporting a flower bud, the species was rightly popular, especially as the blooms were eye-catching and the spear-pointed foliage several rungs higher-up the interesting ladder than some of its subsection cohorts. Successful purchasers found plants in west coast gardens benefitted from the increased rainfall and humidity levels to form sizeable shrubs or small trees 5 or 6m high, while those growing on the east coast would only attain 2 or 3m in height even if given a sheltered, yet sunny position. Flowering takes place from as early as March, through to May, but a proclivity in the wild for conifer forests and open gravelly fields between the altitudes of 1,650 to 3,500m has only delivered the species a H4-5 hardiness rating - so gardens in frost-pockets are unsuitable, as are exposed sites or the coldest locales inland.

R. morii has not been reintroduced since 1993.



R. morii

R. morii

R. hyperythrum

R. hyperythrum

Hardiness:

H5-6.

Flowering Period:

April-May.

Distribution in the wild:

NC Taiwan.

Growing in broad-leaved forest and open areas at elevations of 900-1,300m.

Identification:

Shrub, compact, rounded and spreading, somewhat leggy in shade, 1 to 2.5m high;
branchlets glabrous or floccose, becoming glabrescent and glabrous in maturity,
eglandular or short-stalked glandular.
Leaves elliptic through elliptic-lanceolate to oblong-lanceolate,
6.8 to 12cm long by 1.6 to 5cm wide, retained for 3-4 years;
upper surface dark green,
the margins slightly revolute in the wild, but recurved in cultivation;
lower surface glabrous,
but with persistent, fawn, reddish or brownish punctate hair bases
(visible under magnification),
the midrib often with some persistent, short dendroid hairs towards the base.
Petiole 15-25mm long, glabrous or floccose becoming glabrescent,
eglandular or short-stalked glandular.
Inflorescence candelabroid, 7-12-flowered;
the buds conspicuously long, the scales long-tailed.
Rhachis 15-25mm long, floccose, eglandular or short-stalked glandular.
Pedicel 20-50mm, ascending and spreading,
floccose and sparsely through moderately short-stalked glandular.
Calyx outer surface glabrous, sparsely through moderately short-stalked glandular,
the lobe margins glabrous or sparsely ciliate, and short-stalked glandular.
Corolla 3 to 5cm long, funnel-campanulate,
white, off white, pale pink or white flushed pink,
with or without reddish-purple spotting,
nectar pouches absent;
the lobes only slightly emarginate.
Stamens 10, rarely 12.
Ovary densely short-stalked glandular or densely tomentose, or both.
Style floccose and short-stalked glandular along the lower third,
or sparsely through moderately floccose at the base.
Capsule 12-15mm long, straight or slightly curved, ridged,
either hairy or short-stalked glandular, or both.

Seed Collections:

RV 69/218	1969	RV 9881	1970
RV 9812	1970	ETOT 183	1992
RV 9835	1970	ETOT 196	1992

R. hyperythrum was and currently is the subject of much botanic debate. Epithet and placement are the topic headings, with published scientific papers on both concerns arguing for and requiring change.

The species was first found on Mount Shichisei in the early years of the last century, at a time when Taiwan was still known as Formosa and under Imperial Japanese rule following the ceding of the island's sovereignty by the Chinese after their defeat in the First Sino-Japanese War. Like many of the other native rhododendrons, the taxon was described in 1913 by Bunzô Hayata, writing in Volume 3 of *Icones Plantarum Formosanarum,* this text an extensive botanic study of the island's flora that named and described around 1600 endemic vascular plants new to science. The chosen epithet translates as 'reddish below', a reference widely accepted in botanic circles to denote the colour of the punctate hair bases on the leaf underside, viewable through a microscope or a 20x loupe.

Except Taiwanese botanists have concluded that the named entry actually describes the indumented foliage of what in the West is known as *R. pachysanthum,* but on the island, is regarded as *R. hyperythrum,* with the former considered a synonym of the latter.

An article in the National Parks of Taiwan June 2007 Quarterly Bulletin - titled 'High-Altitude Flora in Taiwan' - evidences this and includes a stunning in-situ photograph of what is unmistakably *R. pachysanthum,* labelled and described as *R. hyperythrum*.

This has been viewable online at:

https://np.cpami.gov.tw/np-quarterly.html?view=endetail&catid=12&id=39&ls=3

Conversely, our *R. hyperythrum* is their *R. rubropunctatum,* which is another Hayata-described species, though in this case, specimens of such proved identical to the type herbarium plates of our *R. hyperythrum* and so led to the duplicate taxon being sunk.

And their arises a problem:

For if the Taiwanese position is accepted, a new moniker for their non-indumented but punctulate *R. hyperythrum* will need to be pulled from the ether or otherwise conceived as the *R. rubropunctatum* epithet is unavailable.

Because despite Hayata publishing it in 1913, even then the name was illegal under the nomenclature rules.

As two years earlier, Augustin Léveillé and Eugène Vaniot had used the very same designation to describe what, on re-examination, proved to be nothing more than a form of *R. siderophyllum*.

Yet despite the Léveillé-Vaniot appellation also being sunk, the ICNAFP naming code prevents the epithet's reuse within Genus *Rhododendron* today.

