



TEMPERATE RHODODENDRONS

Julian Taylor-Whall

- Volume Two -

Subgenus Therorhodion, Subgenus Azaleastrum

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.

A close-up photograph of a cluster of temperate rhododendron leaves and flower buds. The leaves are dark green with distinct veins and some red edges, particularly on the new growth. Small, closed flower buds are visible on thin, dark stems emerging from the leaf axils. The lighting is bright, casting deep shadows and highlighting the texture of the leaves and the delicate structure of the flower buds.

TEMPERATE RHODODENDRONS

Julian Taylor-Whall

Copyright © Julian Taylor-Whall 2023.

Julian Taylor-Whall has asserted the moral right
to be identified as the author of this work.

- *Front Cover* -
R. benhallii 'Ylva'

- *Title Page* -
R. camtschaticum

- *Contents* -
R. semibarbatum

- *Subgenus Therorhodion* -
R. camtschaticum

- *Subgenus Azaleastrum* -
R. albrechtii

Contents:

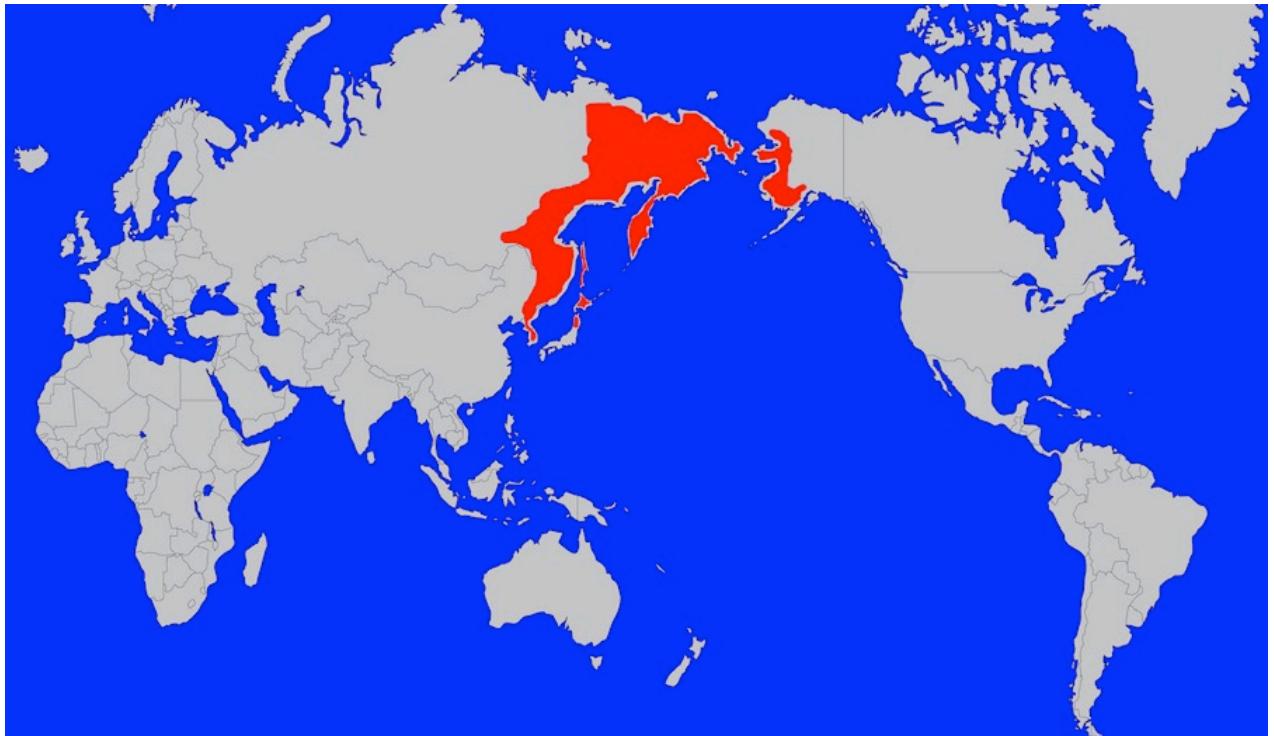
Subgenus Therorhodion	9
Taxa, Taxonomy, Morphology, History	10
Subgenus Azaleastrum	17
Section <i>Sciadorhodion</i>	
Subsection <i>Menziesia</i>	18
Subsection <i>Sciadorhodia</i>	32
Section <i>Tsutsusi</i>	
Subsection <i>Azaleastrra</i>	56
Subsection <i>Brachycalyx</i>	64
Subsection <i>Tsutsusia</i>	90
Subsection <i>Viscidula</i>	154
Photographic Acknowledgements	160
Index of Plants	162





Subgenus
Therorhodion

Subgenus *Therorhodion*:



Taxa:

- R. camtschaticum*
- R. camtschaticum* ssp. *camtschaticum*
- R. camtschaticum* ssp. *glandulosum*
- R. redowskianum*

Taxonomic Revision:

Genetic evidence has now conclusively shown that the three species listed above are indeed rhododendrons.

That DNA analysis has moreover - jaw-droppingly so - demonstrated that *R. camtschaticum* was the kernel from which all the other members of the genus evolved.

A number of peer-reviewed scientific papers independently document this fact, the most authoritative having been written by

Loretta Goetsch, Andrew J. Eckert and Benjamin D. Hall, of the Department of Biology, University of Washington, Seattle, USA, this study titled *The Molecular Systematics of Rhododendron (Ericaceae): A Phylogeny Based Upon RPB2 Gene Sequences*, and published in Volume 30, Number 3, of *Systematic Botany*, during 2005.

The results of their endeavours showed that *R. camtschaticum* was sister to all the other rhododendrons tested, some eighty species covering all the subgenera and sections as defined in the Edinburgh Revision Classification of 1996.

This sampling included the Subsection *Leda* taxa, as well as occupants of Genus *Menziesia*, which have now been transferred into Genus *Rhododendron*.

The DNA sequence data that provided these results was recovered from six regions of the *RPB2-1* gene: three were sequences of large introns; three were contiguous sequences containing both introns and exons.

Those six sampled regions accounted for 5.2 kb of the *RPB2-1* sequence's 12 kb total that was present in *R. macrophyllum*, the reference taxon.

All the rhododendron species tested, except *R. camtschaticum*, occupied three large clades designated A, B, and C - herein, Subgenus *Lepidorrhodium*, Subgenus *Hymenanthes*, and Subgenus *Azaleastrum* - which had 100% bootstrap support and posterior probability, this high degree of phylogenetic resolution and statistical support attributable to the large aggregate size of the DNA regions sampled, as well as to the substantial and well-distributed phylogenetic signal in the *RPB2-1* sequences, this resulting in 767 parsimony-informative sites.

The Goetsch-Eckert-Hall study results were also evidenced in an earlier plastid analysis carried out by Kurashige et al. in 2001:

Sectional Relationships in the Genus Rhododendron (Ericaceae): Evidence from matK and trnK Intron Sequences.

And from the internal transcribed spacer sequences of nuclear ribosomal DNA as analysed by Gao et al. in 2002:

Infrageneric and Sectional Relationships in the Genus Rhododendron (Ericaceae) Inferred from ITS Sequence Data.

Subgenus Morphology:

Dwarf shrubs, usually prostrate or cushion-forming, 0.1 to 0.3m high; branchlets upright or procumbent, reddish-brown, rooting and suckering as they spread; young shoots pubescent and hairy, the hairs long and brownish, or sometimes long-stalked glandular, or glabrous.

Vegetative shoots from separate buds below the terminal inflorescence; bud scales persistent.

Leaves deciduous, chartaceous, without scales, thin, short-petioled or sessile, obovate, oval through oblong-obovate to spatulate, 0.5 to 5cm long by 0.3 to 2.5cm wide, apex rounded and terminating in a gland; upper surface dark-, bright- or olive-green, occasionally setulose, the margins crenulate and bristly, sometimes setulose-glandular, the glands then often lost with age; lower surface pale green, the midrib and veins pubescent or bristly, sometimes setulose-glandular, the glands then often lost with age.

Leaf anatomy comprises a single-layered upper epidermis; the cuticle is thin; water tissue is absent; the lower epidermis cells are not prolonged into papillae. Sclereid cells are absent.

Petiole short, 1-2mm long, or completely absent.

Inflorescence terminal, 1-3-flowered.

Pedicel 10-25mm long, moderately through densely pubescent and long-stalked glandular, with green, persistent, leaf-like bracts that are dissimilar in shape to the true leaves.

Calyx large, green, 5-lobed, these divided almost to the base, 5-18mm long, their outer surface and margins both setulose and setulose-glandular.

Corolla rotate or very widely campanulate, 1.5 to 2.5cm long, deeply lobed and divided nearly to the base between the two lower lobes, purple through rose-purple, pink, red or white, spotted darker within, the outer surface moderately to densely pubescent, the margins ciliate.

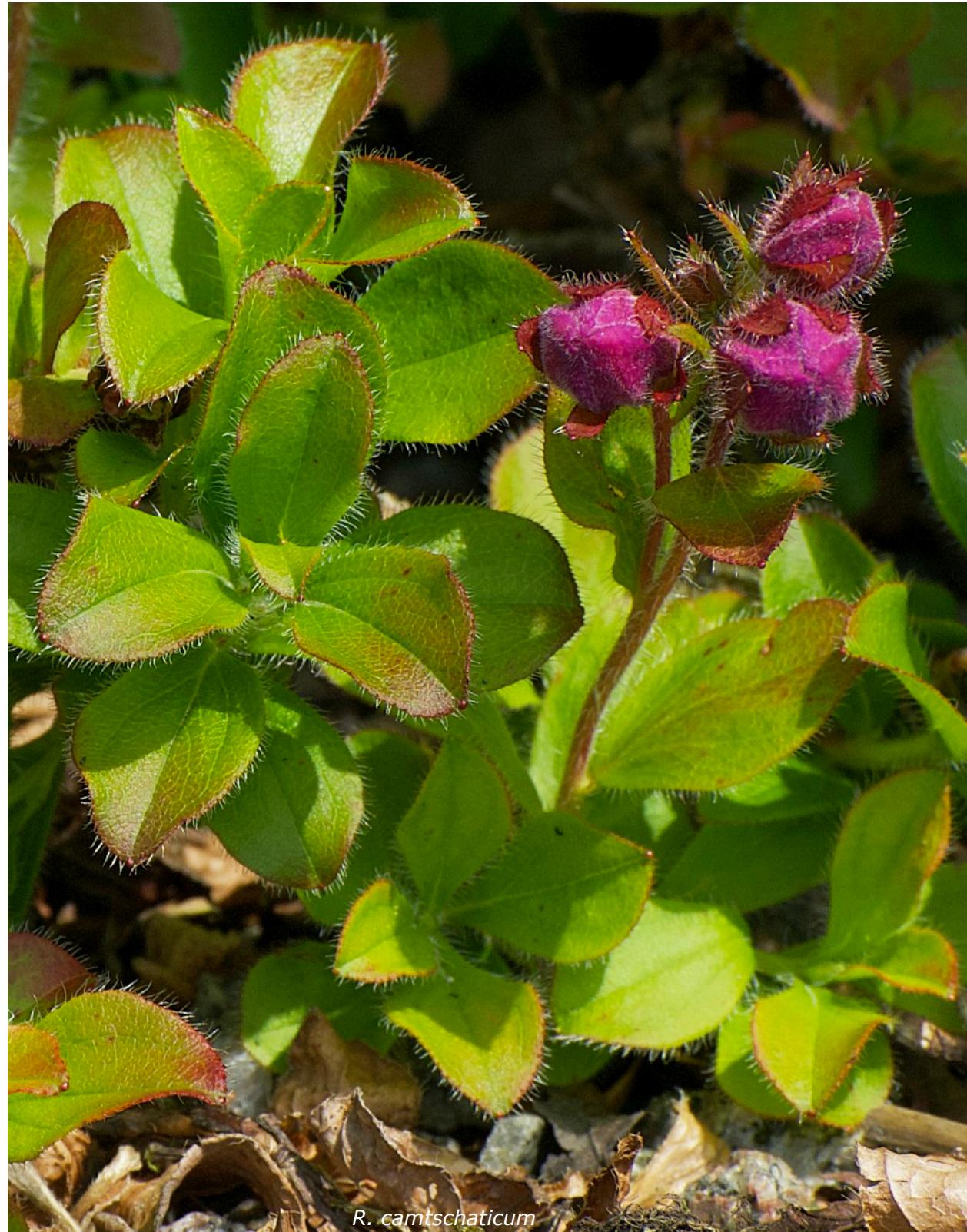
Stamens 10, unequal, purple-red, declinate and shorter than the corolla; filaments densely pubescent at the base.

Ovary ovoid or ovoid, c. 2mm long, 5-celled, densely pubescent.

Style purple-red, declinate, pubescent at the base, or more rarely, along the lower half.

Capsule oblong-ovoid or oval, 5-10mm long, pubescent.

Seeds elongate, without wings or appendages.



R. camtschaticum

R. camtschaticum* ssp. *camtschaticum

Hardiness:

H5-6.

Flowering Period:

May-June, and sometimes in the autumn.

Distribution in the wild:

N Honshu & Hokkaido, Japan;
Kamtschatka, Sakhalin, the Kurile Islands & E Siberia, Russia;
the Aleutian Islands, S & W Alaska, USA.

Growing in the alpine zone of forest regions, on hill and mountain tops, in rocky crevices, in gravelly loam and on rocky tundra, at elevations from near sea level to 1,000m.

Identification:

Dwarf shrub, prostrate or bushy, 0.1 to 0.3m high.

New vegetative shoots from separate buds below the terminal inflorescence.

Leaves deciduous and thin, the margins bristly; abaxial surface midrib and veins hairy or bristly.

Petioles very short if not sessile, or entirely absent.

Inflorescence 1-3-flowered.

Pedicel 10-25mm long,

moderately through densely pubescent and long-stalked glandular, with green, persistent, leaf-like bracts that are dissimilar in shape to the true leaves. Calyx large, green, 5-lobed, these divided almost to the base, 10-18mm long, outer surface and margins both setulose and setulose-glandular.

Corolla rotate, divided nearly to the base between the two lower lobes,

1.8 to 2.5cm long and up to 4cm across, the outer surface moderately to densely pubescent, with ciliate margins.

Seed Collections:

Kurashige 458	1987
AGS 282	1988

R. camtschaticum was discovered growing along the Kamtschatka shoreline of the Sea of Okhotsk by Peter Pallas sometime between 1768 and 1774, the find made while the German zoologist and botanist was leading an expedition for the Russian Academy of Sciences to their Central and Far Eastern provinces. He was also responsible for writing the species botanic description, this included within his two-volume work *Flora Rossica*, which was published in Saint Petersburg between 1774 and 1778.

R. camtschaticum has two very closely related allies, *R. glandulosum* and *R. redowskianum*, neither of which have successfully been introduced into UK cultivation to date, however:

Frederick Andrews Walpole found and collected *R. glandulosum* on August 4, 1901, while on his second trip to Alaska for the US Agriculture Department, Division of Botany. Plants were discovered growing along the foothills of the Kigluaik Mountains, on the Seward Peninsula, near the Imuruk Basin around 50 miles from Port Clarence, the nearest large settlement. The taxon was first described as *Therorhodion glandulosum* by Paul Standley in Volume 39 of *North American Flora*, which was published in 1914, but more recently, has been placed as a subspecies of *R. camtschaticum* in the 1996 Edinburgh Revision.

Ivan Ivanovich Redowsky discovered *R. redowskianum* while he was a member of the Mikhail Friedrich Adams 'Woolly Mammoth' expedition to the mouth of the River Lena in Manchuria, the area today part of eastern Siberia. The rhododendron was probably found along the northern coastline of the Sea of Okhotsk, possibly along the Gizhiga River, for it was here where Redowsky died in 1807, poisoned by the local population who believed him to be a spy for the Russian Tsar. His botanic collections then passed through several hands but somehow came to the attention of Karl Maximovich, who in 1859, named the species for the explorer and wrote its botanic description, this outline appearing in *Primitiae Florae Amurensis*. Specific status is currently retained.

Any morphological differences between the three plants are minor.

Compared with *R. camtschaticum*, *R. glandulosum* will be found to be slightly lower growing, have leaves with a denser covering of glandular hairs, and a corolla outer surface that has glabrous lobes and ciliate margins. The outer surface of the *R. redowskianum* corolla is also glabrous and these plants too are lower growing, but in addition, the calyx and the flowers will be found to be smaller, to 0.5 and 1.5cm long respectively.

The geographic distribution of the three species populations is mirrored, so it will fall to future DNA analysis to show exactly how close the relationship is between the plants and whether they should be classified as varieties of the same species or made synonymous.

R. camtschaticum var. *albiflorum* was first found on the mountains that form the Ohachi-Daira Caldera, a group of volcanic peaks in the centre of Hokkaido that are now part of Japan's Daisetsuzan National Park. Described by Genichi Koidzumi in Volume 31 of *Shokobutsu-gaku Zasshi*, the magazine of the Tokyo Botanical Society, which was published in 1917, only the corolla pigmentation colour differentiates the variety from the type and so it is now considered synonymous. White forms of *R. camtschaticum* have also been found on Kodiak Island in Alaska.

One feature unique to *R. camtschaticum* and its two allies was to cause pre-DNA botanists a great deal of angst - the flowers appear to be born at the end of a leafy shoot instead of a pedicel. This prompted John Lindley and Joseph Paxton, writing in the multi-volume *Paxton's Flower Garden*, around 1850-1851, to reclassify the species, placing it into a newly created genus with the citation *Rhodothamnus kamtschaticus*, and it was under this designation that the Kent-based rhododendron nursery of G. Reuthe Ltd won an RHS Award of Merit certificate when they exhibited the plant in 1908, an unsung horticultural triumph, given the taxon's known climatological dislike of southern England.