Clearly, until a botanic consensus on the matter is reached and published, convention dictates that the accepted epithet and type description for *R. hyperythrum* should continue to be maintained, along with that for *R. pachysanthum.* But as indicated above in the taxonomy update text, the evidence on subsection placement is well and truly in:

R. hyperythrum has a restricted natural distribution, being found only on the hills around Taipei, close to Taiwan's northern apex, and on the flanks of Mount Yushan in the centre of the island. The species is most closely allied to *R. morii*. Both facts were known in 1930, yet the candelabroid inflorescence swung an assignment to the Ponticum Series as detailed in *The Species of Rhododendron*. At the time, the punctate hair bases were initially thought so unusual that, albeit briefly, even an association with the lepidote rhododendrons was considered. Fifty years on, the Edinburgh Revision botanists would describe the taxon as being without close allies within Subsection *Pontica,* but opt to leave it where it was, an approach mirrored by H. H. Davidian and most other expert authors.

DNA analysis however, was having none of that:

Five separate and independent investigations, published post the Millennium, which sequenced a number of different regions along the taxon's DNA chains, showed that *R. hyperythrum* was in the same genetic clade as *R. morii* and *R. pseudochrysanthum,* and that the relationship with the then Subsection *Pontica* rhododendrons - not one of which is currently endemic to Taiwan - was much more distant.

Those scientific studies were:

Molecular Phylogeny of Eight Taiwanese Rhododendron Species Based on Chloroplast trnF-trnL DNA Sequences (Hwang and Hsu, 2001);

Genetic relationships of Rhododendron (Ericaceae) in Taiwan based on the sequence of the internal transcribed spacer of ribosomal DNA (Tsai et al, 2003);

The Molecular Systematics of Rhododendron (Ericaceae): A Phylogeny Based Upon RPB2 Gene Sequences (Goetsch et al, 2005);

Phylogeographic study reveals the origin and evolutionary history of a Rhododendron species complex in Taiwan (Chung et al, 2007);

Phylogeny of Rhododendron subgenus Hymenanthes based on chloroplast DNA markers (Milne et al, 2010).

The case for inclusion within Subsection *Maculifera* is therefore made.

Within its new residence, *R. hyperythrum* will most likely be confused with *R. morii,* the two sharing the characteristics of glands and hairs on the petiole, rhachis, pedicel, calyx, ovary, style and capsule. They also have similarly shaped leaves and white corollas that lack nectar pouches. However, the flower truss is completely different, opening as a candelabroid umbel on specimens of *R. hyperythrum,* and as a racemose umbel on those of *R. morii.* Equally, while the corollas of both species may be crimson-spotted, only *R. morii* boasts a blotch at the base of the upper lobes. Ultimately of course, a glance at the abaxial leaf surface with a magnifying lens will swiftly separate the two, as only the *R. hyperythrum* blades will boast persistent red punctate hair bases. This feature is shared with three other members of the subsection, *R. anwheiense, R. longesquamatum,* and to a lesser degree, *R. pseudochrysanthum,* but confusing these species with *R. hyperythrum* is unlikely as each is highly distinctive. Mother Nature has also proved helpful, as on the ground in the wild, the two populations of *R. hyperythrum* are isolated from those comprising the *R. morii* distribution.

Lionel de Rothschild, the creator of Exbury Gardens and hybridiser extraordinaire, was responsible for introducing *R. hyperythrum* into British gardens during the mid 1930s, the plants being supplied by another fabled figure in the history of the genus, the Japanese nurseryman Koichiro Wada (whose Hampshire-bound consignment also included two small specimens of a modest little species that would later take the entire rhododendron world by storm - *R. yakushimanum*). Those new arrivals were quickly propagated and distributed widely, the *R. hyperythrum* juveniles in time forming domed or spreading bushes to around 2m or more in height. They also proved to be fairly free-flowering, opening their blooms during April-May, and fully hardy, with the experts gifting them a H5-6 rating on the RHS scale. Horticulturally, the species comes with just one notable cultivation proviso: to avoid legginess in later life, an open planting position should be chosen, especially in more northerly climes.

One last fact: in adjusting to the UK climate, the species has made a slight adaptation to its foliage, sporting leaves that are more revolute, with clearly recurved margins. In the wild, this feature is far less distinct and does not endure year round.



R. hyperythrum (ETOT 196)



R. hyperythrum (RV 9812)



R. hyperythrum (ETOT 196)



R. hyperythrum (ETOT 196)

R. pachysanthum (RV 72001)

R. pachysanthum

Hardiness:
H5-6.
Flowering Period:
March-May.
Distribution in the wild:
C Taiwan.
Growing on open grassy mountain slopes above the treeline,
at elevations of 3,400-3,600m.

Identification:
Shrub, rounded, compact and dense, but somewhat leggy in shade, 1 to 3m high;
branchlets densely fawn tomentose.
Leaf bud scales deciduous.
Leaves lanceolate through lanceolate-ovate to ovate,
5.8 to 11.8cm long by 2.5 to 4cm wide;
upper surface fawn or cinnamon-brown at first, becoming dark green,
rugulose or smooth,
with a conspicuous and usually persistent silvery indumentum,
becoming browner with age or when grown in shade;
lower surface indumentum bistrate, thick, dense and woolly,
white, pale whitish-brown or cinnamon at first becoming rufous-brown at maturity,
the upper layer of hairs ramiform, the lower adpressed rosulate,
the covering continuous and usually persistent,
but sometimes only remaining along the midrib, the veins usually obscured.
Petiole 10-20mm long, densely whitish or fawn tomentose.
Inflorescence 8-20-flowered; the bud scales persistent or deciduous.
Rhachis 10-20mm long, puberulous.
Pedicel 25-30mm long,
densely pubescent and sparsely through moderately short-stalked glandular.
Calyx outer surface sparsely through moderately hairy
and sparsely short-stalked glandular,
the margins equally hairy but often moderately short-stalked glandular.
Corolla 3.1 to 4cm long, campanulate through funnel-campanulate,
pure white through pale pink to pale rose-pink,
with or without green or crimson-purple spots or a blotch,
nectar pouches absent.
Ovary sparsely through moderately tomentose and densely short-stalked glandular.
Style glabrous or sparsely hairy at the base,
and sparsely short-stalked glandular at the base.
Capsule to 15mm long.