Six years later, in 1914, John Kunkel Small, botanist and Head Curator at the New York Botanical Garden, writing in one of his establishment's publications - *North American Flora*, Volume 29, Part 1 - conceived Genus *Therorhodion* as a brand new botanic residence for both *R. camtschaticum*, and the-then recently discovered *R. glandulosum*, with John Hutchinson of the Royal Botanic Garden, Kew, lodging *R. redowskianum* within the same fold during 1921 (in Kew's *Bulletin of Miscellaneous Information*). A hotly contested ping-pong match then ensued for the next ninety-odd years, as the trio were batted between genera and it was not until major advances in gene sequencing allowed scientists to identify *R. camtschaticum* as the common ancestor of all the world's other rhododendrons that the issue was finally resolved. Yet even then, some sceptics continued to argue that as the species was unable to breed with any of its modern day descendants, surely, the American, Japanese and Chinese geneticists who carried out the three studies detailed above, must have been wrong. And those critics maintained this stance despite more rigorous observations reporting that the pedicel of *R. camtschaticum* actually emerges as normal from a terminal bud, but bears leaf-like bracts along its length, thereby dismissing the fallacious notion that the flowers were borne on leafy stalks.

The associated science of polyploidy has now provided one possible answer as to why *R. camtschaticum* is presently unable to breed with any of its evolved offspring: it only has twelve chromosomes. While remaining a diploid, $2n$ does not equal 26, which is the case for all the elepidotes along with the majority of lepidote species, but 24.

This somewhat startling fact was first reported by the Russian botanist Alexandra Pavlovna Sokolovskaya in either 1963 or 1965 - according to the online Chromosome Counts Database - although earlier test results - for instance, the Ammal, Enoch and Bridgwater paper *Chromosome Numbers in Species of Rhododendron*, published in *The Rhododendron Year Book 1950* - indicated a value of $2n = 26$ from both tested specimens, these counts made visually, using a high-power microscope, as the root cells being studied began to divide.

The Chromosome Counts Database lists a $2n = 26$ count for *R. redowskianum*, which muddies the water yet more, but if the Sokolovskaya tally is accurate and widespread, it would certainly offer one explanation as to why conception consistently fails.

Tangentially, in a more recent study, *R. canadense* has also been shown to possess just twelve chromosomes. In an article detailing their research - *History and Cytological Reassessment of Rhododendron canadense* (*Journal American Rhododendron Society*, Volume 67, No 2, 2013) - Jason Lattier, Thomas Ranney and Nathan Lynch, of the Mountain Crop Improvement Lab, Department of Horticultural Science, Mountain Horticultural Crops Research and Extension Center, North Carolina State University, report that:

'*R. canadense* may have retained the ancestral chromosome number of $2n = 24$, similar to plants in Subgenus *Therorhodion*'.

They also note that:

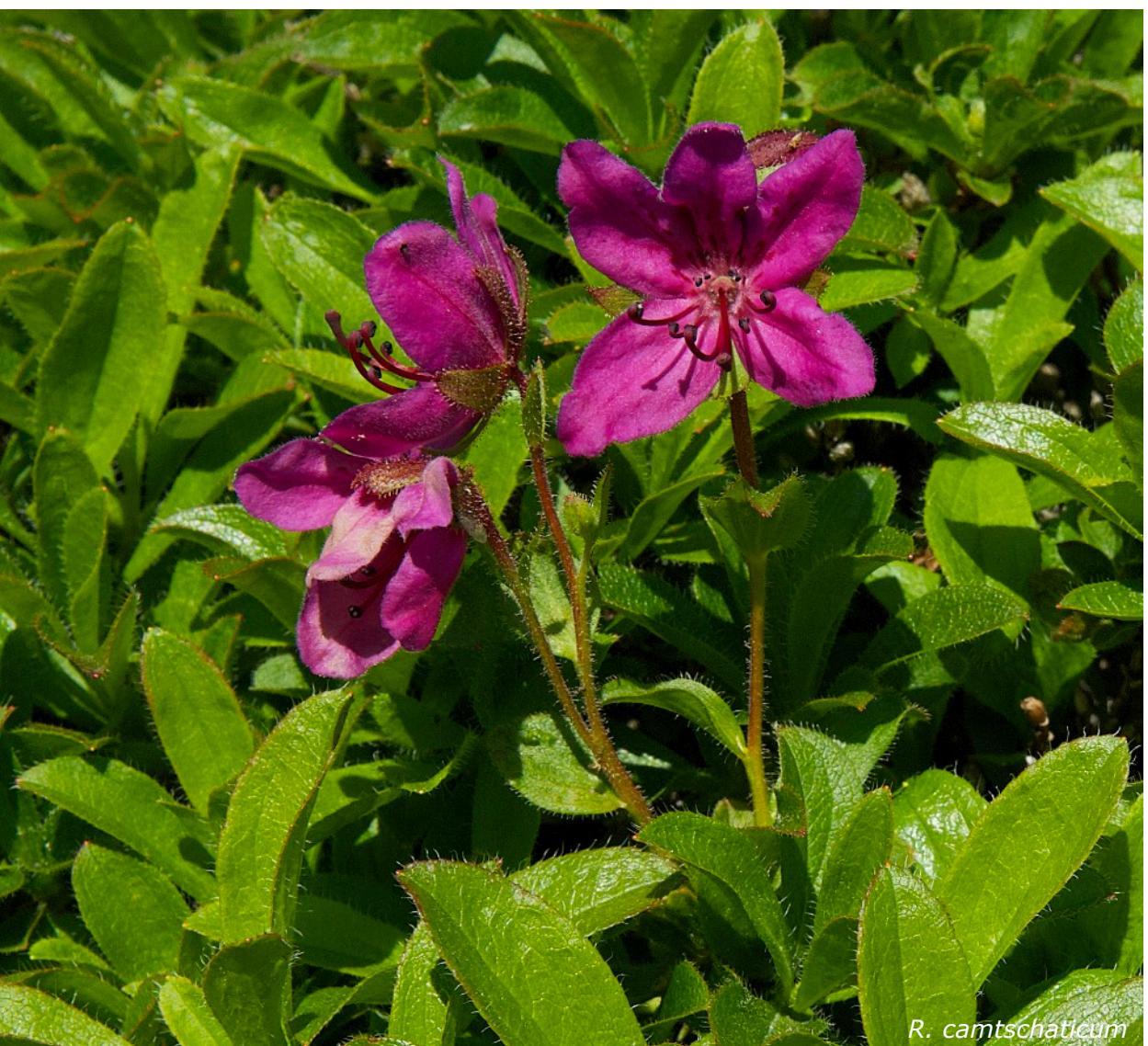
'*R. canadense* and *R. camtschaticum* share certain traits, such as rhizomatous growth, July blooms of speckled pink/purple flowers, connate petals with a tubeless corolla, and 10 stamens'.

Final proof of concept will of course come when a member of the rhododendron hybridising fraternity registers a successful *camtschaticum* x *canadense* pairing - or the reverse - though as of the most recent IRRC supplement, we are still living in hope.

R. camtschaticum was first introduced into UK cultivation in 1799, and despite the clear dearth of documented collections in the table opposite, re-introduced on innumerable

occasions since the arrival of that first batch of seed. Yet the species remains a very rare find in British gardens. For only the cool conditions of eastern Scotland allow it to flourish, and it has proved difficult if near impossible to grow in the south of the country or along the western seaboard. The reasons for this are that specimens of *R. camtschaticum* simply cannot tolerate prolonged periods of high summer temperatures, nor heavy winter rainfall, especially if the soil remains waterlogged afterwards to any significant degree. Equally, the roots must be kept cool yet damp during the growing season, and very few gardens can provide these conditions. Those that can, will find the species a fine addition to the rock garden or peat bed, although freedom of flowering varies considerably, with some clones providing a yearly profusion of red-purple blooms on long stalks, others offering just a few solitary dabs of colour. A few individuals also flower in early autumn, before leaf fall.

Seed of both *R. camtschaticum* ssp. *glandulosum* and *R. redowskianum* has also been introduced into British gardens, but has either failed to germinate, or the seedlings have not survived their first encounter with the UK's maritime winter climate.



R. camtschaticum



R. camtschaticum



R. camtschaticum 'Pink Form'



R. camtschaticum 'Red Form'



R. camtschaticum 'Purple Form'



R. camtschaticum 'White Form'



Subgenus
Azaleastrum

Section *Sciadorhodion* Subsection *Menziesia*:



Taxa:

- R. benhallii*
- R. goyozanense*
- R. katsumatae*
- R. kongiae*
- R. menziesii*
- R. multiflorum*
- R. pentandrum*
- R. pilosum*
- R. yakushimense*

Taxonomic Revision:

The 2005-published Goetsch-Eckert-Hall phylogenetic examination of Genus *Rhododendron* showed that the Genus *Menziesia* species were directly descended from *R. camtschaticum*, just as were all other rhododendrons.

The study's dataset showed that the *Menziesia* should be placed in Subgenus *Azaleastrum*, within Section *Sciadorhodion*, alongside their closest living relatives, deciduous azalea species such as *R. vaseyi*, *R. schlippenbachii* and *R. albrechtii*, but in a separate pigeonhole, which herein is designated Subsection *Menziesia*.

That conveyance between genera formerly took place in March 2011 when the paper *Diplarche and Menziesia transferred to Rhododendron (Ericaceae)*, written by Lyn Craven of the Australian National Herbarium, Canberra, was published in Volume 56 of *Blumea*.

However, to comply with the rules of the *International Code of Botanical Nomenclature* - now the *International Code of Nomenclature for Algae, Fungi, and Plants* following the International Botanical Congress held in Melbourne during July 2011 - a number of epithet changes were required.

Some were no more than simple spelling adjustments, while three plants had to receive completely new appellations to avoid any duplication with an already-resident species.

Those changes were:

- M. ciliicalyx* = *R. benhallii*;
- M. ferruginea* = *R. menziesii*;
- M. goyozanensis* = *R. goyozanense*;
- M. katsumatae* = *R. katsumatae*;
- M. multiflora* = *R. multiflorum*;
- M. pentandra* = *R. pentandrum*;
- M. pilose* = *R. pilosum*;
- M. purpurea* = *R. kongiae*;
- M. yakushimensis* = *R. yakushimense*.

Subsection Morphology:

Shrubs, spreading to upright, freely branching, 1 to 2.5m high; young shoots pilose, glandular-pilose or setose; bark loose, shredding.

Leaves deciduous, bright- to mid-green, sometimes malodorous when bruised, alternate and in pseudowhorls at the branch tips, oval, ovate-elliptic, elliptic through elliptic-obovate to obovate or oblong-obovate, 1.5 to 7cm long by 1 to 2.5cm wide, apex acute or rounded, tip often prominent, mucronate or glandular-mucronate, base cuneate or acute; upper surface pilose, sometimes strigose-hirsute or sparsely stipitate-glandular, the margins often glandular-ciliate, rarely crenulate or pectinate; lower surface glabrous, pilose or stipitate-glandular, rarely glaucous, the midrib sometimes sparsely setose.

Petiole 1-5mm long, glabrous, rarely pilose or ciliate glandular.

Inflorescence terminal, 2-10-flowered, opening as the leaves expand, pendulous.

Pedicel slender, 0.5 to 3.5cm long, stipitate-glandular, often pilose, glandular-pilose or ciliate-glandular.

Calyx minute to small, the lobes usually 0.5 to 3mm long, rarely 6 to 9mm long, these broadly triangular or saucer-shaped, 5-lobed, rarely 3-4-lobed, sometimes stipitate-glandular, the margins lacerate or undulate, ciliate, setose, or setulose, glandular or eglandular.

Corolla tubular to tubular-campanulate, usually urceolate, often bilaterally symmetric, greenish or yellowish, tinged white, red or bronze, or purple-pink, the outer surface glabrous or rarely glandular-pilose, the inner surface densely pilose.

Stamens 5-8-10, included, anthers without awns; filaments often densely pilose or hirsute along the lower half, rarely so base to tip.

Ovary obovate to globose, glandular or glabrous, rarely white-pilose.

Style included.

Capsule broadly ellipsoid, ovoid through ovoid-oblong to globose, 5-8mm long, glabrous, sparsely pilose, or sparsely to densely stipitate-glandular, often puberulent.

Seeds without wings but with appendages at each end, or only at the distal end.



R. menziesii

R. menziesii

Hardiness:

H4-5.

Flowering Period:

May-July.

Distribution in the wild:

Alaska, USA; British Columbia & Alberta, Canada; Washington south to California, Idaho, Montana & Wyoming, USA.

Growing in moist shady coniferous woodland and along stream banks, at elevations of 700-1,900m.

Identification:

Upright, twiggy shrub, 1 to 2.5m high; branchlets glandular-pilose; bark shredding. Leaves mid-green, malodorous when crushed, elliptic-obovate through ovate-elliptic, 3 to 6cm long by 1.5 to 4.2cm wide,

tip mucronate, base cuneate;

upper and lower surfaces glandular-pilose, the hairs rusty-brown.

Inflorescence 2-5-flowered, opening with the leaves.

Pedicel 1-3cm long, pilose, stipitate-glandular.

Calyx minute, the lobes triangular.

Corolla greenish to yellowish, flushed red or bronze.

Stamens 8; filaments hairy towards the base.

Capsule 5 to 8mm long,

ovoid through ovoid-oblong, glabrous, sparsely stipitate-glandular or puberulent.



R. menziesii

In 1791, Sir James Edward Smith, founder of the Linnean Society, writing in Volume 3 of *Plantarum Icones Hactenus Ineditae*, which was published between May and October of that year, described a new species found in northwest America by Archibald Menzies. The plant was gifted the epithet *ferruginea*, and the new genus created to house it - *Menziesia* - named in honour of the man who made the discovery.

Some authorities cite the collection of those type specimens to the Vancouver Expedition of 1790-1795, but fail to appreciate the fact that HMS *Discovery* did not set sail from England until April 1791, reaching the west coast of North America - via Australia and New Zealand - just over a year later in mid-April 1792. However, Menzies was also the botanist and surgeon on an earlier voyage, a fur trading expedition commanded by James Colnett that visited the shores of British Columbia in the summer of 1787, and again the following year, returning to England in 1789. So it was the specimens collected on this trip that were studied and documented by Smith.

Archibald Menzies, whose other taxonomic commemorations span a near A-Z of Planet Earth's flora - *Arbutus menziesii*, *Banksia menziesii*, *Erysimum menziesii*, *Nemophila menziesii*, *Pseudotsuga menziesii*, *Ribes menziesii* and *Tolmiea menziesii* (to highlight but a few) - was one of the truly great plant hunters who, even when sitting down to dinner with the Governor of Chile and apparently off-duty, was totally immersed in his work. For while surreptitiously not consuming his dessert, Menzies stashed away the edible seeds of *Araucaria araucana* that were on his plate, eventually to return five living Monkey Puzzle trees to England.

Menziesia ferruginea was often divided by older classifications into two varieties: *M. ferruginea* var. *ferruginea*, which is predominantly from coastal areas of the range, as well as the Cascade Mountains; and *M. ferruginea* var. *gabella*, whose distribution is inland on the Rocky Mountains. However, more recent study has shown no chemical or morphological differences that justify maintenance of two separate taxa, while fieldwork on the ground has found that intermediate populations exist, especially within the southern ambit of the Cascade Mountains. Any differences between the two varieties therefore, are the result of specimens from either terminus of the distribution - high and low - being compared, which in the eyes of the botanists, confirms that the imposition of synonymy was justified.

The 2011 formal transfer between genera required *Menziesia ferruginea* to become *Rhododendron menziesii*, thus avoiding any confusion with an existing taxon resident in the receiving genus, namely *R. ferrugineum*, and Lyn Craven's apt choice for that replacement epithet continues to honour the distinguished collector who first found the plant.

R. menziesii prefers a moist, though not wet site in UK cultivation, with partial shade and shelter from cold or drying winds. Specimens are usually free-flowering, but the small, pendant urns can be hidden by the leaves, which are poisonous if consumed. They turn red in the autumn before falling and the foliage gives off a skunk-like odour when crushed. The plants have been found to grow best in those British gardens where cool, damp summers are the norm.

R. pilosum

Hardiness:

H4-5.

Flowering Period:

May-July.

Distribution in the wild:

Pennsylvania south to Tennessee and Georgia, USA.

Growing in the mountains on heath-covered bals,
by swamp margins in rocky woodland and on rocky summits,
at elevations of 200-2,100m.

Identification:

Shrub, upright and branching, 1 to 2m high;
branchlets densely setose, often chaffy; bark shredding.

Leaves elliptic through oblong-obovate, 1.5 to 4cm long by 0.8 to 2.3cm wide,
tip prominent, glandular-mucronate, white, the base cuneate;
upper surface pilose or strigose-hirsute; lower surface densely pilose.

Petiole pilose.

Inflorescence 4-6-flowered, opening as the leaves expand.

Pedicel 1-3cm long, stipitate-glandular.

Calyx minute, the lobes triangular.

Corolla greenish red to yellowish white tinged with red.

Stamens 8; filaments glabrous.

Capsule to 6mm long, densely stipitate-glandular.

R. pilosum is endemic to the southern and central Appalachian Mountains of eastern North America, and while rare throughout much of its range, on the southern Blue Ridge, the species is quite common at higher altitudes. André Michaux, the French botanist and explorer, who spent a decade documenting and collecting the flora of North America from 1785 to 1796, wrote the botanic description for *Menziesia pilosa* that appears in Volume 1 of *Annales du Museum National d'Histoire Naturelle Paris*, this published in 1802.

The recent move into Genus *Rhododendron* has required a slight amendment to that epithet in order to comply with the nomenclature rules.

Identifying *R. pilosum* from its fellows is easily accomplished thanks to the leaf tip morphology: prominent, glandular-mucronate, and white. Or as a less botanically accurate phrasing found online would have it - 'creamy-white and shaped like a nipple'.



R. pilosum

R. benhallii

Hardiness:

H4-5.

Flowering Period:

May-June.

Distribution in the wild:

C & W Honshu, & Shikoku, Japan.

Growing on the margins of deciduous woodland at elevations of 400-1,000m.

Identification:

Shrub, 1 to 2m high; branchlets brown, glabrous.

Leaves elliptic through oblong, 2 to 5cm long by 1 to 2.5cm wide, tip mucronate-glandular, base acute; upper and lower surfaces glabrous.

Petiole 1-3mm long.

Inflorescence 2-10-flowered.

Pedicel 1-2cm long, sparsely stipitate-glandular.

Calyx small, lobes to 3mm long, saucer-shaped, the margins undulate and glandular-setose.

Corolla tubular, urceolate, greenish-yellow tinged purple near the top.

Stamens 10; filaments densely pilose along the lower half.

Capsule to 4mm long, glabrous.

First described as *Andromeda ciliicalyx* in 1863 by Friedrich Miquel - *Annales Musei Botanici Lugduno-Batavi*, Volume 1 - that reference makes clear the involvement of the Dutch East India Company and its botanical garden at Batavia - now Jakarta, the capital of Indonesia - in the discovery and return to Europe of the first specimens of *R. benhallii*. As part of their remit, the VOC traders based at Dejima, Nagasaki, were required to seek out Japan's native plants and this they most assiduously did during the 250 years when they alone were the sole Western nation accepted by the Japanese, sending countless new species first to their Indonesian colony and then back to the Netherlands.

The Russian botanist Karl Maximovich, curator of the herbarium then director of the Saint Petersburg Botanical Gardens, also collected the species during his expedition to Japan in the 1860's, and it was his 1871-published description that relocated the shrub into Genus *Menziesia* (*Mémoires de l'Academie Imperiale des Sciences de Saint Petersbourg*, Volume 16). Epithet-wise, the 2011 genera switch proved to be more problematical as *R. ciliicalyx* was already resident within the receiving filing cabinet, so despite the Miquel and Maximowicz citations pre-dating Adrien Franchet's 1886 appellation, *Menziesia ciliicalyx* became *Rhododendron benhallii*, Lyn Craven choosing to name the species in honour of the highly-regarded Professor Emeritus of Biology and Genome Sciences at the University of Washington, Seattle, Benjamin Hall.

In UK cultivation, like all the *Menziesia* species, whether from either coast of North America or the Japanese archipelago, *R. benhallii* should be grown in moist but well-drained soil, in partial shade, with shelter from cold or drying winds. The 'Honshu Blue' clone is a named species selection, while 'Plum Drops' and 'Ylva' are the result of selective breeding programmes, though how many generations were involved is unclear.



R. benhallii



R. benhallii 'Honshu Blue'



R. benhallii 'Plum Drops'



R. benhallii 'Plum Drops'



R. benhallii 'Plum Drops'



R. benhallii 'Ylva'



R. kroniae

R. kroniae

Hardiness:

H4-5.

Flowering Period:

May.

Distribution in the wild:

Kyushu, Japan.

Growing in scrub around the mountain summits, at elevations of 1,300-1,700m.

Identification:

Semi-dwarf shrub to 1m high;

branchlets brown, sparsely pilose at first, the hairs short-stalked, then glabrous.

Leaves elliptic, 2 to 5cm long by 1 to 2.5cm wide,

tip mucronate-glandular, base acute;

upper surface sparsely pilose, margins entire or crenulate;

lower surface glaucous, the midrib sparsely ciliate-setose.

Petiole glabrous, or sparsely ciliate-glandular.

Inflorescence 3-10-flowered.

Pedicel 1-1.5cm long, sparsely stipitate-glandular.

Calyx small, the lobes to 3mm long, the margins stipitate-glandular.

Corolla tubular, slightly urceolate, purple.

Stamens 8; filaments densely pilose base to tip.

Ovary globose, white-pilose.

Capsule to 3mm long, globose, glabrous.

Karl Maximovich was also the author of the *Menziesia purpurea* botanic description that appears in the 1867-published Volume 11 of the *Bulletin of the Saint-Petersburg Imperial Academy of Sciences*. Within Genus *Rhododendron* however, that epithet is preempted by the Frederick Pursh and George Don described *R. purpureum*, despite the taxon it delineates long ago having been reduced to synonymy under *R. maximum*. Again, Lyn Craven opted for an honorific replacement, his nominee this time being Kathleen Kron, who was one of the Edinburgh Revision botanists and later, whilst Professor of Biology at North Carolina's Wake Forest University, responsible for several research papers evidencing the systematic relationships found within the deciduous and evergreen azalea species.

Thus did *Menziesia purpurea* become *Rhododendron kroniae*.





R. pentandrum (EJE 97)

R. pentandrum
Hardiness:
H4-5.
Flowering Period:
May-June.
Distribution in the wild:
Hokkaido, Honshu, Shikoku & Kyushu, Japan; S Kuriles & Sakhalin, Russia.
Growing on rocks and at the margins of deciduous woodland, at elevations of 400-2,500m.

Identification:
Upright, twiggy shrubs, 1 to 2m high; branchlets reddish-brown, pilose, the hairs brown.
Leaves oblong to narrowly-elliptic, 1.5 to 5cm long by 1 to 2.5cm wide,
tip mucronate-glandular, base acute;
upper surface sparsely pilose; lower surface glabrous, the midrib and veins pilose.
Petiole pilose.

Inflorescence 3-6-flowered.
Pedicel 1-2cm long, pilose-glandular.
Calyx small, 3-5-lobed, these 2.5 to 3mm long, saucer-shaped,
the margins setulose-glandular.
Corolla obliquely and broadly urceolate,
brownish-red, or with the lower half greenish-yellow.
Stamens 5; filaments glabrous.
Capsule 3-4mm long, green, broadly ellipsoid through globose, sparsely pilose-glandular.

Seed Collections:

EJE 97	2003
--------	------

The original botanic description for *Menziesia pentandra* was again authored by Karl Maximovich and like that for *Menziesia purpurea*, appears in Volume 11 of the *Bulletin of the Saint-Petersburg Imperial Academy of Sciences*, published in 1867.



R. pentandrum (EJE 97)

R. multiflorum

Hardiness:

H4-5.

Flowering Period:

May-June.

Distribution in the wild:

S Hokkaido, N & C Honshu, Japan.

Growing on the margins of deciduous woodland or in wet thickets,
at elevations of 600-1,900m.

Identification:

Upright, twiggy shrub, 1 to 2m high;
branchlets brown, glabrous, occasionally sparsely pilose.

Leaves obovate through obovate-elliptic, 2 to 5cm long by 1 to 3.5cm wide, base acute;
upper surface usually glabrous, occasionally setose, the margins ciliate;
lower surface glabrous, the midrib sparsely setose.

Petiole 3-5mm long, glabrous, occasionally sparsely pilose.
Inflorescence 2-10-flowered.

Pedicel 1-2cm long in flower, extending to 3cm long in fruit,
sparsely stipitate-glandular, or eglandular,

or with both stipitate-glandular and setose-eglandular hairs mixed together.
Calyx small, the lobes 1-3-9mm long, saucer-shaped,
their margins setose-glandular.

Corolla tubular-urceolate, slightly zygomorphic,
purple, purple with lobes flushed reddish-purple, or reddish-purple throughout.

Stamens 10; filaments densely pilose along the lower half.
Capsule to 3mm long, globose, sparsely stipitate-glandular.



R. multiflorum

The original botanic description for *Menziesia multiflora* that appears in Volume 16 of *Mémoires de l'Academie Imperiale des Sciences de Saint Petersbourg*, published in 1871, was again authored by Karl Maximovich. There is a bi-coloured form of the species that has been given intraspecific rank in Japan - *M. multiflora* forma. *bicolor* - which also includes some individuals of *M. lasiophylla*. They differ from the specific species in having pedicels without glandular hairs and a pale purple corolla with lobes deeply flushed reddish-purple. A second taxon - *M. multiflora* forma. *brevicalyx* - has much smaller calyx sepals than the specific species, these just 1 to 3mm long, rather than the usual 3 to 9mm. Intermediates have been found which would indicate this is simply a more variable characteristic than field study first noted.

Japanese botanists also maintain *M. multiflora* var. *purpurea*, under which epithet the remaining population of *M. lasiophylla* have been made synonymous. Here, the upper surface of the leaves is setose rather than glabrous, the pedicel also has eglandular-setose hairs mixed-in with the stipitate-glandular ones, and the corolla is 2mm larger and coloured deep reddish-purple.

Had the genus consolidation occurred while the *Synonymy Aurors* of the Edinburgh Revision were active, their considered view would likely be that the maintenance of such distinctions was unwarranted. That is the position adopted herein for *R. multiflorum*.



R. multiflorum

R. goyozanense

Hardiness:

H4-5.

Flowering Period:

June-July.

Distribution in the wild:

N Honshu, Japan.

Growing on rocks in deciduous woodland, at elevations of 1,200-1,300m.

Identification:

Shrub, 1 to 1.3m high; branchlets brown, glabrous.

Leaves elliptic, 1.5 to 4.5cm long by 0.8 to 2.5cm wide,
tip mucronate-glandular, base acute;
upper surface sparsely hirsute;
lower surface glabrous, the midrib sparsely hirsute.

Inflorescence 3-6-flowered.

Pedicel short, 0.5 to 1.5cm long, sparsely white pilose and glandular-pilose.
Calyx small, 4-lobed, each to 3mm long, saucer-shaped, widely elliptic,
their margins glandular-hirsute.

Corolla tubular, greenish-yellow on the lower half, brownish-red above,
the outer surface glandular-pilose.

Stamens 8, unequal; filaments densely pilose along the lower half.
Capsule to 3mm long, glabrous.

R. katsumatae

Hardiness:

H4-5.

Flowering Period:

May.

Distribution in the wild:
C Honshu, Japan.

Growing at the margins of deciduous woodland, at elevations of 600-1,100m.

Identification:

Upright, twiggy shrub, 1 to 2m high; branchlets brown, glabrous.

Leaves obovate through elliptic, 2 to 5cm long by 1 to 3cm wide,
tip mucronate-glandular, base acute;
upper surface glabrous;
lower surfaces glabrous, glaucous, the midrib sparsely setose.

Inflorescence 3-10-flowered.

Pedicel 1.5 to 3.5cm long, sparsely ciliate-glandular.
Calyx small, lobes to 3mm long, saucer-shaped,
their margins densely glandular-setose.
Corolla tubular-urceolate, somewhat zygomorphic,
purple.

Stamens 10; filaments densely pilose along the lower half.
Capsule 3-4mm long, globose, glabrous.

Menziesia goyozanensis was described by Masao Kikuchi in Volume 37 of the Journal of Japanese Botany, *Shokubutsu Kenkyu Zasshi*, which was published in 1962.
It is unclear if *R. goyozanense* has been introduced into UK cultivation.

Menziesia katsumatae was described by M. Tashiro and Hiroaki Hatta in Volume 99 of *Shokubutsu-gaku Zasshi*, the magazine of the Tokyo Botanical Society, which was published in 1986.

R. katsumatae may or may not have been introduced into UK cultivation.

R. yakushimense

Hardiness:

H4-5.

Flowering Period:

June.

Distribution in the wild:

Yakushima Island, Kyushu, Japan.

Growing in scrub on rocky slopes at elevations of 1,700-1,900m.

Identification:

Semi-dwarf shrub to 1m high; branchlets brown, sparsely glandular-hirsute.

Leaves elliptic, 2 to 4cm long by 1 to 2cm wide,

tip mucronate-glandular, base acute;

upper surface glabrous, the margins entire or obscurely-pectinate;

lower surface glabrous, glaucous, the midrib sparsely minutely-setose.

Petiole sparsely glandular-hirsute.

Inflorescence 4-7-flowered.

Pedicel 1-2.5cm long, sparsely glandular-hirsute.

Calyx small, the lobes 4-6mm long, their margins glandular-hirsute.

Corolla tubular, slightly urceolate, purple,

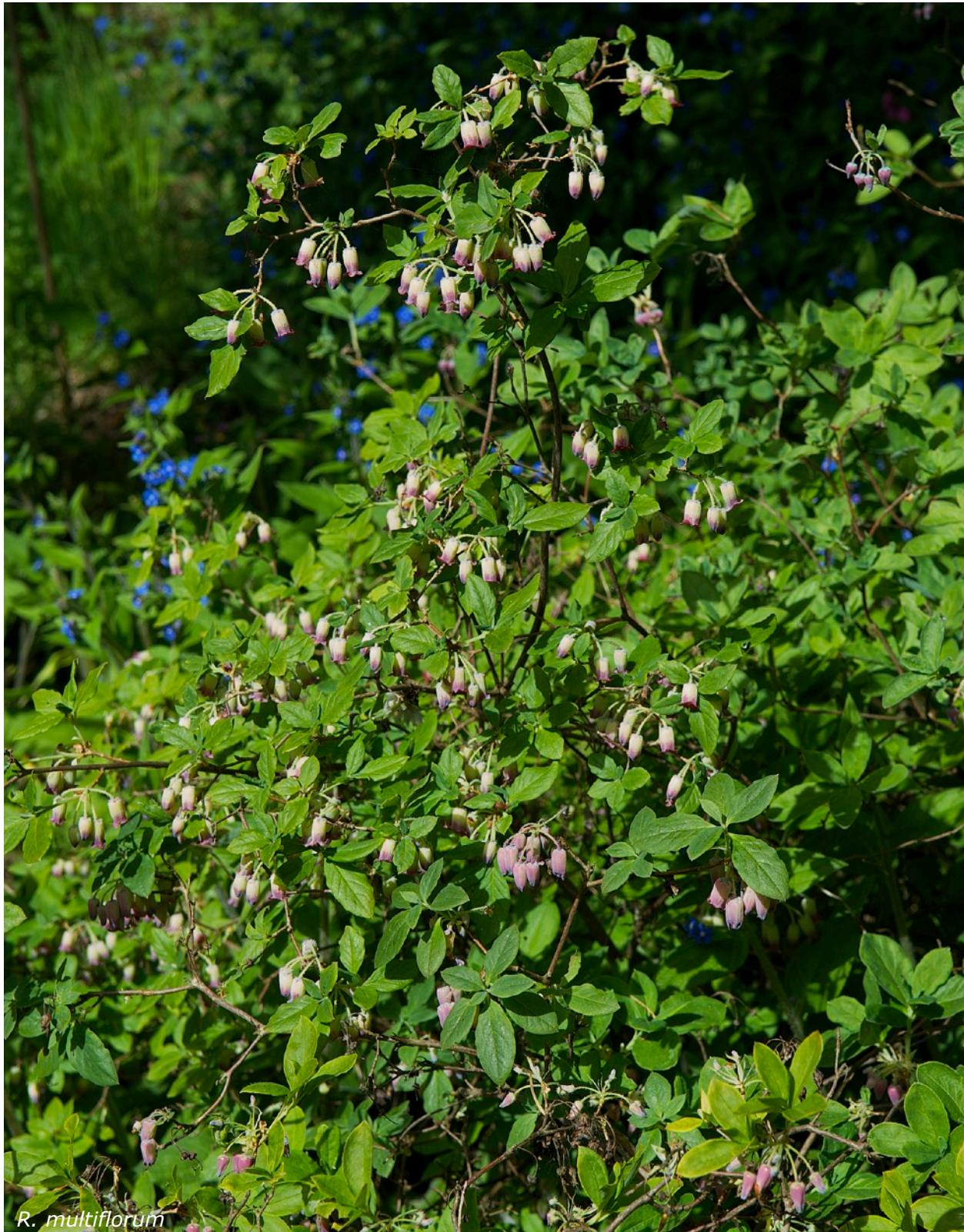
sparsely glandular on the lobe margins.

Stamens 8; filaments hirsute from base to tip.

Capsule to 4mm long, globose, glabrous.

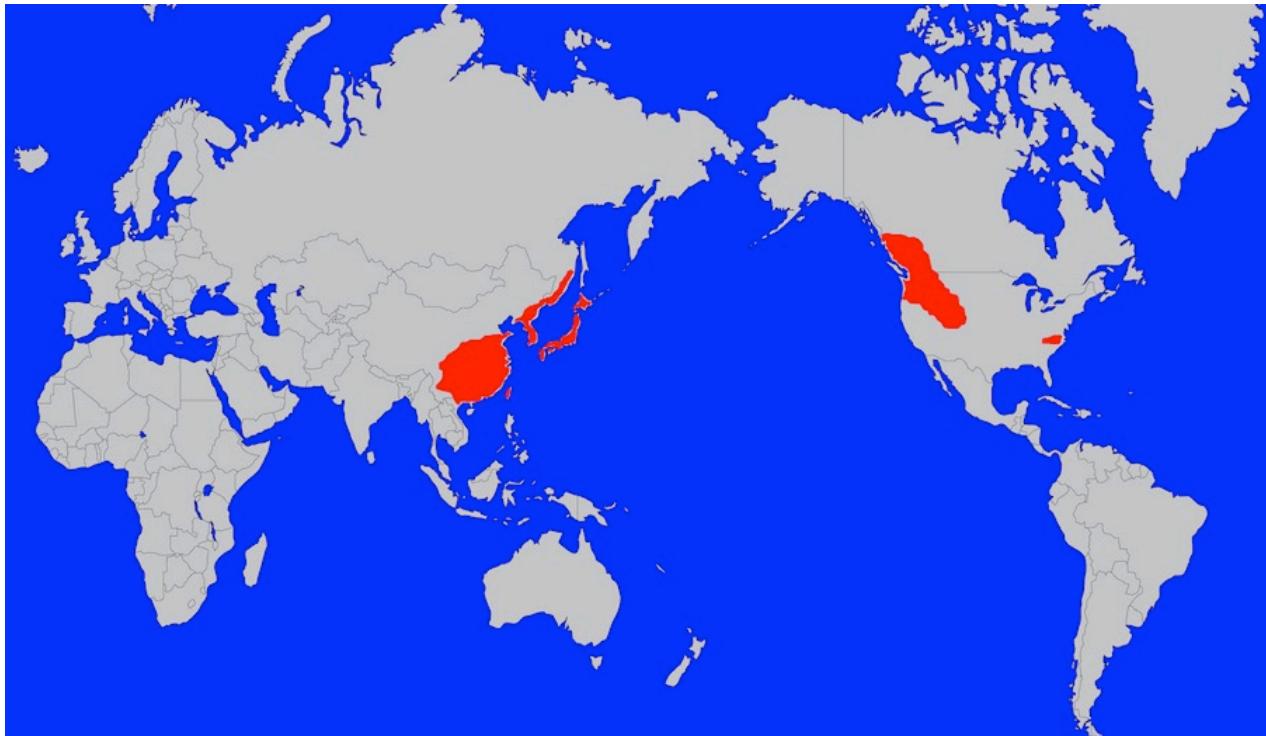
Menziesia yakushimensis was originally described in 1986 by M. Tashiro and Hiroaki Hatta, their outline appearing in Volume 99 of *Shokubutsu-gaku Zasshi*, the magazine of the Tokyo Botanical Society.