Seed Collections:

RV 72/001	1972

R. pachysanthum is without a doubt, one of the most distinctive rhododendrons in cultivation and it is rarely mistaken for any other species. Discovered growing above the treeline on open, grassy mountain slopes, across a narrow altitudinal band from 3,400m up to 3,600m, that sole endemic population, is located high-up on Nanhu Da Shan, a peak in central Taiwan. These plants were first encountered by Ushinosuke Mori, and then later described in 1913 by Bunzô Hayata (*Icones Plantarum Formosanarum,* Volume 3).

But a problem has arisen. Because Hayata's description does not match with what is grown in Western gardens under the *R. pachysanthum* epithet. Moreover, a troll through the published botanical papers, muddies the situation instead of clarifying it.

Taiwanese botanists, for instance, believe that the correct name for *R. pachysanthum* is *R. hyperythrum* and they regard that former epithet - *R. pachysanthum* - as a synonym and have sunk it under the latter - *R. hyperythrum.*

On the other hand, Japanese botanists now consider *R. pachysanthum* and *R. morii* to be subspecies of *R. pseudochrysanthum,* with *R. hyperythrum* made synonymous under *R. morii.* At least, that is the position set out in *A Revision of Genus Rhododendron in Japan, Taiwan, Korea and Sakhalin,* which was written by Takashi Yamazaki in 1996, and published by the Tsumura Laboratory, Tokyo.

Luckily, the situation on the ground has been appraised by a trio of rhodo-savvy Western horticulturalists: Tony Kirkham, then Head of the Arboretum at the Royal Botanic Garden, Kew; the late Mark Flanagan, then Keeper of the Gardens in Windsor Great Park; and most recently, by Rama Lopez-Rivera, of the Woodland Unit in the Savill Gardens. Their fieldwork confirms that altitude divides the species and that there are hybrid zones between the distinct populations.

With regard to *R. pachysanthum:*

They confirm that the species is found only on Nanhu Da Shan, with thousands of plants growing just below and just above the 3,500m contour.

That these match exactly the cultivated plants grown in Western gardens under this epithet.

That intermediates exist between *R. pachysanthum* and *R. morii* in an extensive natural hybrid zone beginning at around 2,900m, with the morphology first favouring *R. morii,* then *R. pachysanthum,* the character change occurring as height is gained.

And finally, that neither *R. hyperythrum,* nor *R. pseudochrysanthum,* are found on Nanhu Da Shan.

The case for retention of *R. pachysanthum* at specific ranking is therefore made, the situation reflective of the hybrid swarm found between the *R. falconeri* and *R. hodgsonii* populations in Bhutan, though without a stabilised taxon - *R. kesangiae* - in the middle of the mêlée. The *R. pachysanthum* epithet may well have to be changed, as the Hayata 1913 description is clearly not this plant and writing in Volume 4 of the *Flora of Taiwan* (Second Edition), published in 1998, four Taiwanese botanists set out the case for its replacement by *R. hyperythrum,* with that taxon reverting to *R. rubropunctatum,* a revived name previously declared synonymous and sunk. But as explained in the *R. hyperythrum* entry, such a resurrection falls foul of the current internationally agreed nomenclature rules as the Hayata-coined epithet was actually illegal at the time of its conception, having already been used to describe another member of Genus *Rhododendron*. Whatever the outcome, the resulting change will clearly cause confusion and likely generate the same levels of furore amongst gardeners as the loss of the revered *R. metternichii* epithet once did. But the situation requires a resolution, and it should come from the Taiwanese. Though until then, as already stated above, the status quo should be maintained.

To which end:

Identification of the species, even when growing alongside its subsection associates, is a piece of cake, the leaves unmistakeable from when they first extend to when they fall, their shape, arrangement and contrasting adaxial and abaxial tomentum colours impossible to confuse with any other rhododendron, though a few UK gardens offer a challenge with mislabelled *R. pachysanthum* x *R. morii* natural hybrids grown from the Patrick-Hsu RV 72001 seed gathering. This appears to have been sourced from plants sited too close to the aforementioned mêlée, with the rogues that sprouted amongst the true species overlooked. But as these only have a thin film of indumentum covering the lower leaf surface, not the thick and woolly cloak worn by bona fide specimens, keying them apart is a cinch.

Outwith the Subsection *Maculifera* contingent, there is a clear resemblance to *R. wasonii,* a somewhat aberrant member of Subsection *Taliensia* Series *Wightia*. The two taxa share a similar height and build, have matching leaves and corollas, at least in size and shape, and display the same colour and woolly texture in their lower leaf surface indumentum. But then the differences kick-in as the *R. wasonii* leaf is bereft of any adaxial tomentum, allowing the dark green pigmentation of the lamina to shine through, and its abaxial indumentum is composed of just a single layer of long-rayed hairs, these cast aside on the *R. pachysanthum* blades for a bistrate covering of ramiform and adpressed rosulate hairs. Moreover, a final fingertip check of the ovary will confirm a correct diagnosis if a white-flowered plant is to hand, sticky equalling *R. pachysanthum*.