As with the other two most-recently described members of the subsection, it is not known if *R. yakushimense* has been introduced into UK cultivation.



R. multiflorum

Section *Sciadorhodion* Subsection *Sciadorhodia*:



Taxa:

- R. albiflorum*
- R. albrechtii*
- R. pentaphyllum*
- R. quinquefolium*
- R. schlippenbachii*
- R. vaseyi*

Taxonomic Revision:

The Subsection *Sciadorhodia* species comprise the four azaleas previously assigned to Subgenus *Pantanthera* Section *Sciadorhodion* in the 1996 Edinburgh Revision classification, plus two additions: *R. albiflorum*, from the monotypic Subgenus *Candidastrum*; and *R. vaseyi*, from Subgenus *Pantanthera* Section *Rhodora*.

R. albiflorum demonstrated a very close genetic relationship with *R. albrechtii* in the maximum parsimony strict consensus tree produced from analysis of their RPB2-1 gene sequences (Goetsch-Eckert-Hall, *The Molecular Systematics of Rhododendron (Ericaceae): A Phylogeny Based Upon RPB2 Gene Sequences*), with a 100% bootstrap value and a 100% Bayesian posterior value recorded.

The results for *R. vaseyi* indicated a slightly closer relationship with *R. benhallii* and *R. menziesii* - formerly *M. ciliicalyx* and *M. ferruginea* - than with the other Subsection *Sciadorhodia* azaleas, showing a bootstrap value of 63% and a Bayesian posterior value of 97%. Yet the 2-lipped, rotate-campanulate corollas appear to share little with the tubular, urceolate and pendulous flowers of the Subsection *Menziesia* plants. Moreover, the stamens and style of *R. vaseyi* are far from included. Morphologically then, while remaining in Clade C and Section *Sciadorhodion*, an association with *R. pentaphyllum*, *R. quinquefolium* and *R. schlippenbachii* is the better option, with *R. vaseyi* the likely bridging taxon between the two subsections, despite its current isolated distribution.

Subsection Morphology:

Shrubs to around 2.5m high, occasionally taller; young shoots generally from axillary buds beneath the terminal flower buds, from within the same bud or a terminal bud; leaf scales absent.

Leaves deciduous, alternate, scattered or in pseudo-whorls, generally oblong through obovate to elliptic, sometimes oblanceolate or rhombic-elliptic, 2.1 to 13.5cm long by 0.9 to 7.2cm wide; upper and lower surfaces often hairy, sometimes glabrous, rarely glandular; their margins often hairy and toothed.

Petiole 1-8mm long, hairy, sometimes glandular, rarely glabrous.

Inflorescence terminal and lateral, the axillary buds scattered along the branchlets, 1-8-flowered, these opening before, with or after vegetative growth begins.

Pedicel 3-18mm long, usually densely glandular-hairy, sometimes eglandular, occasionally glabrous.

Calyx minute to large, often fringed with hairs.

Corolla generally rotate-campanulate, often zygomorphic, white, pale to deep pink, rose-purple or purplish-pink, rarely fragrant, the outer surface often glabrous.

Stamens 5-7-10, often shorter than the corolla or only slightly exserted.

Ovary often glandular and pubescent.

Style straight or declinate, sometimes impressed into the ovary.

Capsule 7-18mm long, usually glandular-hairy, sometimes eglandular, more rarely glabrous.

Seed with or without wings and appendages, sometimes elongate.



R. quinquefolium



R. albrechtii



Rhododendron albiflorum, Tab 3670, *Curtis's Botanical Magazine*, Volume 65, 1839.

R. albiflorum

Hardiness:

H5-6.

Flowering Period:

June-July.

Distribution in the wild:

the Rocky Mountains, from British Columbia to Colorado, W North America.
Growing near the tree-line at elevations of 1,200-2,300m.

Identification:

Upright shrub, 1-2m high, the branches ascending;
young growth ciliate, the hairs long, brown and loosely appressed, sometimes glandular;
bark becoming pale grey through greyish-brown in the third year.

Vegetative buds terminal.

Leaves thin, chartaceous, scattered along as well as clustered at the end of the branches,
oblong through oblong-elliptic to oblanceolate,
2.5 to 7.5cm long by 1 to 2.5cm wide,
the base decurrent on the petiole;
upper surface bright green, ciliate, especially on the midrib,
these hairs long, brown and appressed,
the margins moderately undulate and minutely toothed;
lower surface ciliate at first, then glabrous,
the midrib ciliate, occasionally glabrous,
the hairs when present, long, brown and appressed.

Petiole 3-5mm long, flat, with a narrow wing on each side,
ciliate, the hairs long, brown, appressed and sometimes glandular.

Inflorescence 1-2-flowered,
the lateral (axillary) buds scattered along the previous year's shoots,
opening after the leaves have fully expanded, pendulous.

Pedicel 6-15mm long, moderately to densely hairy,
the hairs long, brown and short-stalked glandular.

Calyx large, the lobes 6-13mm long, their outer surface densely ciliate,
the hairs long, brown, appressed and sometimes glandular.

Corolla rotate-campanulate, 2cm wide,
pure-, creamy- or greenish-white, sometimes with yellow or orange spotting,
the lobes spreading, the tube short and ciliate inside and out.

Stamens 10, shorter than the corolla.

Ovary densely ciliate, often glandular, the hairs long and appressed.

Style straight, impressed into the ovary,
pilose throughout its length, or along its lower half or just at the base.

Capsule 7-10mm long, pilose-glandular,
entirely enclosed by the calyx lobes.

Seed Collections:

No recent re-introductions have been officially documented,
but over the last five decades members of the American Rhododendron Society
have contributed more than forty lots to their annual Seed Exchange.

R. albiflorum was discovered by Thomas Drummond in 1828 on the Rocky Mountains of British Columbia and described in the two-volume work *Flora Boreali-Americana*, published between 1834 and 1840, by William Jackson Hooker, first Director of the Royal Botanic Gardens at Kew. This tome comes with a now less politically correct secondary title - *The Botany of the Northern Parts of British America* - and it details all the plants collected by Doctor John Richardson and Thomas Drummond on the Late Northern Expeditions under the command of Captain Sir John Franklin, R.N, as well as those of David Douglas and other naturalists made in northwest America.

Rare and shy-flowering in cultivation, but plentiful and free-flowering in the wild over a wide distribution, *R. albiflorum* is a distinct species that, before recent DNA studies, was first placed into its own, separate, monotypic genus, and then, post its transformation into a rhododendron (non-miraculous), pigeonholed in the monotypic Subgenus *Candidastrum* by the botanists responsible for the Edinburgh Revision classification. Long-thought to be distantly related to *R. nipponicum*, sequencing results from the work carried out by Loretta Goetsch, Andrew Eckert and Benjamin Hall, proved that relationship to be considerably closer as both taxa were shown to fall within the same clade. However, the phylogeny evidenced an even closer relationship with the old Section *Sciadorhodion* azaleas, as well as with *R. vaseyi*, prompting all six to be grouped together within the same subsection courtesy of their DNA.

R. albiflorum flowered for the first time in UK cultivation during July of 1837 at the Royal Botanic Garden, Edinburgh, this one of the plants grown from Thomas Drummond's 1828 introduction. Since that event, however, the species has garnered mixed reports on its success rate when housed in various British arboreta:

H. H. Davidian, in Volume 3 of his *The Rhododendron Species*, states that in Scotland the plant is usually easy to grow, adjusting without problem to the soil and climate, is hardy, and that it grew well in a number of gardens, including Edinburgh Botanic.

Peter Cox and David Chamberlain have both separately written that it is difficult in cultivation, the former adding that the species is very slow-growing for the first few years and never flowers well (*The Larger Rhododendron Species*, Batsford, 1990). Yet writing in Volume 9 of the *New Flora and Silva*, published in 1937, Andrew Harley, also of Perthshire, disagrees:

'*R. albiflorum* . . . gets a little overhead shade. It faces south and gets a great deal of sun, while the soil is rather poor and stony and inclined to dry out during summer. It was planted in this situation about eleven years ago as a small plant, and is now over 5 feet high . . . *R. albiflorum* with me is absolutely hardy and was quite untouched in the severe frost of May 1935 when many species and hybrids in my garden were severely damaged.'

The species was also successfully cultivated in the south of England at Tower Court, Ascot, in the famed rhododendron collection of John Barr Stevenson and his wife Rosa. At least, until the early 1950s. Thirty years before Andrew Harley put pen to paper however, another amateur but expert doyen, John Guille Millais, had this to say of *R. albiflorum* in Volume 1 of his 1917 book, *Rhododendrons and the Various Hybrids*:

'This somewhat unattractive species grows in vast thickets just above the timber line, and amongst the highest Firs, in company with another common shrub *Cladothamnus pyrolaeflorus*. It is found, seldom below 4,000 feet, on all the highest mountains of Washington, USA, and British Columbia; also in less quantity further to the south as far as Montana. I have seen thousands of acres covered by this shrub in the Rockies and the Selkirks, on either side of the Canadian Pacific Railway. Even when in bloom it

is not attractive, owing to its sparse and drooping flowers and scant foliage, whilst its dense habit and its difficulty of breaking through the masses of resilient and intertwining boughs have caused it to be known throughout the northwest as "The Miner's Curse". In its true home the snow seldom disappears before early July and again hides the ground in late September. As a garden plant it is not attractive'.

A conclusion that likely explains the absence of *R. albiflorum* from even the most comprehensive of UK rhododendron collections, including - currently - that at Edinburgh Botanic, and consequently, the lack of any photographs to accompany the text.



R. schlippenbachii

R. schlippenbachii

Hardiness:

H5-6.

Flowering Period:

April-May.

Distribution in the wild:

Korea; Liaoning, Jilin, Heilongjiang & Inner Mongolia, China;

Amur, Khabarovsk, Primorsky & Sakhalin, Russia.

Growing in open woodland on mountain slopes at elevations of 400-1,500m.

Identification:

Shrub or small tree, 1 to 4.5m high;
branchlets glandular and pale brown at first,
becoming glabrous and grey during the second year.

Vegetative shoots and inflorescence from within the same terminal bud.

Leaves in whorls of 5 at the branch tips, obovate,
2.5 to 11.7cm long by 0.9 by 7.2cm wide,
the apex rounded, emarginate or truncate;
upper surface dark green, sparsely pubescent at first, then glabrous;
lower surface sparsely pubescent at first, then glabrous,
the midrib and veins pubescent.

Petiole 2-5mm long, glandular.

Inflorescence terminal, 3-6-flowered, opening before or as the leaves expand,
the buds ovoid or conoid, the 9-12 scales ovate, those at the base aristate,
all densely appressed-pubescent, with densely ciliolate margins.

Pedicel 6-15mm long, densely glandular.

Calyx large, the lobes 1.5 to 7mm long, ovate, green,
their outer surface glabrous or glandular,

the margins fringed with long-stalked glandular hairs, or sometimes setulose.

Corolla broadly rotate-funnel-shaped, 5 to 8.8cm wide,
pale- through rose-pink, rarely white,
with red-brown spotting on the upper three lobes.

Stamens 10, unequal, the longest as long as the corolla, anthers yellow;
filaments pubescent along the lower half.

Ovary densely glandular.

Style longer than the corolla and the stamens,
glabrous, but glandular along the lower half.

Capsule oblong-conoid, 12 to 18mm long, glandular, the hairs short-stalked.

Seed Collections:

W 9592	1917/1919	RJL 025	1991
BEC 139	1982	H&S 92/148	1992
Doleshy 706	1983	ESUS 125	1994
Doleshy 713a	1983	ESUS 129	1994
Doleshy 713b	1983	ESUS 135	1994
Doleshy 713c	1983	SUE 135	1994
KFB 101	1989	MW 175	1997

R. schlippenbachii was discovered growing along the shores of northeast Korea in 1854 by a Russian naval officer, Baron Alexander Ludwig von Schlippenbach. Sixteen years later, a Karl Maximovich-penned description appeared in the 1870-published Volume 15 of the *Bulletin of the Saint-Petersburg Imperial Academy of Sciences*, but whether rendered from Schlippenbach's specimens or the botanist's own collections, is unclear.

It was a member of the Veitch Nursery dynasty who first introduced the taxon into UK cultivation during 1893, John Gould Veitch Jr. importing a number of plants from a Japanese garden. Those outliers remained the only form of the species available until 1917 when, post his explorations of Japan, Ernest Wilson visited the Korean peninsula and saw mile after mile of hillside awash in millions of pure pink flowers. A large quantity of seed was soon on its way to the Arnold Arboretum, a proportion of which crossed the Atlantic to Kew, and once germinated, those youngsters were quickly distributed amongst the leading horticulturalists of the day. And despite regular collections from Japan, Korea and eastern Russia arriving in subsequent years, many of the stunning mature specimens to be seen in British gardens today can trace their origin back to a Wilson-collected seed capsule.

Leaf, calyx and corolla size are larger than those found on other members of the subsection, which in tandem with the whorl of foliage at the end of the branchlets, as well as the fact that new growth emerges from within the same terminal bud as the flowers, distinguishes the species from its closest relatives. Were *R. nipponicum* to be more widely grown, identification might be a little more problematic, as out of flower the leaves of both species are somewhat similar in size and shape, but in *R. schlippenbachii* the foliage is not held alternately, nor is the bark papery and peeling. When in bloom, identification becomes easy, as the *R. nipponicum* corollas are small pendant urns.

Cultivation is straightforward, with frost protection necessary for the flowers and early growth; otherwise *R. schlippenbachii* is fully hardy, though a soil slightly nearer neutral than that preferred by most other rhododendrons would be icing on the cake. A large domed bush, covered in white or pink flowers is breathtakingly beautiful, with the bronzy-brown-tinted new growth and spectacular autumn colour an added bonus.



R. schlippenbachii



R. schlippenbachii



R. schlippenbachii



R. schlippenbachii



R. albrechtii

R. albrechtii

Hardiness:

H5-6.

Flowering Period:

April-May.

Distribution in the wild:

Hokkaido & Honshu, Japan.

Growing by forest margins at elevations of 800-2,300m.

Identification:

Upright, twiggy shrub, 1-3m high;

branchlets densely setulose-glandular at first, glabrescent with age and purple-brown;
mature bark greenish-brown, furrowed and grooved.

Vegetative buds lateral.

Leaves alternate, more tightly packed at the branch tips as though in pseudowhorls,
but not in whorled clusters of 5,bronzy when young, obovate through oblong-lanceolate,
2.1 to 13.5cm long by 0.9 to 6.3cm wide;

upper surface and margins sparsely strigose;

lower surface densely strigose or strigose-glandular,
the midrib with straight through crisped unicellular hairs.

Petiole 2-5mm long, often setulose, the hairs sometimes glandular, rarely glabrous.

Inflorescence terminal, 2-5-flowered,
opening before or as the leaves expand;winter flower buds ovoid, the 7-9 scales broadly ovate, glabrous,
their margins densely white-ciliate on the upper half.

Calyx small, the purple lobes 1-3.5mm long, their outer surface hairy.

Pedicel 10-18mm long, densely hairy, the hairs long-stalked glandular or villous.

Corolla rotate-campanulate, 3 to 4cm wide, not divided to the base,
pink to rose through deep rose-purple,
spotted olive-green on the upper lobes,
the tube short and wide, shorter than the spreading lobes,
the outer surface glabrous.Stamens 10, dimorphic, the anthers reddish-purple;
the filaments long or short,

and respectively, glabrous or densely pubescent towards the base.

Ovary densely appressed-pilose, glandular.

Style glabrous, sometimes pubescent at the base.

Capsule 8-10mm long, conoid-ovoid, glandular,
the yellowish hairs multicellular, sometimes unicellular at the apex.

Seed Collections:

W 7638	1914	W&H 633	1987	EHOK 98	1997
Doleshy 804	1984	W&H 691	1987	EJE 99	2003
Kurashige 498	1987	W&H 704	1987	EJE 262	2003
Kurashige 573	1987	AGS 163	1988	EJE 285	2003

R. albrechtii is named after Michael Albrecht, Naval Surgeon at the Russian Consulate in Hakodate, southern Hokkaido, Japan, who discovered the species in 1860, shortly before a fellow countryman, Karl Maximovich, arrived from the Saint Petersburg Botanical Gardens to begin an extensive two-year exploration of the archipelago. It was Sugawa Tschonoski (Sukawa Chonosuke), the locally-recruited Japanese assistant to Russia's then premier botanist, who actually collected Maximovich's specimens, most likely from the exact same area visited by the plant's honoree. The species description was written some years after the botanist returned home, the delay no doubt the result of the vast amount of material that had been collected - 72 chests of herbarium specimens alone - but the write-up for Albrecht's rhododendron finally appeared in Volume 15 of the *Bulletin of the Saint-Petersburg Imperial Academy of Sciences*, which was published during 1870.

Morphologically, the alternate leaves are distinctive and unique within the subsection, and they show that *R. albrechtii* is not especially closely related to any of the other occupants. The dimorphic stamens are another key characteristic: the longer ones, glabrous; the shorter, densely pubescent from the middle downwards to the base. The species can be confused with *R. pentaphyllum*, as both plants may bear pink corollas that open before or as the leaves expand, but in *R. albrechtii*, the corollas are always spotted olive-green and are smaller, being only 3 to 4cm across.