Only one documented collection of the species has occurred to date and thanks to Euan and Peter Cox subscribing to the fourth Rhododendron Venture expedition mounted by John Patrick and Chien Chang Hsu in 1972, the species and its natural hybrid were introduced into UK cultivation. All of the largest plants found in British gardens originate from this single lot, with hand-pollinated offspring germinated from the first plant to bloom in the garden at Glendoick, the source of most other specimens.

Exquisite in both flower and foliage, *R. pachysanthum* succeeds best in an open, sunny position, though as some plants begin to open their buds quite early in the season, frost-pockets should be avoided, despite the fact that the species is fully hardy with a H5-6 rating. In too much shade however, compact rounded shrubs, densely filled with foliage, become leggy and open, and their leaves loose the silvery sheen as the tomentum dulls to a pale brown.

Like *R. yakushimanum,* this is a species no rhododendron garden should be without.



R. pachysanthum (RV 72001)



R. pachysanthum x *R. morii* (RV 72001)

R. pachysanthum (RV 72001)

R. pachysanthum

R. pachysanthum

R. sikangense* var. *cookeanum

Hardiness:
H5-6.
Flowering Period:
May-July.
Distribution in the wild:
NE Yunnan, China.
Growing in mixed forests at elevations of 3,300-4,500m.

Identification:
As var. *sikangense* except:
Bark sometimes smooth and flaking.
Leaves oblong-lanceolate through oblong-elliptic,
6.5 to 15cm long by 2.4 to 7cm wide;
lower surface with a persistent rufous stellate indumentum,
this found towards the base and on the midrib,
rarely sparsely short-stalked glandular.
Petiole sometimes sparsely short-stalked glandular.
Corolla white through pink, usually with a deep red blotch and spots.

Seed Collections:

R 18142	1929	CNW 934	1994	CNW 1062	1994
R 18169	1929	CNW 943	1994	AC 873	1995
R 24322	1932	CNW 958	1994	AC 879	1995
R 24440	1932	CNW 959	1994	C&H 7166	1995
R 24471	1932	CNW 961	1994	EGM 349	1995
R 25476	1932	CNW 967	1994	AC 2054	1996
AC 587	1993	CNW 970	1994	AC 2066	1996
CNW 920	1994	CNW 971	1994	AC 2070	1996
CNW 923	1994	CNW 973	1994	C&N 5983	2007
CNW 924	1994	CNW 982	1994	JN 12260	2012
CNW 927	1994	CNW 1045	1994	JN 12262	2012
CNW 929	1994	CNW 1060	1994	JN 12354	2012
		CNW 1061	1994		

R. sikangense* var. *sikangense

Hardiness:
H5-6.
Flowering Period:
May-July.
Distribution in the wild:
CW & SW Sichuan, China.
Growing in forests, amongst bamboo thickets, and on alpine slopes,
at elevations of 3,100-4,400m.

Identification:
Shrub or small tree, broadly upright, 1.8 to 9m high;
branchlets densely white through rufous stellate-tomentose,
sometimes short-stalked glandular,
but quickly becoming glabrous and eglandular;
bark rough.
Leaves oblong-elliptic through elliptic-lanceolate to lanceolate,
7 to 12cm long by 2.5 to 3.5 cm wide;
upper surface dark green, papillose;
lower surface midrib sparsely rufous stellate-floccose, becoming glabrescent or glabrous.
Petiole 10-15mm long, rufous stellate-tomentose at first, glabrous at maturity.
Inflorescence 5-15-flowered.
Rhachis 10-20mm long,
white through rufous stellate-tomentose.
Pedicel 10-20mm long,
white through rufous stellate-tomentose.
Calyx outer surface stellate-tomentose.
Corolla 3.5 to 5cm long, campanulate,
white through pink to purple,
with or without either or both a red-purple blotch or spots,
nectar pouches absent.
Ovary variably stellate-tomentose, the hairs brownish through rufous,
occasionally glandular.
Capsule 15-20mm long, densely rufous stellate-tomentose.

Seed Collections:

Cox 5012	1990	CEE 246	1991
Cox 5105	1990	SICH 990	1992
EGM 108	1990	JN 12295	2012
EGM 155	1990	FB15-2018	2018
CEE 231	1991		

R. sikangense is another species with placement and nomenclature issues still waiting to be resolved, its stellate hairs, spread across the branchlets, petioles, abaxial midrib, rhachis, pedicel, calyx, ovary, style and capsule, the perplexity befogging the former, with the var. *exquisitum* epithet, the bugbear of the latter.

Chun Nien Ho and Wen Kwang Hu discovered *R. sikangense* in June 1951 on Erlang Shan, a 3,437m-high peak in the west of Sichuan province. It was described the following year by Wen-Pei Fang, writing in Volume 2 of *Acta Phytotaxonomica Sinica*.

R. exquisitum was described by Tien Lu Ming in 1981, writing in Volume 3, Part 1, of *Acta Botanica Yunnanica*. In 1984 he reduced the taxon to a variety of *R. sikangense* in Volume 6, Part 2, of the same publication.

Specimens of *R. exquisitum* differ from *R. sikangense* in having much broader leaves, a persistent indumentum at the base of the abaxial leaf surface and white flowers with a red basal blotch. Such features make it a near mirror image of a plant found by Joseph Rock, near Muli, in southern Sichuan, during 1929, although this was not described until 1962, when H. H. Davidian's botanic portrait of the ever-so marginally more narrowly-leaved *R. cookeanum* appeared in *The Rhododendron and Camellia Yearbook*.

The morphological progression in characteristics, from those of the *R. sikangense* var. *sikangense* populations on Erlang Shan - with oblong-elliptic through elliptic-lanceolate to lanceolate leaves, 7 to 12cm long by 2.5 to 3.5 cm wide - can be tracked south through Muli into northeast Yunnan and onto Wumeng Shan, where *R. sikangense* var. *exquisitum* is endemic - these plants with oblong-lanceolate through oblong-elliptic blades, 6.5 to 15cm long by 2.4 to 7cm wide - and this evolvement has been documented in the field reports of pre-Millennium Western expeditions.

At this point, however, a divide opens up, with the authors of *Flora of China* making *R. cookeanum* synonymous under *var. exquisitum,* while those responsible for the Edinburgh Revision have opted to make it synonymous under var. *sikangense*. Regrettably, what neither group has taken cognisance of, is the fact that the 'exquisitum' epithet has a prehistory within the genus, being used by John Hutchinson in 1932 to describe a plant lodged in what would later become Subsection *Triflora*. That this scaly *R. exquisitum* is now synonymous under *R. oreotrephes* is - like all the other innumerable instances of epithet duplication - immaterial. But to continue using it within Genus *Rhododendron* - as here, describing a variety of *R. sikangense* - would be totally illegal under the internationally agreed nomenclature rules.

R. sikangense var. *cookeanum* is therefore adopted herein as its replacement.

As to the subsection quandary:

Western experts are split down the middle between *Maculifera* and *Parishia,* while Chinese botanists have opted for *Irrorata* (despite a stated longing for *Maculifera* being noted in their *Flora of China* online text). There is currently no DNA evidence available to conclusively show which clade *R. sikangense* falls into, as the species has not featured in any of the gene sequencing studies of the genus published to date. So:

Stellate hairs are a feature of the Subsection *Parishia* membership, which would be all well and good except that *R. sikangense* has white rather than red flowers and no nectar pouches within the corollas, making it rather aberrant from the likes of *R. elliottii, R. facetum* and *R. kyawii*. Geographically too, its populations are located several hundred miles away from that troika's natural distribution, which runs from the northeastern states of India across Upper Myanmar into western Yunnan. It is also a much hardier plant.

Within Subsection *Irrorata,* the stellate hairs make *R. sikangense* an aberrant, as they also do within Subsection *Maculifera,* but lacking the pivotal evidence of a cladistic analysis, the current subsection assignment will be maintained, despite the imperfect fit.



R. sikangense (CEE 246)



R. sikangense (EGM 108)

R. cookeanum (CNW 920)

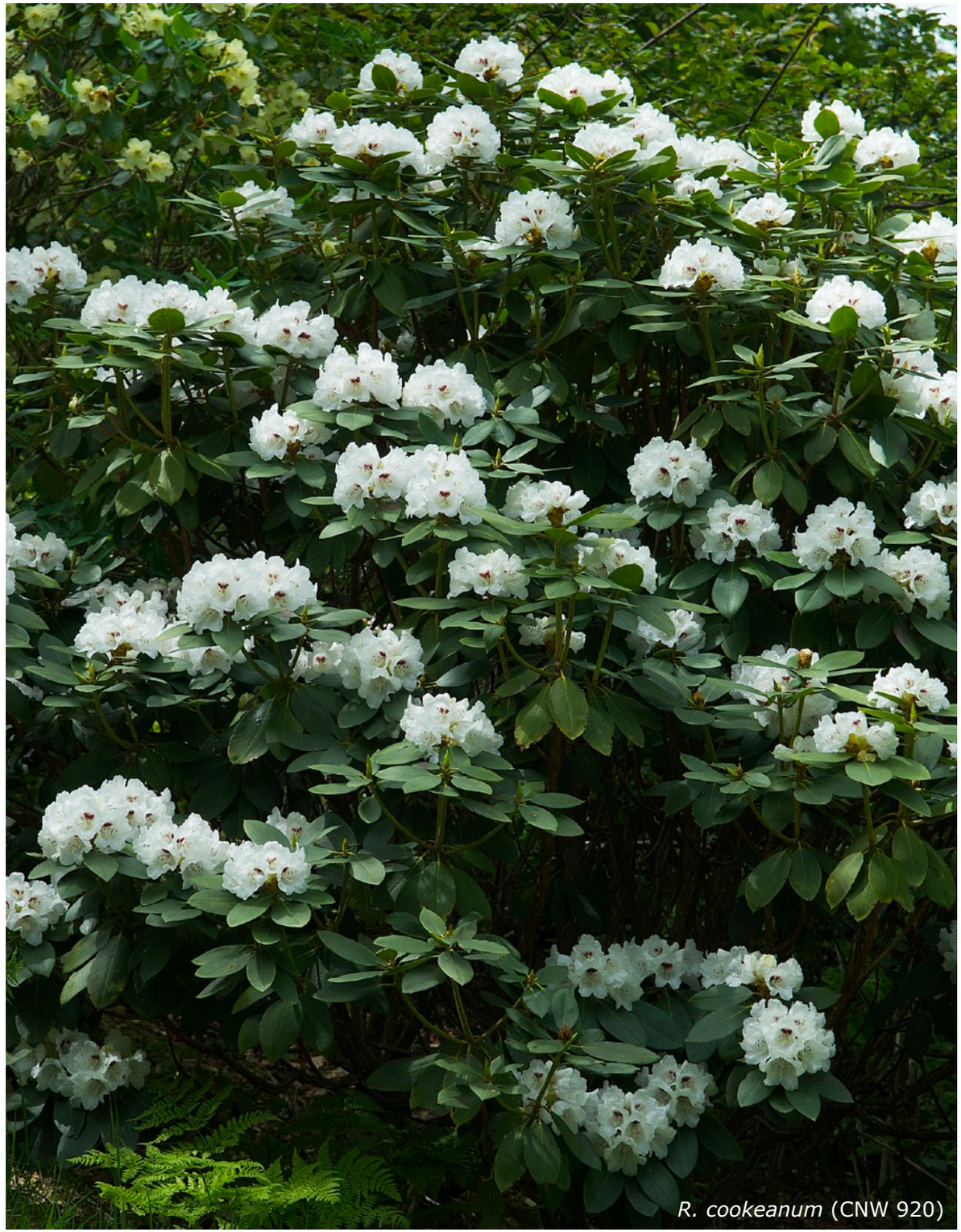
Within that current taxonomic home, *R. sikangense* can swiftly be separated from all the other members of Subsection *Maculifera* by a lack of bristles, hairs or indumentum on the mature foliage, if the abaxial leaf base is excepted. The broadly elliptic-shaped leaves of var. *cookeanum*, plus its red-blotched white flowers, are distinctive in combination; the narrower and more lanceolate-shaped blades of var. *sikangense,* less so. Confirmation of the stellate type hairs on the rhachis, pedicel, calyx, ovary and capsule, as well as on the new shoots, leaves and petioles when they first extend, requires the use of a hand-lens or low-powered microscope, but is the decisive distinguishing feature.