In UK cultivation, a woodland situation is needed to protect the early growth and flowers from frost. *R. albrechtii* is also said to perform best in areas spared from excessive summer temperatures, though as the array of stunning garden plants in many of England's southern and south-eastern counties aptly testify, if all other cultural requirements are met, that modicum can generally be ignored, especially if the plants were sourced from central, rather than northern Japan.

Seed from the original 1860s collection never reached British gardens, although an almost complete duplicate set of Maximovich's herbarium specimens was sent to and is still held at the Royal Botanic Garden, Kew. Professor Charles Sprague Sargent was the first Westerner to secure viable capsules, doing so on a visit to Hokkaido in 1892, but the plants grown at the Arnold Arboretum swiftly succumbed and it was not until Ernest Wilson visited Japan in 1914 and sent back seed from Honshu that the species was successfully introduced into cultivation. A plant from that gathering, Wilson 7638, first flowered in the UK at Trewithen in Cornwall, the home and garden of George Johnstone, and was featured in a 1930 issue of the *Botanical Magazine*.



R. albrechtii (EJE 262)



R. albrechtii 'Suzuki Collection'



R. albrechtii



R. albrechtii

R. quinquefolium

Hardiness:

H5-6.

Flowering Period:

April-May.

Distribution in the wild:

Honshu & Shikoku, Japan.

Growing on rocky hillsides and in mixed deciduous forests,
at elevations of 300-1,700m.

Identification:

Shrub or small tree to 8m high, usually much lower in cultivation;
new shoots glabrous, shiny brown at first,
becoming grey-brown over time; bark corky and fissured.

Vegetative shoots and inflorescence from within the same terminal bud.

Leaves in whorls of 4-5 at the branch tips, rhombic-elliptic through obovate,
3 to 5.8cm long by 1.8 to 3cm wide;

upper surface pale green, edges tinted red-purple, glabrous,
the midrib densely pubescent, the margins ciliate;

lower surface pale green, edges tinted red-purple, glabrous or pubescent near the base,
the midrib densely pubescent towards the base and sometimes bristly.

Petiole 1-3mm long, pubescent.

Inflorescence terminal, 1-3-flowered, opening as the leaves expand,
winter flower buds narrowly oblong, the 9 scales ovate, purple-brown, glabrous,
their margins either ciliolate or glabrous.

Pedicel slender, 8-18mm long, glabrous or pilose, sometimes glandular-pilose.

Calyx lobes 1-3mm long, outer surface glabrous,
their margins often ciliate, glandular or eglandular.

Corolla rotate-campanulate or funnel-shaped, 3 to 4.3 cm wide,
white, with green spots at the base of the upper lobe,
the lobes longer than the tube.

Stamens 10, unequal, shorter than the corolla;
the filaments dilated, pubescent towards the base.

Ovary glabrous, sometimes densely pubescent, rarely puberulent at the apex.

Style glabrous, or puberulent towards the base.

Capsule cylindric, 8 to 15mm long, glabrous, rarely pubescent at the apex.

Seed Collections:

W 7676	1914/1915
W 7683a	1914/1915
Russell 943	1987

In addition to the trio of authenticated gatherings listed above,

over the past fifty years some twenty additional collections

- made by members of the Japanese Rhododendron Society -

have appeared on the annual Seed Exchange run by the American Rhododendron Society.

James Bisset was a British plant collector who visited the mountainous areas of Kanagawa and Tochigi Prefectures, on the main island of Honshu, several times between 1866 and 1886. He was searching for Japanese ferns, because the Victorian gardeners back home were going quietly crazy for them - massed pots of growing fronds used to decorate the heated conservatories newly attached to their homes, extinctions that were then all the rage. But in 1876, aside from the various *Dryopteris*, *Osmunda*, *Cyrtomium*, *Lygodium* and *Athyrium* species he collected, Bisset also found *R. quinquefolium*. On his return to Britain in 1877, he wrote the botanic description for the new species jointly with David Moore, Director of Dublin's Glasnevin Botanical Garden, their appraisal appearing in Volume 15 of the *Journal of Botany*.

Yet it was the noted Japanologist, Algernon Bertram Freeman-Mitford, who introduced the species into British gardens around 1896 when, as Baron Redesdale, he was rebuilding Batsford House in Gloucestershire and in the process, establishing its arboretum. Freeman-Mitford had previously been employed as Second Secretary to the British Legation in Tokyo during the period of the Meiji Restoration, and was also the author of several books on the country - *Tales of Old Japan* (1871) and *The Bamboo Garden* (1896) are two of his works, with the former inflicting 'Forty-seven Ronin' on an unsuspecting Western audience for the first time - so past social and diplomatic contacts obviously proved botanically useful.

Though perhaps not, as *Fallopia japonica* was also one of the Baron's introductions.

The Yokohama Nursery Company began despatching plants that were labelled 'Azalea *quinquefolia* white' to America and Europe a few years later, while Ernest Wilson secured two seed lots from his 1914-15 Arnold Arboretum-sponsored expedition. More than seven decades would pass before another, officially documented, batch of capsules gave up their contents, in this case to James Russell, once of Sunningdale Nurseries, but at that time creating Ray Wood in the grounds of Castle Howard - who somehow managed to be out and about collecting on Mount Akagi, in Honshu's Gunma Prefecture, during 1987.

A study published by a group of Chinese botanists in 2010 - *A Taxonomic Revision of Rhododendron Subgenus Tsutsusi Section Brachycalyx (Ericaceae)* - suggested moving *R. quinquefolium* into Subsection *Brachycalyx* because the characteristic of both flowers and leaves appearing from within the same terminal bud is significant and shows that a closer relationship exists with that pigeonhole's *R. amagianum* and *R. reticulatum*, than it does with the Subsection *Sciadorhodia* species. However, it should be noted that the leaves of *R. quinquefolium* are 5-subverticillate, rather than the *Brachycalyx* norm of 3-verticillate, that no mention is made of a similar move in regard to *R. schlippenbachii*, which also has its leaf and flower emerging from within the same bud scales, and crucially, no DNA evidence was provided that would place *R. quinquefolium* into the *Brachycalyx* clade as opposed to the already-published datasets that clearly show it to be a member of Subsection *Sciadorhodia*. Maintenance of the status quo should continue therefore until that cladistic analysis is scientifically challenged.

Out of flower, *R. quinquefolium* is almost a mirror image of *R. pentaphyllum* in leaf and form, though mature specimens can be identified through the bark, which is fissured and cork-like in the former. White flowers, opening as the leaves expand from within the same terminal bud, are the key distinguishing features whenever the plants are in bloom. Also, *R. quinquefolium* will be found in a lot more gardens, as the plant is much easier to grow, even in Scotland, where the cooler summers can sometimes hinder the attainment of full hardiness.

Priority number one however, is to provide such a specimen with a sheltered spot right from the off, protected from gusting October gales. For in such a locale, the autumn colour display will simply be spectacular.



R. quinquefolium



R. quinquefolium



R. quinquefolium



R. quinquefolium



R. quinquefolium



R. vaseyi

Hardiness:

H5-6.

Flowering Period:

April-May.

Distribution in the wild:

NE Georgia & W North Carolina, USA.

Growing in red oak woodland, in swamps, ravines and on mountain slopes, at elevations of 900-1,830m.

Identification:

Shrub or small tree, 1.5 to 4.6m high, usually much lower in cultivation, upright and spreading; branchlets sparsely pilose at first, soon glabrescent or glabrous; bark grey-brown, striate and shredding. Vegetative buds lateral.

Leaves scattered, elliptic through obovate, 5 to 12.5cm long by 1.3 to 4.3cm wide, those at the branch tips tapering at each end; upper surface dark green, glabrous, the midrib puberulent, the margins often serrulate, strigose, undulate; lower surface light green, glabrous, the midrib sparsely setulose. Petiole 3-8mm long, often sparsely setulose.

Inflorescence terminal, 4-8-flowered, opening before the leaves expand; winter flower buds ovoid, the 7-9 scales ovate, greenish-pink, those at the base often shed, all being glabrous, but with densely ciliolate margins.

Pedicel 5-15mm long, glabrous or glandular-pubescent.

Calyx variable, the lobes 0.5 to 8.5mm long, oblique, their margins glandular.

Corolla rotate-campanulate through widely funnel-shaped,

3.5 to 5cm wide,
2-lipped,

the upper lip of 3 lobes less deeply divided,
the lower lip of 2 lobes widely spreading,
pale- through deep-pink, or white,

often with reddish-brown spotting on the upper 3 lobes.

Stamens 5-7, unequal, anthers brown; filaments glabrous.

Ovary often densely glandular.

Style glabrous, or sparsely glandular at the base.

Capsule narrowly-oblong, 10-13mm long, sparsely glandular, the hairs short-stalked.

Seed Collections:

None have been officially documented, but close to fifty lots have featured on the annual American Rhododendron Society Seed Exchange since the mid 1970s.

R. vaseyi was found and first collected on the Great Balsam Mountains in western North Carolina. The year was 1879 and George R. Vasey, son of the Chief Botanist at the United States Department of Agriculture, George S. Vasey (the gentleman responsible for setting-up the US National Herbarium), was the plant hunter involved in the encounter. His specimens were passed to Asa Gray, who wrote the botanic description that same year for Volume 15 of *Proceedings of the American Academy of Arts and Sciences*, the choice of epithet an honorific for George Jr., rather than George Snr., though the opposite may also be true as complete confusion exists over which specific Vasey was being taxonomically commemorated, in this case, and in that of several other non-rhododendron species and genera. With *R. vaseyi*, even money is on the son, though H. H. Davidian hedges his bets in Volume 4 of *The Rhododendron Species* by assigning the father's birth and death dates to the son. Regardless, the azalea was a rare find, because its distribution is now known to be restricted to just seven counties in the west of North Carolina, and to one in the northeast of Georgia.

Before DNA gene sequencing correctly placed the species alongside its actual closest relations, *R. vaseyi* had long been associated with *R. canadense*, the Edinburgh Revision taxonomy placing the pair in Section *Rhodora* of Subgenus *Pentanthera*, while before 1996, proponents of the Balfourian classification had located it in the *Canadense* Subseries. Today, phylogenetics has shown the two North American azaleas to be in separate clades and only distantly related, despite the shared trait of a 2-lipped corolla: *R. canadense* and 1996's Section *Pentanthera* azaleas are associated with the *Hymenanthes* rhododendrons in one clade; *R. vaseyi* and the azaleas of the Edinburgh Revision's Section *Sciadorhodion*, along with its Subgenus *Tsutsusi* species, the rhododendrons of Sections *Azaleastrum*, *Candidastrum*, *Mumeazalea* and *Viscidula*, plus the membership of Genus *Menziesia*, within another.

The once-bedfellows are easily distinguished from each other when in flower as *R. vaseyi* has just 5 to 7 stamens in the corolla, while *R. canadense* boasts 10. Out of bloom, specimens of *R. vaseyi* will be found to be much taller growing than those of *R. canadense*, they are not stoloniferous, the leaves taper at the apex and the base, are dark-rather than bluish-green in colour, and the winter flower buds are fat and plump.

Writing in the early 1920's - for their book *A Monograph of Azaleas* - Ernest Wilson and Alfred Rehder correctly associated *R. vaseyi* with *R. albrechtii*, but here again, the two azaleas can be identified by differences in the leaves - respectively: scattered rather than alternate; and glabrous rather than strigose - and when in bloom, from the stamen count and the presence of that distinctive 2-lipped corolla.

Seed of *R. vaseyi* was sent to the Royal Botanic Garden, Kew, from Boston's Arnold Arboretum in 1891, and the species has been cultivated in British gardens ever since. In the wild, the azalea prefers the lower summer temperatures offered by higher elevation locales and withers away on sites nearer sea level whenever hit by prolonged dry spells or periods of excessive heat. As a consequence, it succeeds admirably in the UK's maritime climate when given a moist but not wet spot on which to grow, proving fully hardy and very free-flowering. Indeed, a mature specimen can often appear completely shrouded in a cloud of pink or white butterflies when in bloom. Remarkably, the species has only been used to create just one single hybrid - basically, a pairing with itself made by rhododendron doyen David Leach in 1968.





R. vaseyi 'White Find'

R. pentaphyllum

Hardiness:

H4-5.

Flowering Period:

March-April.

Distribution in the wild:

Honshu, Kyushu & Shikoku, Japan.

Growing in deciduous woodland amongst trees and other shrubs, often on steep slopes, at elevations of 500-1,700m.

Identification:

Shrub or small tree to 8m high, but much lower in cultivation; branchlets sparsely pilose at first, quickly glabrous; bark shiny, red-brown, becoming greyish during the second year, not corky.

Vegetative buds lateral.

Leaves in whorls of 5 at the branch tips, elliptic through obovate, 2.5 to 6.3cm long by 1.4 to 3.1cm wide; upper surface dark green, with a red-purple tint along the edges, this sometimes extending across the whole leaf, and often strigose, the midrib and veins densely pubescent or glabrous, the margins usually ciliate and serrulate; lower surface glabrous or sparsely unicellular-pubescent at the base, the midrib and veins often densely pubescent, these hairs when present straight or crisped, glandular or eglandular. Petiole 3-8mm long, setulose, eglandular or glandular, the hairs arranged in a distinct fringe.

Inflorescence terminal, 1-2-flowered, opening before the leaves expand; winter flower buds oblong-ovoid, the 15 scales ovate, glabrous, their margins densely ciliolate.

Pedicel 8-13mm long, glabrous or pilose-glandular.

Calyx glabrous, the lobes 1-5mm long, their margins sometimes ciliate.

Corolla rotate-campanulate, 4 to 6cm wide, pale pink or mauve through deep rose, sometimes with red flecks or spots,.

Stamens 10, unequal, shorter than the corolla; filaments puberulous at the base.

Ovary and style glabrous and eglandular.

Capsule 12 to 15mm long, spindle-shaped, glabrous and eglandular.

Seed Collections:

W 7683	1914
Doleshy 40	1967
Doleshy 44	1967
Doleshy 834	1984
Kurashige 510	1987

As with *R. quinquefolium*, additional collections made by members of the Japanese Rhododendron Society have featured on the ARS Seed Exchange lists.

It is not known who first discovered *R. pentaphyllum*, but close to a quarter-of-a-century after his successful four-year field study of Chinese, Japanese and Korean flora, Karl Maximovich penned the botanical description for the species that appears in Volume 31 of the *Bulletin of the Saint-Petersburg Imperial Academy of Sciences*, published in 1887. First introduced into cultivation in America and Europe by the Yokohama Nursery Company - as early as the mid-1890s when their first English language catalogue was issued - it took until 1914 for *R. pentaphyllum* to definitively arrive in British gardens, when seed collected by Ernest Wilson was distributed by the Arnold Arboretum.

In a garden setting, *R. pentaphyllum* can easily be mistaken for either *R. albrechtii* or *R. quinquefolium*. From the former, the corollas are larger, 4 to 6cm across, without any green spotting, and the flowers open before the leaves have appeared. From the latter, the corolla colour is pink, mauve or rose, never white, and again, the flowers open before not with the leaves. In addition, the mature stem bark is not corky or fissured, and vegetative growth is from separate axillary buds below the terminal flower bud, not from within the same bud scales.

In UK cultivation, the species has proved very difficult to establish and sustain, with the flowers and early growth subject to spring frosts, the bushes very slow-growing and shy-flowering, so a mature plant is an extremely rare find. Yet on its native soil in Japan, *R. pentaphyllum* is a spectacular small tree, putting on a show of bloom equal in the wild to any cherry or magnolia, as online photographs of those populations confirm.

With regard to the presence of spotting on the corolla there is a modicum of confusion, with some authorities citing red-brown flecking on the upper three lobes, while others state that the corollas do not bear any spots. On the ground, the characteristic will be seen to vary: some populations have spots, others don't; but where present, they will always be red-brown, never olive-green.



R. pentaphyllum



R. pentaphyllum

Section *Tsutsusi* Subsection *Azaleastraea*:



Taxa:

R. leptothrium
R. ovatum

Taxonomic Revision:

Subsection *Azaleastraea* holds the eleven species the 1996 classification pigeonholed in Subgenus *Azaleastrum* Section *Azaleastrum*. However, only two of those rhododendrons have been found hardy enough to be grown outdoors in the UK.

Subsection Morphology:

Shrubs or small trees, 0.5 to 8m high; upright and bushy to lax and spreading; young branchlets slender, crimson-purple, often minutely puberulous.

Scales absent.

Vegetative growth from terminal buds.

Leaves evergreen, coriaceous or chartaceous, elliptic, narrowly elliptic through lanceolate, ovate through obovate, 2 to 12cm long by 1 to 4cm wide, their upper and lower surfaces glabrous, the midribs moderately to densely minutely puberulous.

Leaf anatomy comprises a 2-layered upper epidermis, with the cells in the lower layer much larger than those above; the cuticle is as thick as the upper layer cells are deep; water tissue is absent; the cells of the lower epidermis are not papillose. Sclereid cells are absent.

Petiole densely minutely puberulous.

Inflorescence axillary, in the uppermost 1-4 leaves, 1-2-flowered, the bud scales usually persistent while in bloom, their outer surface usually glabrous.

Pedicel often densely glandular.

Calyx lobes large, to 9mm long, these fringed with either stalked glands or hairs, or both, or sometimes glabrous.

Corolla rotate through tubular-campanulate with 5 spreading lobes, white or pink, rose through purple to purplish-red or magenta-purple, with or without spots.