Joseph Rock's collection of *R. sikangense* var. *cookeanum* under the field number R 18142 was the premier introduction of the species into British gardens, though the delay in receiving a formal description meant the 'official' first-flowering honours went to a George Forrest gathering under the designation Forrest No. 8 (this was one of around 100 then un-numbered lots that arrived at Edinburgh Botanic from Yunnan a few months after the plant hunter's death on January 5th, 1932 - a massive heart attack had struck the Scotsman while he was out hunting game on the hills around Tengchong). The specimen in question opened its blooms in the Northumberland garden of the renowned rhododendron grower, Randle Cooke, in or around 1952, and of course, it is this gentlemen that H. H. Davidian's chosen epithet honours.

The ramifications of disassociating *R. cookeanum* from *R. sikangense* var. *sikangense,* has meant that Peter Cox and Ted Millais now get the credit for first introducing seed of this variety - the specific species, in fact - into British gardens, following their exploration of Erlang Shan during the autumn of 1990.

Cultivation of either form of *R. sikangense* is straightforward and without problem, the species proving hardy and able to survive and prosper in west coast and southern gardens, as well as in sheltered sites along the east coast and inland, as both varieties have a H5-6 hardiness rating. Each is quite fast growing, forming a broadly upright, spreading bush, well cloaked in foliage, and they begin to set flower buds a decade or so after germination, doing so freely a few years later.

Older specimens of var. *cookeanum* from the Rock and Forrest collections, now 4m high shrubs displaying quite dense trusses of white-blotched-red corollas, match the best garden forms of *R. morii* or *R. pseudochrysanthum*.



R. cookeanum (CNW 920)



R. anwheiense

R. anhweiense
Hardiness:
H5-6.
Flowering Period:
April-May.
Distribution in the wild:
Anhui, Guangxi, Hunan, Jiangxi & Zhejiang, China.
Growing at forest margins, in thickets, on open rocky sites, and on cliffs,
at elevations of 700-1,800m.

Identification:
Shrub, compact and rounded, 1 to 3.6m high;
branchlets sparsely through moderately floccose, the hairs white,
becoming glabrescent then glabrous.
Leaf and flower buds globose.
Leaves oblong-lanceolate through oblong-elliptic to elliptic,
3 to 8.5cm long by 1.5 to 3.6cm wide, but sometimes 10-15cm long;
upper surface green (often pale green or yellowish in cultivation);
lower surface matt, glabrous,
but sometimes with minute black hairs extending from a red punctate base,
or punctulate with minute red glands,
the midrib sometimes floccose at the base.
Petiole 5-30mm long,
sparsely through moderately floccose-tomentose, the hairs whitish,
occasionally short-stalked glandular at first.
Inflorescence 6-12-flowered.
Rhachis 10-18mm long, glabrous or floccose, eglandular.
Pedicel 13-34mm long, glabrous or floccose, the hairs long, becoming glabrescent,
eglandular.
Calyx outer surface glabrous and eglandular,
the lobe margins often ciliate, rarely short-stalked glandular at first.
Corolla 2.4 to 4cm long, funnel-shaped through funnel-campanulate,
pink through white (flushed pink in the bud),
sometimes with crimson-purple spotting,
nectar pouches absent,
the outer surface glabrous or with a few long hairs.
Ovary usually glabrous, but sometimes sparsely long-hairy.
Capsule 12-18mm long, curved and grooved,
glabrous, rarely sparsely floccose.

Seed Collections:
None have been officially documented to date.

R. anwheiense was discovered on Wang Shan, part of the Huangshan mountain range in the south of China's Anhui Province - then spelt Anwhei, or improperly, Anhwei - by the botanist H. K. Ip towards the end of August 1923. Ernest Wilson, writing in Volume 6 of the *Journal of the Arnold Arboretum,* described the species in 1925 from dried herbarium material sent to Harvard by the University of Nanking.

The taxon was first placed into the old Maculiferum Subseries of the Barbatum Series, but then moved to the Irroratum Series, the taxonomic musical chairs down to the fact that *R. anwheiense* is the linking species between the two subsections, differentiated from the Subsection *Irrorata* rhododendrons by the soft white hairs on the petioles and from its closest ally in its true home, *R. maculiferum,* by the distinctly rounded leaf and flower buds. Indeed, for close on two decades, between 1978 and 1996, it was pigeonholed as a subspecies of the latter, a position still maintained by some botanists, as well as the online pages of *Flora of China*. Additional keys are provided by the near glabrous and eglandular branchlets, foliage, calyx, corolla, ovary and style, while the pale green to yellowish leaf colour - in cultivation, though not in the wild - offers a further distinction.

With regard to its endemicity, the species is geographically isolated from the main concentration of *Hymenanthes* rhododendrons in southwest China, and appeared at first to have a very restricted distribution in the east of the country, though recent fieldwork has extended this southwards into Jiangxi and Zhejiang, Hunan and Guangxi.

R. anwheiense was introduced into British gardens around 1925, but by whom is unknown, as there are no documented field numbers apart from Ip's 4784, which in theory, only relates to the dried herbarium material (although seed could have been extracted from a fruiting specimen and grown on). Regardless of their origin however, those plants have proved fully hardy across the UK, are quite fast growing, and very free-flowering, with the flush of blooms often obscuring the entire shrub. Those forms with a tighter, fuller truss, where a deeper pink initially flushes the corollas, are the best clones and should be sought out by prospective purchasers. Otherwise, the species is not demanding as to position in the garden, but care should be exercised in that choice nonetheless, as out of flower, the foliage provides very little visual interest.



R. anwheiense

R. anwheiense

R. anwheiense

Photographic Acknowledgements:

Mirroring the listings in the first two volumes, details of where each of the plant portraits was photographed is set out below, along with the website details of those collections visited. Thanks is again extended to each establishment for allowing images taken in a private-use capacity, to be reproduced here. Gratitude is also due the institutions, organisations and individuals who allowed the portrait photographs of historical and noted figures associated with the genus to appear alongside the text.

Key: AL - above left; AC - above centre; AR - above right; ACL - above centre left; ACR - above centre right; BL - below left; BC - below centre; BR - below right; BCL - below centre left; BCR - below centre right; L - left; R - right.

Arduaine Garden, Oban, Argyll:
https://www.nts.org.uk/visit/places/arduaine-garden
p. 11-AR; p. 27-AR, BR; p. 28-BL, BR; p. 36-L; p. 37; p. 48-L, BR; p. 95-BL, BR; p. 131-BR; p. 133; p. 140; p. 151-BR; p. 152-BR; p. 234; p. 237; p. 271-BR; p. 272-L, AR; p. 288-AL; p. 317; p. 325-AR; p. 331-L; p. 383-R; p. 454-L.

Benmore Botanic Garden, Argyll:
https://www.rbge.org.uk/visit/benmore-botanic-garden/
Front Cover; p. 14-AR; p. 16; p. 24; p. 30-BR; p. 31-L; p. 33-AL; p. 34; p. 39-AR; p. 44-BL; p. 54-L; p. 55-R; p. 59-BL, BR; p. 65-AL, BL; p. 81-AR, BR; p. 87; p. 95-AR; p. 102; p. 103-BR; p. 104-AL, AR; p. 105; p. 107-ARC, ARR, BR; p. 109; p. 128-BR; p. 137-BL; p. 142-L, BR; p. 143-AL, BL, R; p. 148-L, AR, BR; p. 149-AL, R; p. 152-L, AR; p. 153; p. 166-AR; p. 170-L, AR, BR; p. 172-BR; p. 173-BRL; p. 175; p. 178; p. 179-R; p. 180-AL, Bl, R; p. 181-L; p. 185-BL; p. 189; p. 192-AL; p. 208-AL; p. 214-BR; p. 215-AL, BL; p. 221-L, AR, BR; p. 223-BR; p. 231-R; p. 232-AL; p. 246-AL, R; p. 251-AL, BL; p. p. 255-AL; p. 260-L, BR; p. 272-BR; p. 284-BR; p. 289-R; p. p. 292-BR; p. 301-L, AR, BR; p. 306; p. 314-AL; p. 320-L; p. 321-R; p. 322-BL, BR; p. 333; p. 345-BR; p. 346-AC, AR, BL, BR; p. 349-BR; p. 365-R; p. 369-AR, BR; p. 389; p.390-AL; p. 391-AR; p. 393; p. 394; p. 395-L, R; p. 402; p. 404-R; 415-L; p. 416; p. 418-BR; 419-BR; p. 455-R.

Michael Blooman, Lyme Regis:
https://www.michaelblooman.co.uk/
p. 190-L - Rhododendron Titapuriense at Yungchak.

Bishop's College Press, Calcutta:
https://bishopscollege.ac.in/archives/
p. 290-BRL - William Griffith, an engraving from *Journals of Travels in Assam Burma Bootan Affghanistan and the Neighbouring Countries,* 1847.

Brodick Castle Garden, Isle of Arran:
https://www.nts.org.uk/visit/places/brodick-castle-garden-country-park
p. 25; p. 196-L; 197; p. 229-AL; p. 325-BR; p. 327; p. 328; p. 329; p.330; p. 331-R; p. 336-AL, BL; p. 338; p. 339; p. 346-AL; p. 359-L, AR, BR.

Crarae Woodland Glen, Inveraray, Argyll:
https://www.nts.org.uk/visit/places/crarae-garden
p. 65-R; p. 150-R; p. 298; p. 414-AR.

Dawyck Botanic Garden, Stobo, Peebles:
https://www.rbge.org.uk/visit/dawyck-botanic-garden/
p. 43; p. 113-L, BR; p. 119-BL, AR, BR; p. 120; p. 203-R; 423-BR; p. 424-L; p. 425-L, AR, BR; p. 451-AR.