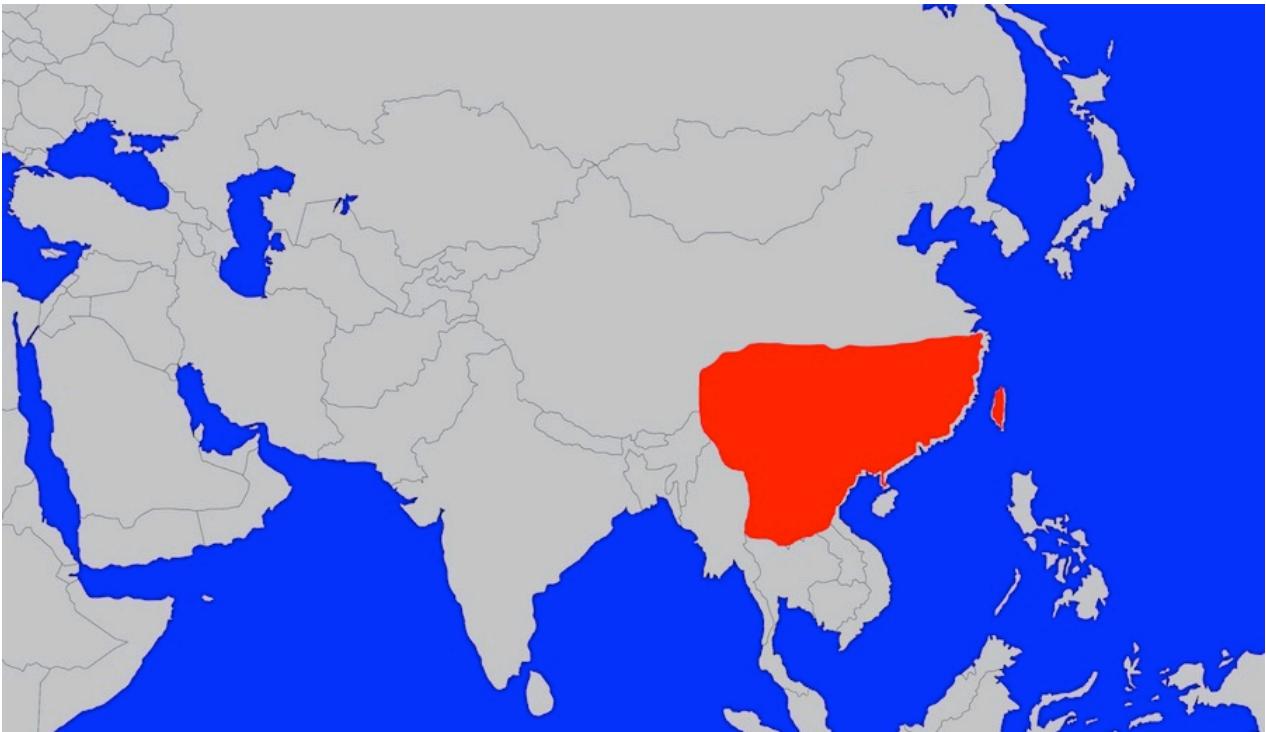
Stamens 5, unequal, as long or shorter than the corolla, the filaments pubescent along the lower half or two-thirds, rarely glabrous.

Ovary 5-locular, 1-3mm long, usually setulose-glandular, but sometimes without glands.

Style impressed, glabrous and eglandular.

Capsule ovoid or conoid, very short, usually setulose-glandular, but sometimes without glands, equal in length or shorter than the surrounding and persistent calyx.

Seeds without appendages.



R. ovatum

Hardiness:

H3-4.

Flowering Period:

May-June.

Distribution in the wild:

NE Upper Myanmar; C, S & SE China; Taiwan; N Vietnam.

Growing on open mountain slopes and cliffs, in thickets, in open and dense woodland, at elevations of 300-1,600m.

Identification:

Shrub or small tree, compact, bushy or upright, 1 to 4m high; branchlets slender, reddish-brown at first, minutely puberulous, occasionally short-stalked glandular.

Leaves coriaceous, ovate through ovate-elliptic, 2 to 6cm long by 1 to 2.6cm wide;

upper surface bright reddish- or pinkish-brown at first, maturing to dark green.

Petiole occasionally short-stalked glandular.

Inflorescence 1-flowered, the outer surface of the bud scales densely minutely puberulous.

Pedicel densely minutely puberulous, sometimes short-stalked glandular.

Calyx 2-7mm long, the lobes broadly rounded, their outer surface glabrous or minutely puberulous over the lower half, their margins glabrous, or sometimes short-stalked glandular.

Corolla rotate with a short tube and spreading lobes, 1.6 to 2.6 cm long by 2.5 to 3cm wide,

white through pink to pale purple, with or without pink or darker spotting, sometimes with a yellow blotch,

the outer surface glabrous, the inner surface densely minutely puberulous.

Seed Collections:

W 938	1900	RV 73/107	1973
W 1391	1907	KR 2248	1992
W 1690	1907	C&N 5761	2007
KW 6335	1924/1925	JN 12376	2012
RV 9880	1970	JN 12413	2012

R. ovatum has a very wide natural distribution. It can be found growing in the central, south and southeast Chinese provinces of Anhui, Fujian, Guangdong, Guangxi, Guizhou, Hubei, Hunan, Jiangsu, Jiangxi, Sichuan, Yunnan and Zhejiang, as well as on the island of Taiwan, in northeast Upper Myanmar, and in the northern provinces of Vietnam. The species was unveiled to Western science in 1843 when Robert Fortune, on a plant-hunting trip for the nascent Royal Horticultural Society, collected specimens in Zhejiang Province, as well as from islands in the Zhoushan archipelago, southeast of Shanghai. While first described as *Azalea ovata* by John Lindley in 1846 - Volume 1 of the *Journal of the Horticultural Society of London* holds his appraisal - Karl Maximovich is credited with the subsequent rebranding to *R. ovatum*, plus the corresponding full botanic description that appeared in Volume 16 of *Mémoires de l'Academie Imperiale des Sciences de Saint Petersbourg*, which went to print in 1870.

Two species that had previously received specific status ranking are now considered to be synonymous under *R. ovatum*:

R. bachii was found in Guizhou Province during 1908 by the French collector Julien Cavalerie and described by Augustin Léveillé in 1913 (within Volume 12 of *Repertorium Specierum Novarum Regni Vegetabilis*). Cavalerie's specimens came from western areas of the distribution, are characterised by glandular calyx margins, and are now considered by the doyens to be intermediate between *R. ovatum* and *R. leptothrium*, but should the need to do so arise, they can be described as *R. ovatum* Bachii Group.

R. lamprophyllum was also described in 1913, but from dried herbarium material that had been collected on Taiwan, and by a Japanese botanist, Bunzô Hayata, his assessment appearing in Volume 3 of *Icones Plantarum Formosanarum nec non et Contributiones ad Floram Formosanam*. No vocal or other objections to the imposition of synonymy under *R. ovatum* have so far been raised by Western horticulturalists.

Leaf, calyx and corolla shape, as well as flower colour, distinguish *R. ovatum* from the sole other member of the subsection that can survive outdoors, all year round, in a British woodland garden, *R. leptothrium*.

R. ovatum was initially introduced by Fortune in 1844, with seed lots from Ernest Wilson and Frank Kingdon-Ward following. A reintroduction took place in 1970 courtesy of a John Patrick and Chien Chang Hsu gathering, with another five batches of capsules secured up until 2012.

The species can be successfully cultivated out of doors in the south and along the east and west coasts of the UK if given a well-sheltered spot to make its home, though lowland forms will still require winter confinement in a cool glasshouse or conservatory. Highly floriferous in the south, where the warmer summers better reflect the climate of its endemic environs, in some northern gardens the species can prove both shy-flowering and slow growing, with the leaves also appearing chlorotic.



R. ovatum



R. ovatum



R. ovatum (W 1391)



R. leptocephalum

R. leptocephalum

Hardiness:

H2-3.

Flowering Period:

April-May.

Distribution in the wild:

SE Tibet; SW Sichuan & W Yunnan, China; NE Upper Myanmar.

Growing in open conifer, deciduous and mixed forest, within thickets and scrub on cliffs, and at the margins of rhododendron forest, at elevations of 1,500-3,500m.

Identification:

Shrub or small tree, upright and densely bushy, 0.6 to 8m high; branchlets slender, minutely puberulous, reddish at first; bark peeling, brown or reddish-brown at maturity.

Leaves chartaceous, narrowly-elliptic through lanceolate, 2 to 12cm long by 1 to 3.6cm wide;

upper surface shiny, deep bronze-green or reddish at first maturing to dark green.

Inflorescence 1-flowered,

the outer surface of the bud scales densely minutely puberulous.

Calyx 3-9mm long, the lobes oblong,

their outer surface glabrous or minutely puberulous at the base, sometimes glandular, their margins glabrous, or minutely puberulous, glandular or eglandular.

Corolla rotate with a short tube and spreading lobes, pale rose through purple-rose, rarely purplish-red or magenta-rose, with or without darker spotting.

Ovary and capsule setulose.

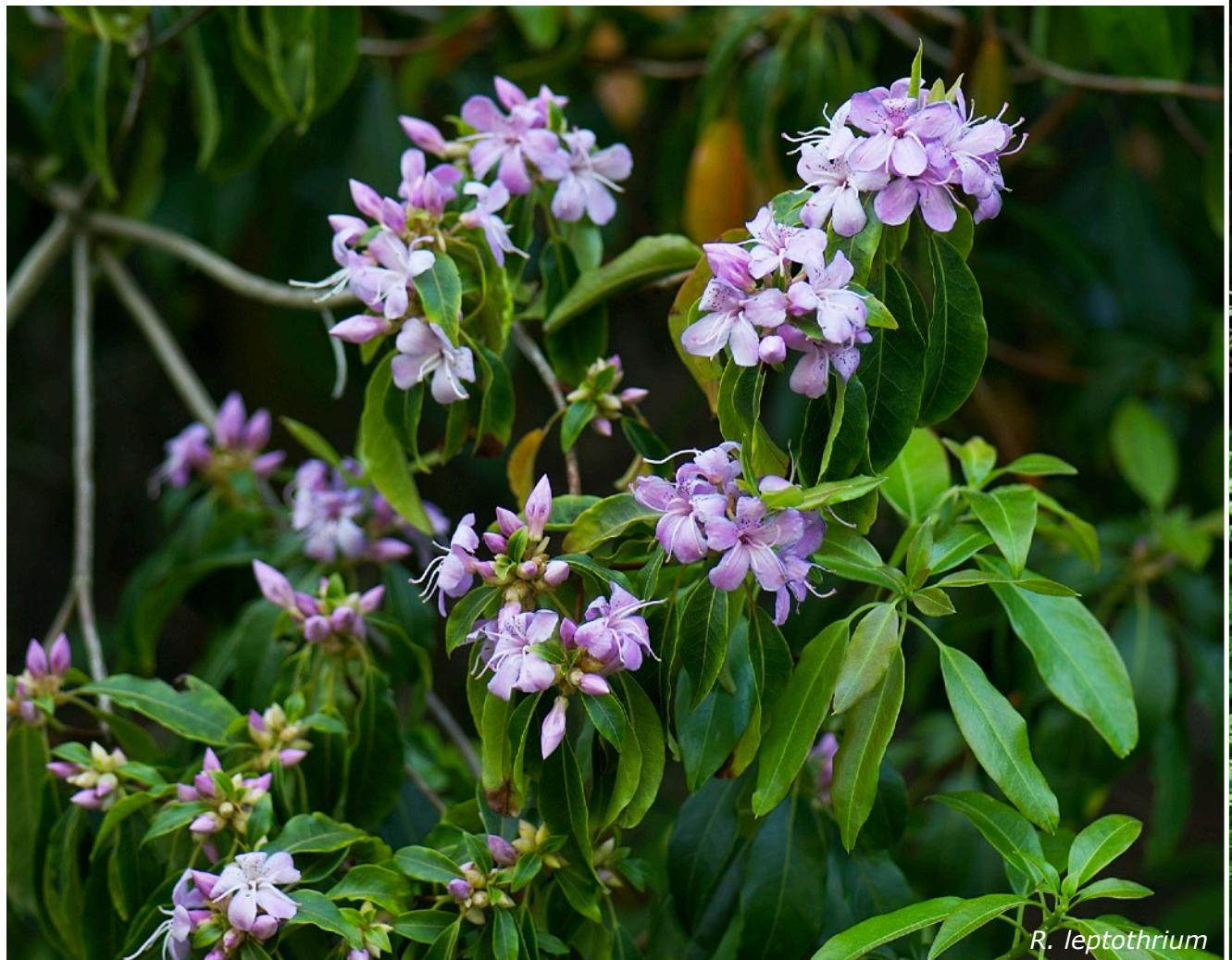
Seed Collections:

F 9341	1912	R 11317	1923/1924	KW 413	1938/1939
F 9901	1912/1914	R 11706	1923/1924	KW 460	1938/1939
F 12845	1912/1914	F 24022	1924/1925	R 159	1948/1949
F 13881	1917/1919	F 24071	1924/1925	SBLE 424	1987
F 15673	1917/1919	F 24284	1924/1925	KR 2586	1993
F 15733	1917/1919	F 25448	1924/1925	KR 2610	1993
F 15736	1917/1919	F 25458	1924/1925	KR 4028	1996
F 16355	1917/1919	F 26240	1924/1925	Henriksen 154	1997
F 21036	1921/1922	F 26507	1924/1925	DGEY 428	2001
F 21698	1921/1922	F 26597	1924/1925	AC 5095	2002
R 7646	1923/1924	R 18471	1929	JN 11077	2011
		R 18473	1929		

George Forrest was the first Western plant hunter to find *R. leptothrium* in the wild, doing so during June of 1912 while exploring the volcanic hillsides of Tengchong County in western Yunnan, which was close to the border with today's Myanmar. He also wrote the species botanic description that appears in Volume 11 of *Notes from the Royal Botanic Garden, Edinburgh*, this jointly penned with Sir Isaac Bayley Balfour and published in 1919. Forrest's cardinal introduction of the species flowered for the first time in UK cultivation during May of 1920, just eight years after sowing, a simultaneous blooming taking place at Caerhays Castle in Cornwall, and Rowallane Garden in Northern Ireland.

The long narrow leaves clearly distinguish the species from *R. ovatum*, but nowadays you will be hard pressed to find a specimen resident in a British garden, despite the thirty-plus gatherings of seed returned by the plant hunters since its discovery.

Yet forms of *R. leptothrium* sourced from higher altitudes across the distribution will grow well outdoors along the east coast if given a sheltered spot - one protected from late spring frosts, which if unchecked would damage the early-developing young shoots - while along the west coast, the species succeeds admirably, often forming small bushy trees that despite producing only a solitary bloom from each flower bud, are often heavily bedecked if not awash with clusters of star-shaped rose corollas.



R. leptothrium



R. leptothrium



R. leptothrium



R. leptothrium

Section *Tsutsusi* Subsection *Brachycalyx*:



Taxa:

- R. amagianum*
- R. chilanshanense*
- R. decandrum*
- R. dilatatum*
- R. farrerae*
- R. reticulatum*
- R. tashiroi*
- R. wadanum*
- R. weyrichii*

Taxonomic Revision:

Subsection *Brachycalyx* comprises the deciduous-leaved species of the old Subgenus *Tsutsusi* Section *Brachycalyx* pigeonhole as defined in the 1996 Edinburgh Revision classification, with but one addition from Section *Tsutsusi*, *R. tashiroi*.

Analysis in the 2005 Goetsch-Eckert-Hall genetic study *The Molecular Systematics of Rhododendron (Ericaceae): A Phylogeny Based Upon RPB2 Gene Sequences*, showed that this evergreen species was most closely related to the now-synonymous deciduous species, *R. mariesii*, (which recent field study found to be wholly within the feature range of *R. farrerae*). Transfer into Subsection *Brachycalyx* was therefore required.

Additional confirmation that this was indeed the correct association, and not a fluke result, arrived in 2009, with publication of the scientific paper *The Molecular Systematics of Rhododendron Subgenus Tsutsusi (Rhodoreae, Ericoideae, Ericaceae)*, written by Kathleen Kron and Elizabeth Powell.

Using a different series of DNA gene sequences to the 2005 research, the resulting dataset confirmed the two clade division, this split basically dependent on winter leaf retention. Except the parsimony trees also showed that the placement of *R. tashiroi* in Subsection *Brachycalyx* was correct despite those evergreen-deciduous inconsistencies.

Subsection Morphology:

Shrubs or small trees, 0.5 to 5m high; mostly upright with ascending, tiered or spreading branches; young shoots from within the same terminal buds as the flowers, pubescent at first becoming glabrous.

Leaf scales absent.

Leaves monomorphic, deciduous, semi-deciduous or evergreen, chartaceous, rarely coriaceous, usually in pseudowhorls of 3 at the branch tips, opposite or verticillate, rarely scattered, rhombic through rhombic-ovate to ovate, or elliptic-obovate through oblong-elliptic, 1.5 to 10cm long by 0.7 to 7cm wide; upper and lower surfaces usually with long, adpressed hairs at first, becoming glabrous at maturity, except along the midrib.

Petiole usually moderately to densely hairy, sometimes glandular, occasionally glabrous.
Inflorescence terminal, 1-5-flowered,
opening before or as the leaves expand, not fragrant.

Pedicel usually moderately to densely hairy, sometimes glandular, rarely glabrous.

Calyx minute, the outer surface and margins sparsely through densely hairy,
but sometimes glandular.

Corolla funnel-shaped through funnel-campanulate,
orange, red, rose, purple, mauve and lavender, sometimes magenta, occasionally white;
outer surface glabrous.

Stamens 5-12, shorter, as long as, or longer than the corolla;
filaments usually glabrous, but sometimes glandular-hairy at the base.

Ovary hairy, often glandular.

Style usually curved at the base, glabrous,
but sometimes with hairs along the lower half, these occasionally glandular.

Capsule hairy, sometimes glandular.

Seeds brown, usually oblong, without wings,
obtuse at one end, short appendiculate at the other.



R. tashiroi



R. chilanshanense (ETOT 136)

R. dilatatum

Hardiness:

H5-6.

Flowering Period:

April-May.

Distribution in the wild:

C & S Honshu, Japan.

Growing on mountain slopes along the margins of deciduous forests, at elevations of 700-1,000m.

Identification:

Shrub or small tree, 1 to 3m high;

young shoots densely pilose at first, glabrous at maturity.