Exbury Gardens, Hampshire:
https://www.exbury.co.uk/
p. 11-BR; p. 121; p. 206-AR, BR; p. 224; p. 280-AL, AR; p. 281-BL, R; p. 294; p. 363-R; p. 428-B; p. 430-AR, BR.

Glenarn Gardens, Rhu, Helensburgh:
https://www.discoverscottishgardens.org/garden/glenarn-glorious-gardens-of-argyll-and-bute/
p. 265-R; p. 404-AL.

Glendoick Gardens Ltd, Perth:
https://glendoick.com/
p. 59-AL, AR; p. 97-BL; p. 100-AL; p. 107-ARL; p. 113-AR; p. 122-L, R; p. 129-AL, BL; p. 132; p. 135-AR, BR; p. 162; p. 171; p. 193-R; p. 219-AL, BL; p. 241-AR, BR; p. 264-AL; p. 284-AR; p. 363-AL; p. 429-R; p. 432-BR; p. 433-BR; p. 434; p. 435; p. 439; p. 448; Back Cover-AR, BR.

Howick Hall Gardens & Arboretum, Alnwick, Northumberland:
https://howickhallgardens.com/
p. 47-BR; p. 219-R; 421-BR.

Inverewe Gardens, Poolewe, Wester Ross:
https://www.nts.org.uk/visit/places/inverewe
p. 30-BL; p. 33-BL; p. 84; p. 85-Al, AR; p. 98; p. 146; p. 147-BRL; p. 151-AR; p. 256-BR; p. 299; p. 364-BR.

Lakeland Horticultural Society, Holehird Gardens:
https://holehirdgardens.org.uk/the-society
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Logan Botanic Garden, Stranraer:
https://www.rbge.org.uk/visit/logan-botanic-garden/
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Logan House Garden, Stranraer:
https://www.visitscotland.com/info/see-do/logan-house-garden-p865701
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Muncaster Castle Gardens, Ravenglass, Cumbria:
https://www.muncaster.co.uk/
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National Portrait Gallery, London:
https://www.npg.org.uk/collections/search/portrait/mw159856/William-Henry-Sykes?LinkID=mp104112&role=sit&rNo=0
p. 138-BRR - William Henry Sykes, photographed by John & Charles Watkins, *c.* 1860.

Nymans Garden, Handcross, West Sussex:
https://www.nationaltrust.org.uk/nymans
p. 48-AR; p. 185-AL; p. 208-BL; p. 210-L; p. 279-L, AR; p. 297; p. 337-BR; p. 409-BR; p. 410-AL.

Public Domain:
p. 138-BRL - Hugh Falconer; p. 222 - *Rhododendron serotinum,* Tab 8841, *Curtis's Botanical Magazine,* Volume 146, 1920, botanic illustration by Matilda Smith and John Nugent Fitch; p. 290-BRR - Robert Wight, aged 36, from the *Journal of Botany,* Volume 3, 1840, the lithograph by Allan & Ferguson of Glasgow, from a drawing by Daniel MacNee.

Ray Wood, Castle Howard, North Yorkshire:
https://www.castlehoward.co.uk/visit-us/the-gardens/the-woodland-garden
p. 86; p. 147-BRR; p. 188-BR; p. 190-BL; p. 211; p. 235-AR, CR, BR; p. 243-BL; p. 255-BL; p. 367-BL; p. 384-L; p. 391-B; p. 406; p. 407; p. 408; p. 422-L; 436-BR; p. 449.

Royal Botanic Garden, Edinburgh:
https://www.rbge.org.uk/visit/royal-botanic-garden-edinburgh/
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Royal Botanic Garden, Wakehurst Place:
https://www.kew.org/wakehurst
p. 14-BR; p. 15-BL; p. 50-L; p. 61-AL; p. 89; p. 117-AR; p. 134-L; p. 174; p. 227; p. 249-AL; p. 282; p. 367-BR; p. 368-Al; p. 371-R; p. 379-AL, BL, R; p. 422-R; p. 451-BR.

Royal Horticultural Society, Wisley:
https://www.rhs.org.uk/gardens/wisley
p. 74-BR; p. 209-BL, R.

Savill Garden, Windsor Great Park:
https://www.windsorgreatpark.co.uk/en/experiences/the-savill-garden
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Sir Harold Hillier Gardens, Ampfield, Romsey:
https://www.hants.gov.uk/thingstodo/hilliergardens
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Valley Gardens, Windsor Great Park:
https://www.windsorgreatpark.co.uk/en/experiences/the-valley-gardens
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About the author:



Julian Taylor-Whall was born in Lowestoft at the end of November, 1957. He received a grammar school education before beginning a three-decades-long career with the BBC at Television Centre in West London. During that time he worked on many of the now classic shows made in the production facilities there, the studios at Lime Grove and Elstree, and at the Television Theatre. He retired early in 2008, moving to a small village in West Cumbria, just outside the Lake District National Park.

Twenty years earlier, in late April 1988, on a day when the hills of Torridon and Applecross were hidden in cloud, a visit to the nearby Inverewe Gardens offered an alternative distraction. By chance, it took place at the peak of the flowering season, during a particularly profligate year for bloom, and turned into an encounter never to be forgotten. Thus did the species and hybrids of Genus *Rhododendron* become yet another enduring passion, along with music, film, photography, and concocting the occasional science fiction novel.

- above -
Observed in the woodland at Muncaster,
any resemblance to the author is completely denied.

- back cover -

R. sinofalconeri (AC 1213)	*R. souliei* 'Deep Pink'
R. suoilenhense (AC 432/448)	*R. ochraceum* (C&H 7052)