Leaves deciduous, chartaceous, rhombic through rhomboid-ovate,

3 to 7cm long by 2 to 5cm wide,

apex acuminate;

upper surface dark green, appressed-pilose at first, becoming glabrous;

lower surface appressed-pilose at first,

becoming glabrous or sparsely pilose, or densely minutely puberulous.

Petiole 4-13mm long, papillate, glabrous or sparsely pilose-glandular.

Inflorescence 1-3-flowered, opening before the leaves expand;

winter flower buds conoid,

the outer surface of the scales glabrous, or densely appressed-pilose, their margins densely ciliolate.

Pedicel 5-10mm long, glabrous or moderately pilose-glandular.

Calyx 0.5-2mm long, the lobes saucer-shaped, their outer surface and margins sparsely pilose-glandular.

Corolla rotate-funnel-shaped,

purple through rose-purple, rarely white,

with darker purple flecks at the base of the upper lobes.

Stamens 5, equal to or longer than the corolla; filaments glabrous.

Ovary pilose glandular.

Capsule cylindrical, 9-12mm long, glandular.

Seeds broadly oblong, obtuse at one end, short appendiculate at the other.

Seed Collections:

Kurashige 392	1987
W&H 794	1987

A number of additional, but unauthenticated gatherings appeared on the American Rhododendron Society Seed Exchange lists between 1976 and 1995.

The German physician, explorer and botanist Philipp Franz Balthasar von Siebold was the first Western plant hunter to chance upon *R. dilatatum*, encountering the species during his seven-year residency in Japan for the Dutch East India Company. Arriving at Dejima Island in Nagasaki Bay in August 1823, the doctor was soon able to travel beyond the confines of the trading post and with the help of his new Japanese friends - scientists he worked and corresponded with; patients he treated; the students at his medical school - he managed to gather a massive collection of 12,000 herbarium specimens and over 2,000 live plants, most of the latter arriving safely back in Europe after Siebold's expulsion from Japan late in 1829 (he was caught with maps of the country, then falsely accused of being a Russian spy and ordered into house arrest). The University of Ghent was the recipient of his living collections and those plants became the fulcrum from which the Belgian town's horticultural star would ignite.

R. dilatatum received its botanical description some thirty years later in 1863, the Friedrich Miquel-penned soliloquy appearing in the first published volume of *Annales Musei Botanici Lugduno-Batavi*. Specimens of the species, found growing on the mountains of the Chūgoku region and in Kanagawa Prefecture, were sent to Miquel - director of the Netherlands' Rijksherbarium at Leiden - from the Buitenzorg Botanical Garden in Batavia (now Jakarta) on the Indonesian island of Java, which was then a Dutch colony. These were almost certainly Siebold's collections, or those gathered by his assistant and successor at Dejima, Heinrich Bürger, as both men would have sent their collections to Buitenzorg for onward shipment.

Fast-forward into this millennium and both the *Flora of Japan* botanic description and that contained in the 2010-published Chinese scientific paper *A Taxonomic Revision of Rhododendron Subgenus Tsutsusi Section Brachycalyx (Ericaceae)*, describe the branchlets of *R. dilatatum* as being densely pilose at first. UK descriptions on the other hand - Chamberlain, 1997; Cox & Cox, 1997; Davidian, 1995 - report those young shoots as only being glabrous. However, when the Edinburgh Revision classification of Section *Brachycalyx* was written, its authors stated that the herbarium material was inadequate, or simply not available for many of the species they surveyed, so it could be that this deficiency has resulted in the discrepancy between those accounts.

Japanese botanists have also classified the white-flowering plants of the species as *R. dilatatum* forma. *leucanthum*. However, as with 'album', the use of 'leucanthum' to terminate an epithet would be illegal under the nomenclature rules as the Russian botanist Alexander Andreevič von Bunge - who was first to use it within the genus in 1833 - would quickly point out were he not dead, buried and possibly turning over in his grave.

R. dilatatum is allied to *R. decandrum* and closely related to *R. reticulatum*. With the former, it shares many characteristics including glandular hairs on the petiole and ovary; with the latter, leaf shape and size, plus flower shape, size and colour. Yet a consistent and significant feature distinguishes the taxon from both of those kindred entities - stamen number. Specifically, a count of 5, as opposed to 7 through 10.

Live plants of *R. dilatatum* were first introduced into British gardens by the Veitch Nurseries in 1883, with a second consignment arriving from the Yokohama Gardeners' Association ten years later. First-flowering reportedly took place at the Royal Botanic Garden, Kew, in 1899, sixteen years after the first importation, a time span that likely indicates the first batch were lost. In UK cultivation *R. dilatatum* is fully hardy across the whole country, forming a small shrub around the 1m-mark that is usually resplendently bedecked with flowers during spring. It grows best where the summer temperatures are highest, but for whatever reason - though certainly not from any lack of floral beauty - the species remains an exceedingly rare find.



R. dilatatum (W&H 794)



R. dilatatum



R. dilatatum (W&H 794)



R. dilatatum



R. farrerae

Hardiness:

H2-3.

Flowering Period:
April-June.

Distribution in the wild:
C, S & SE China; Taiwan.

Growing on cliffs, in thickets and in open or dense mountain woodland,
at elevations of 800-2,100m.

Identification:

Shrub, densely-branched, 0.5 to 4m high;
branchlets short and rigid, shiny brown, appressed-pilose at first,
the hairs shiny, yellowish or brown, becoming glabrous and grey.

Leaves deciduous or semi-deciduous, chartaceous,
ovate through ovate-lanceolate to elliptic,
1.5 to 10cm long by 1 to 4.5cm wide;
upper surface dark green, often pilose at first becoming glabrous,
the hairs yellowish- or reddish-brown,

the margins strigose at first then glabrous, the midrib often strigose especially at the base;
lower surface usually glabrous, sometimes sparsely pilose,
the midrib often strigose especially at the base.

Petiole 2-20mm long, densely to sparsely strigose-setulose, the hairs red-brown,
sometimes glabrous.

Inflorescence 1-2-flowered, opening before the leaves expand;
winter flower buds ovoid, with around 10-12 broadly ovate scales,
their outer surface finely puberulous or glabrescent,
the margins densely ciliolate-eglandular.

Pedicel 4-10mm long, densely villous, the hairs yellow- or reddish-brown.

Calyx 0.5-1mm long, the lobes triangular or rounded,
their outer surface and margins densely villous, the hairs yellowish- or reddish-brown.

Corolla rotate-funnel-shaped,
lavender through purplish-pink, deep or pale rose to purplish-red,
with purple-red spotting on the upper lobes,
the tube short, the lobes spreading, these all deeply cleft,
or the lower 2 lobes more deeply divided than the upper ones.

Stamens 8-10, unequal, slightly shorter or as long as the corolla;
filaments glabrous, or glandular-pilose at the base.

Ovary densely appressed-pilose, the hairs yellowish- or reddish-brown.
Style curved upward.

Capsule ovoid through oblong-cylindrical, 6-18mm long, densely appressed-pilose,
the hairs reddish-brown, often shiny.

Seed Collections:

W 683	1900	Valder I51	1974/1975
RV 73/105	1973	JN 12409	2012



In 1829, Captain William Ward Farrer of the East India Company, introduced a new cultivated plant from China into British gardens. It was named *R. farrerae*, in honour of the Captain's wife, and in 1831 received a botanic description written by Robert Sweet that was published in *The British Flower Garden*, Series 2, Volume 1. Sweet's prose had amended and validated a slightly earlier text by George Tate so it conformed to the rules of botanical nomenclature Carl von Linné had established eight decades earlier. Whether taking umbrage at Sweet's tweak prompted Tate, later that same year, to propose the creation of Section *Brachycalyx* within the Linnaean classification system to contain Farrer's new-to-science rhododendron, is unclear.

Robert Fortune was the next plant hunter to introduce the species, doing so during 1844, and it is documented that some of his plants flowered in 1846.

For many years, *R. farrerae* has been identified as being most closely related to *R. mariesii*, with both species having a similar geographic and altitudinal distribution across southern China. Size was the primary distinguishing feature that separated the two, with *R. farrerae* being smaller: in overall height; in leaf length and width; and in the length of the petioles. Additionally, on *R. farrerae* the petioles were usually densely hairy and the mature seed capsules ovoid in shape, while on *R. mariesii* the petioles were only sparsely hairy or more often, without any hairs at all, and the capsules were oblong-cylindrical. However, in July 2010, a Chinese study - the aforementioned *Taxonomic Revision of Rhododendron Subgenus Tsutsusi Section Brachycalyx*, published in Volume 97, Issue 2, of the *Annals of the Missouri Botanical Garden* - proposed that *R. mariesii* should be made synonymous under *R. farrerae*. The team responsible for the paper had carried out an extensive inspection of the herbaria specimens available in both China and Japan, as well as a full-on examination of a live population in Zhejiang Province. That field study documented leaf size, petiole length, and the density of the hair covering on the petioles, and found that these varied across the plants examined - some seventy individuals - and encompassed the extreme characteristics of both species, which clearly signalled a taxonomic demise.

R. mariesii had been a Robert Fortune find although the credit for introducing the species into UK cultivation in 1886 went to Augustine Henry, who sent seed gathered from plants around Yichang in the west of China's Hubei Province. William Botting Hemsley and Ernest Wilson wrote the botanic description in 1907, post the latter's 1900 re-introduction, their text appearing in Volume 44 of the *Bulletin of Miscellaneous Information*, published by the Royal Botanic Gardens, Kew.

The Jin Xiao-Feng, Ding Bing-Yang, Zhang Yue-Jiao, and Hong De-Yuan revision of *Brachycalyx* also proposes that *R. reticulatum* and its regional allies - *R. hidakanum*, *R. kiyosumense*, *R. lagopus*, *R. mayebarae*, *R. nudipes* and *R. viscidulum* - should be made synonymous with *R. farrerae*. But this is problematical.

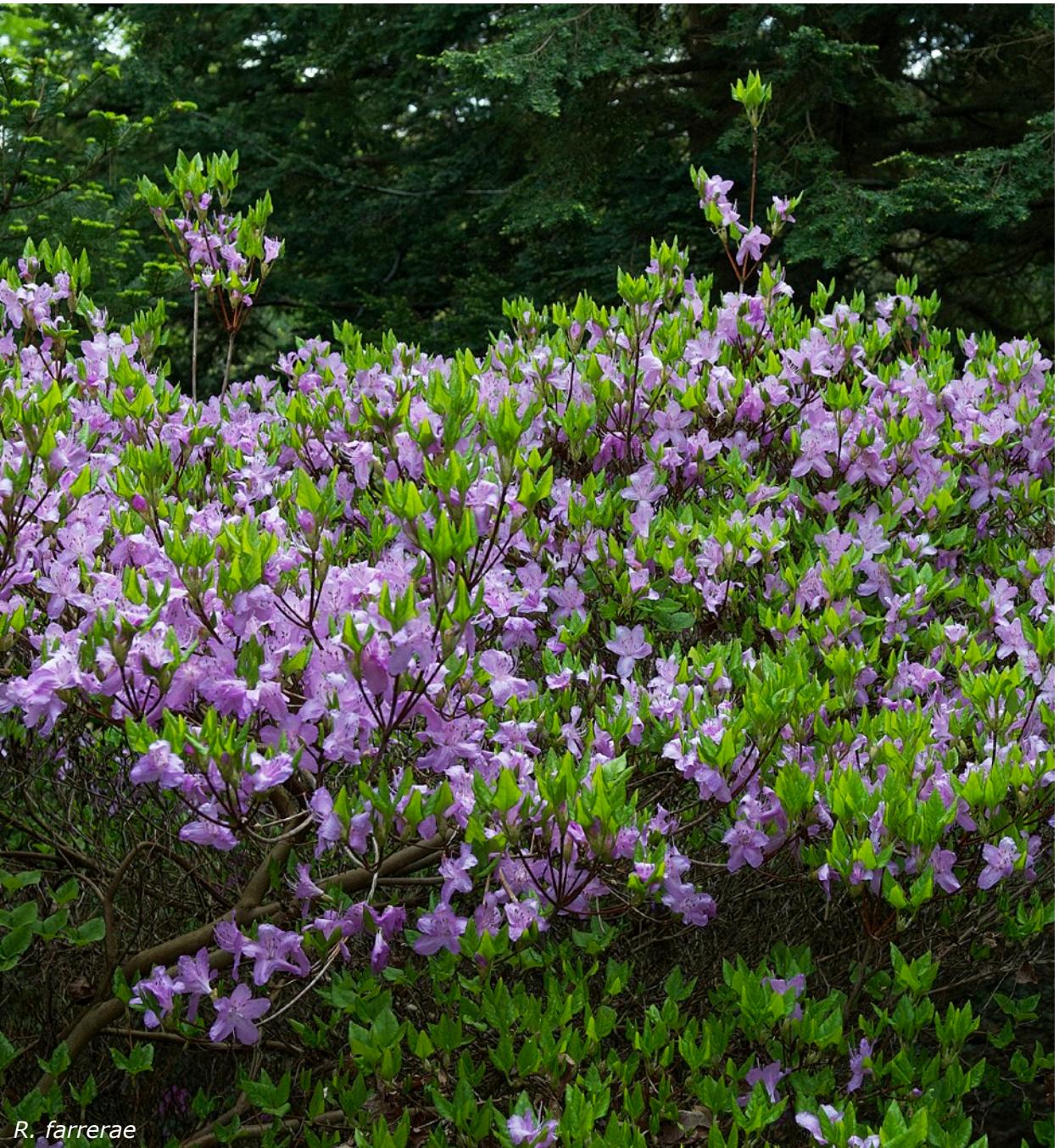
Because in Volume 4 of *The Rhododendron Species*, published in 1995, H. H. Davidian highlighted the clear differences in the geographic distribution of these species.

And in their 1997 *Encyclopedia of Rhododendron Species*, Peter and Kenneth Cox, although critical of the Edinburgh Revision treatment of the Section and predicting a future reduction in the number of specific species to between 3 and 5, chose to group the Chinese and Japanese plants into separate, distinct alliances. This division evidenced the far from inconsequential cultural differences between the two groups, including their variance in hardiness, which is significant, as well as their poles-apart horticultural value.

No DNA gene sequencing evidence was offered in the Chinese study to support the proposal of synonymy in this instance, even though such data would have proved decisive in making the case for or against the merger, allowing plants to be sunk without misgiving or if more appropriate, given subspecific or varietal ranking. For the moment, therefore,

the specific status of *R. reticulatum* is secure, though not that of its associates (as will shortly be detailed).

Forms of *R. farrerae* from lowland areas require cultivation under glass across most of the UK, succeeding outdoors only in the mildest west coast gardens, but those plants previously classified as *R. mariesii* are a touch more robust, succeeding in sheltered gardens in the south and even along the east coast. But they are only borderline hardy and likely to be lost in a really cold winter unless given extra protection.



R. reticulatum

Hardiness:

H5-6.

Flowering Period:

April-May.

Distribution in the wild:

S Hokkaido, C & W Honshu, Kyushu & Shikoku, Japan.

Growing in open thickets, in and along woodland margins, in open country, and on sunny mountain slopes, at elevations from sea level to 1,800m.

Identification:

Shrub or small tree, multi-branched, upright or tiered, 1 to 8m high; young shoots densely appressed-pilose, sometimes pilose-glandular, later glabrescent or glabrous; bark brown, finely striate.

Leaves deciduous, chartaceous, broadly ovate through rhombic-ovate, 1.5 to 9cm long by 0.7 to 6.5cm wide, apex acuminate, acute or cuspidate;

upper surface dark green, densely appressed-hairy at first, the greyish or yellowish-brown soft hairs long or short, becoming sparsely pubescent or pilose, glabrescent or glabrous later, the margins sometimes denticulate;

lower surface paler or glaucous, moderately reticulate, pubescent or pilose at first, especially on the veins and the midrib, the hairs appressed, becoming glabrous or rarely glabrescent,

the midrib sparsely pilose or pubescent, sometimes minutely papillate.

Petiole 2-13mm long, sparsely or densely pilose, or glabrous, occasionally papillate.

Inflorescence 1-2-3-flowered, opening before the leaves expand;

winter flower buds conoid through lanceolate, usually with 9 broadly ovate scales, mucronate, their outer surface densely appressed-pilose or glabrous, their margins densely ciliolate.

Pedicel 4-15mm long, densely appressed-pilose, sometimes glandular.

Calyx 0.5-3mm long, the lobes triangular, ribbon-like or saucer-shaped, their outer surface and margins densely to sparsely pilose, rarely glandular.

Corolla rotate-funnel-shaped,

purple through rose- to reddish-purple, magenta, or rarely white, sometimes with darker purple flecks at the base of the upper lobes, the tube short, shorter than the spreading lobes,

the upper 3 lobes held erect, the lower 2 more deeply divided and pointed downward, giving an almost 2-lipped appearance.

Stamens 10, unequal,

the upper 5 shorter, 10-16mm long, the lower 5 longer, 20-28mm long; the filaments glabrous.

Ovary conoid or ovoid, densely appressed-pilose, or glandular with short-stalked and sessile glands,

or both hairy and glandular, and occasionally bristly.

Style glabrous, but sometimes pubescent along the lower half, rarely glandular.

Capsule cylindrical, oblong or ovoid, often curved, 8-15mm long, pilose or glabrous or glandular.

Seed Collections:

W 7694	1914
Kurashige 441 (Hidakanum)	1987
Kurashige 518 (Kiyosumense)	1987
Kurashige 557	1987
Kurashige 594	1987
Kurashige 876 (Mayebarae)	1987
Kurashige 934	1987
KQ 8	1989

In addition to the authenticated gatherings listed above,

over the past fifty years a dozen or so additional collections

- made by members of the Japanese Rhododendron Society -

have appeared on the annual Seed Exchange run by the American Rhododendron Society.

*R. reticulatum*



R. reticulatum

R. reticulatum is the undoubted star of the subsection.

The species was first described by the brothers Don in Volume 3 of *A General History of the Dichlamydeous Plants*, published in 1834, David validating his older sibling George's text so it conformed to the rules of botanical nomenclature. The subject of their attentions was a plant imported from Japan two years earlier that was then growing at the nursery of Messrs. Knight, on the King's Road, Chelsea, but which had yet to flower. Seed would later arrive in the UK from the Saint Petersburg Botanical Gardens in 1865 - courtesy of Karl Maximovich, recently returned from the archipelago - and via the Arnold Arboretum during 1892, this from a Charles Sprague Sargent collection made on the mountains of Tochigi Prefecture, in central Honshu. Further reintroductions - mostly undocumented - occurred throughout the whole of the 20th Century, but stopped abruptly in the second decade of the new millennium when the Nagoya Protocol came into effect.

Collectively, the *R. reticulatum* diaspora are most closely related to *R. decandrum*, *R. dilatatum* and *R. wadanum*. Stamen number - five as opposed to ten - can be used to key *R. dilatatum* from *R. reticulatum*; the villous-glandular hairs on the petiole and ovary of *R. decandrum* provide differentiation for that species; and a combination of villous hairs on the branchlets, leaf lower midrib, petiole and ovary, plus a stipitate-glandular style, separate-out *R. wadanum*. But with regard to the rest of the *R. reticulatum* flock, the botanic consensus has coalesced on a synonymous merger.

Horticulturalists and rhododendron specialists Peter and Kenneth Cox, writing in their 1997-published *Encyclopedia of Rhododendron Species*, suggest this synonymy should encompass *R. decandrum*, *R. dilatatum*, *R. hidakanum*, *R. kiyosumense*, *R. lagopus*, *R. nudipes*, *R. viscidulum* and *R. wadanum*.

The treatment set out by H. H. Davidian in the fourth volume of his opus, *The Rhododendron Species*, published in 1995, mirrors this proposed merger with the exception of *R. dilatatum*, which the UK's most estimable rhododendron guru maintains at specific status due to the differences in stamen number and the presence of glands on the pedicel and calyx. An acknowledged taxonomic 'splitter', the significance of Davidian advocating such a consolidation should be immediately apparent.

The Chinese *Brachycalyx* revision of 2010 follows Davidian's lead in lumping together *R. reticulatum* with its regional relatives - *R. decandrum* and *R. wadanum* excepted - but goes one step further in considering them all to be synonymous under *R. farrerae*.

As previously indicated, several factors rule out such an amalgamation:

The Sea of Japan physically separates the two populations.

Small but still important differences exist in leaf and flower bud shape, indumentum type, and the presence or not of notches on the leaf margins.

But more significantly, there is a marked difference in hardiness, with Japanese plants proving far more robust than their tender Chinese cousins, the former being rated H5-6, as opposed to latter's H2-3.

Of course, should DNA evidence emerge to support a full unification of the two currently disjunct populations, then all bets would be off, but lacking such and taking account of the apparent in-print consensus:

R. decandrum, *R. dilatatum*, *R. reticulatum* and *R. wadanum* are herein maintained at specific status.

R. hidakanum, *R. kiyosumense*, *R. lagopus*, *R. mayebarae*, *R. nudipes* and *R. viscidulum* are reduced to synonymy under *R. reticulatum*, which has precedence under the nomenclature rules.

Group status under the *International Code for the Nomenclature of Cultivated Plants* would preserve the sunk epithets if enough horticulturalists and gardeners believed

that this was warranted, that those names were of sufficient importance, and that they were being widely used.

If so, the candidates for such treatment would be:

Hidakanum Group.

These plants are native to southern Hokkaido and grow on mountain slopes along the margins of deciduous forest at altitudes no higher than 200m. Young shoots are greyish, with glandular hairs at first. The leaves are rhombic through rhombic-ovate,

3 to 7cm long by 2 to 5cm wide, with a cuspidate apex, surface hairs appressed-pilose, the midrib minutely papillate. Petioles extend to 13mm long and are papillate.

The pedicel is glandular and moderately pilose below, with the calyx around 3mm long, its lobes ribbon-like and purple, their outer surface and margins sparsely pilose-glandular. The corolla is usually magenta coloured, with some stamens slightly longer in length; the ovary, pilose-glandular, with short-stalked and scattered hairs; and the capsule cylindrical and glandular.

Kiyosumense Group.

Native to the Pacific Ocean side of central Honshu and distributed from Chiba Prefecture southwest to Mie Prefecture, plants will usually be found growing at the margins of deciduous forest between 400 and 1400m. These will generally be lower growing than the type species, to 2m high, with glabrous branchlets and lanceolate-shaped flower buds. Leaves are rhombic, no more than 5cm long by 4cm wide, with an acuminate apex and denticulate margins, the upper and lower surfaces sparsely pilose at first, but soon glabrous. The inflorescence is usually single-flowered, the corolla purple in colour, and the ovary densely bristly.

Lagopus Group.

Plant populations are found in central and western Honshu, growing in thickets on mountain slopes at altitudes of between 500 and 1,000m. They are shrubs rather than small trees, topping out between 1.5 and 2.5m in height, with glabrous young shoots and winter flower buds that are oblong-lanceolate in shape. Leaves expand to around 8cm in length and 6.5cm in width, are broadly rhombic in form, with an acute apex that is gland-tipped. Both upper and lower leaf surfaces remain sparsely pilose. Petioles are quite short, 3-6mm long, but densely lanate, which is a key identifier. The inflorescence is 1-2-flowered, with quite long pedicels to 12mm. Flower colour is rose-purple, the ovary is densely villous with pale brown hairs, and the oblong capsule also very hairy and 10-15mm in length.

Mayebarae Group.

These are shrubs or small trees endemic to the central and southern regions of the island of Kyushu, populating open thickets on sunny mountain slopes at altitudes of between 400 and 1200m. They grow to around the 3m mark, have glabrous young shoots and oblong-lanceolate-shaped flower buds. Foliage is quite small, no more than 4cm long by 2.5cm wide, rhombic-ovate, with an acute apex and denticulate margins. Both upper and lower leaf surfaces are glabrous, though a sparse scattering of brownish, pubescent hairs will be found along the abaxial veins, these becoming more concentrated at the base of the midrib. The petioles are quite short, no more than 7mm long, and are somewhat pilose at first. The pedicels too are around 7mm long, densely brown-pubescent at first, sparsely pubescent by the time the solitary, purple through deep magenta flowers are fully open, and glabrous at fruiting. The ovary and capsule are densely covered with brown bristles.

Nudipes Group.

These plants have a distribution that is restricted to the island of Kyushu, with the populations present within only five of the seven prefectures: Fukuoka, Kagoshima, Kumamoto, Miyazaki and Oita. Open stony mountain slopes in full sun, at heights from 700 to 1500m, are the preferred niche habitat, with the plants forming quite dense shrubby thickets or growing as small trees to 3m high. Young shoots may be densely pubescent at first, but quickly become glabrescent, or they are glabrous from the off, with the winter floral buds oblong-lanceolate in shape. Leaves are broadly rhombic through widely rhombic-ovate and can attain the species maxima for length and width. They have acute apexes, but blunt tips, and their margins are denticulate.

The long brown hairs on both the adaxial and abaxial surfaces are detersile, those above pilose, the ones below pubescent, with the midrib sparsely to densely pilose along the lower half. Petioles are short and usually glabrous, but may sometimes be densely pubescent at first, becoming glabrescent. The inflorescence is 1-2-flowered, with the pedicels around 5mm long and densely brown-pubescent at first. These quickly become sparsely pubescent as the purple through rose-purple corollas fully open and are glabrous at fruiting. Ovaries are densely brown-villous, the capsules cylindrical, slender and arched, between 10 and 15mm long, and hirsute.

Viscistylum Group.

As the name implies, these plants can quickly be identified when in flower by their sticky styles. The lower leaf surface, pedicel, calyx outer surface, the ovary and capsule are also glandular to some degree. They are shrubs to around 2.5m high, with densely pilose young shoots that quickly become glabrescent or glabrous. Flower buds are lanceolate-shaped. The leaves are rhombic through rhombic-ovate and quite small, no more than 4cm long by 2cm wide. The leaf apex is acuminate. Both the upper and lower leaf surfaces are brown-pilose at first, but quickly become glabrous, though the lower midrib remains pubescent towards the base. The petioles are very short, only 2-3mm in length, yet boast both pilose and pubescent hairs. Flowers are solitary, purple through reddish-purple and the stamen filaments are sparsely pilose along the bottom half. Plant populations are only found in Kagoshima Prefecture at the southern end of Kyushu, growing along the margins of deciduous woodland at altitudes between 800 and 1400m.

The nitpicking concluded, in UK cultivation *R. reticulatum* will grow in the majority of British gardens where soil conditions allow rhododendrons to flourish. It will prosper best where the summer temperatures are highest, allowing the young shoots to fully ripen, and if given a sunny spot that doesn't completely dry out, flower bud set can be maximised so that mature plants are completely covered in purple, rose, magenta or white flowers during the season. Those bushes will be around 2.5 or 3m high, more across, and will usually have formed a multi-branched, tiered dome. Free-flowering from a young age, fiery autumn leaf colour is an added bonus.





R. reticulatum

R. weyrichii

Hardiness:

H5-6.

Flowering Period:

April-June.

Distribution in the wild:

SE Honshu, Kyushu & Shikoku, Japan; Jeju-do, South Korea.

Growing in thickets, on rocky mountain slopes, in open woodland and along the margins of evergreen woodland from sea level to elevations of 1,200m.

Identification:

Shrub or small tree, with short ascending branches, 1 to 5m high; branchlets densely pilose at first, the hairs reddish-brown, becoming glabrous in their second year or sooner.

Leaves deciduous, chartaceous, broadly ovate through rhombic-ovate to not quite orbicular, 3.2 to 8cm long by 1.5 to 6cm wide, apex acute;

upper surface dark through pale green, not shiny, sparsely rufous-pubescent at first, quickly glabrous, the margins minutely toothed;

lower surface pale green, sparsely rufous-pubescent at first, becoming scattered or glabrous, the midrib sparsely to moderately pubescent.

Petiole 5-10mm long, densely rufous-pilose at first, quickly becoming glabrescent, but rarely glabrous.

Inflorescence 2-4-flowered, opening before, as or after the leaves expand; winter flower buds conoid or oblong, the 8-10 scales ovate, their outer surface glabrous or densely appressed-pilose, the hairs yellowish-brown, their margins densely pilose.

Pedicel 4-8mm long, densely through moderately rufous-pilose.

Calyx 2-3mm long, saucer-shaped, the outer surface and margins densely rufous-pilose.

Corolla open-funnel-campanulate, red through brick-red, rarely purple or white, with darker red flecks at the base of the upper lobes; the tube short, the lobes spreading and deeply divided.

Stamens 10, unequal, the longest equal to or slightly longer than the corolla; filaments glabrous.

Ovary ovoid, densely appressed rufous-pilose.

Style glabrous or pilose along the lower half, and sometimes also papillate.

Capsule obliquely cylindrical, 10-20mm long, densely appressed-pilose.

Seed Collections:

W 7813	1914	Kurashige 711	1987	KQ 117	1989
W 9411	1917	Kurashige 719	1987	KQ 148	1989
BEC 28	1982	Kurashige 730	1987	H&S 92/449	1992

R. weyrichii was first encountered by a gaijin in 1853, a Russian naval surgeon, Doctor Heinrich Weyrich, whose ship, the 900-ton corvette 'Vostok', was part of an Imperial fleet sailing to Japan, able to disembark, explore and botanise while near the Gotō Islands, off the western coast of Kyushu. Twenty years later in 1871, his fellow countryman, Karl Maximovich, penned the description of the taxon that appears in Series 7, Volume 16, of the *Mémoires de l'Academie Imperiale des Sciences de Saint Petersbourg*.

Endemic to all of the Gotō Islands, growing from their rocky seashores to the tops of the mountains, and with disjunct populations on three of Japan's main islands - Honshu, Kyushu and Shikoku - *R. weyrichii* can also be found on Jeju-do (formerly Quelpart) the largest island in the Korea Strait, having likely made the crossing during one of the Quaternary glaciations, when a substantial drop in sea levels worldwide would have reconnected the Japanese archipelago to the Eurasian continent. In consequence, this gives the species a much wider distribution than its closest relative *R. amagianum*.

The differences between these two rhododendrons could be categorised as rather esoteric, although their specific status is not currently under threat. *R. weyrichii* has a matt upper leaf surface and usually flowers before leaf expansion, while *R. amagianum* has been gifted somewhat shiny leaves and corollas that open with or after the new growth extends. The persistent nature and quantity of hairs on the petiole and leaf midrib can also be used to differentiate the pair.

Japanese botanists have given the quite rare, white-flowered plants of *R. weyrichii* a forma. *albiflorum* tag, while those with purple coloured corollas are described as forma. *purpuriflorum*, distinctions that are not recognized under the Edinburgh Revision. Both also duplicate existing epithets within the genus nomenclature.

Ernest Wilson was the first plant hunter to introduce *R. weyrichii* into Western gardens, a portion of his 1914 gathering of seed - from plants growing on the island of Shikoku - arriving in Britain through the good offices of the Arnold Arboretum. Three years later and again via Boston, Wilson sent a second batch of seed, this from the population on Jeju-do. Subsequent collections have continued to arrive intermittently over the years, but in UK gardens, the species rarely produces the same spectacular floral display that it is famed for on the mountains of Japan. This is almost certainly due to our cooler maritime climate and a lack of consistently high summer temperatures, with specimens short-lived and never performing well in the north of the country, especially in Scotland. Forms of the species collected from lower elevations are even more temperamental and will only survive in gardens along the west coast where winter cold spells are moderated, immaterial of the H5-6 hardiness rating. However, in the south, and along the east coast if sheltered, plants with a known high altitude provenance do succeed, growing into bushes around a metre or so high and flowering relatively freely.



R. weyrichii



R. weyrichii



R. weyrichii

R. tashiroi

Hardiness:

H2-4.

Flowering Period:

April-June.

Distribution in the wild:

SW Taiwan; the Ryukyu Islands, Kyushu & Shikoku, Japan.

Growing in and at the margins of evergreen forests at elevations from sea level to 500m.

Identification:

Shrub, or rarely a small tree, multi-branched, 1.5 to 5m high; branchlets densely brown-pubescent at first, the hairs weak and appressed, soon becoming glabrescent or glabrous.

Leaves evergreen, coriaceous, elliptic-obovate through oblong-elliptic, 3-verticillate or in pairs, 3.5 to 7cm long by 1.3 to 2.5cm wide, apex acute or acuminate;

upper surface densely grey-brown appressed-hairy at first, becoming glabrous, the margins often denticulate; lower surface densely grey-brown appressed hairy at first, becoming glabrescent or sparsely hispid, the midrib hispid.

Petiole 3-10mm long, densely brown appressed-hairy.

Inflorescence 2-5-flowered, bud-scales usually persistent; winter flower buds ovoid, with around 9 broadly ovate-rounded scales, their outer surface glabrous,

but sometimes strigose along the middle or near the apex.

Pedicel 6-15mm long, densely brown appressed-strigose.

Calyx 1-3mm long, saucer-shaped, the lobes triangular, their outer surface and margins densely brown strigose.

Corolla broadly funnel-campanulate,

pale rose-purple, pink, or white,

the upper lobes sometimes spotted maroon-purple.

Stamens 10, rarely 9 or 12, unequal;

filaments glabrous.

Ovary ovoid, densely appressed-villous, the hairs brown and shiny.

Style glabrous.

Capsule obliquely cylindrical through narrowly ovoid, 8-13mm long, densely to sparsely brown appressed-hairy.

Seed Collections:

Doleshy 228	1970	KQ 309	1989
Kurashige 100	1987	SOJA 309	1989

Four unauthenticated collections made by members of the Japanese Rhododendron Society featured on the annual American Rhododendron Society Seed Exchange lists between 1978 and 1990.

R. tashiroi was the next member of the subsection to be discovered, possibly as early as 1862, but certainly before 1887 when Karl Maximovich described the taxon in Volume 31 of the *Bulletin de l'Academie Imperiale des Sciences de Saint-Pétersbourg*. The specimens he documented were collected in southern Japan, most likely by the author when he was exploring the archipelago, or later sent to him at the Saint Petersburg Botanical Gardens by his one-time field assistant, Tschonoski Sugawa. White flowered plants, which are endemic to Yakushima Island only and grow on either side of the 500m contour, were previously described as *R. tashiroi* forma. *leucanthum* by Genkei Masamune in the 1929-published paper *A Preliminary Report on the Vegetation of Yakushima*, but are now considered synonymous. This would no doubt greatly please Alexander Andreevič von Bunge, given that he was the first botanist to conceive and use the epithet within Genus *Rhododendron*, back in 1833, making any subsequent reuse, illegal.

To say that *R. tashiroi* has been the cause of many a botanically-themed nightmare since Maximovich's outline first went to print would be an understatement. The problem is down to it being closely related to plants within both the deciduous *Brachycalyx* and evergreen *Tsutsusi* pigeonholes, thereby making it especially difficult to place within the classification regardless of version, old or new. Even more infuriating - as the highly regarded Japanese nurseryman Koichiro Wada reported in a 1965 article for the *Journal American Rhododendron Society* (Volume 19, Number 1) - is the fact that *R. tashiroi* has been crossed extensively with members of both plant groups, their leaf retention attributes immaterial. So whether from a desperate need to curtail continually waking in the middle of the night, screaming, as monster bushes of *R. tashiroi* closed-in from all sides, or simply as a stopgap, Hermann Sleumer, the German-Dutch botanist whose *Ein System der Gattung Rhododendron* is the 1949 foundation stone upon which the Edinburgh Revision sits, created the monotypic Section *Tsusiopsis* within Subgenus *Sciadorhodion* expressly to hold said rascal in 1980, though this failed to impress David Chamberlain and Sally Rae, who stuck the ungrateful critter right back into Section *Tsutsusi* when their Subgenus *Tsutsusi* monograph was published in 1990 (A Revision of Rhododendron IV. Subgenus *Tsutsusi*, *Edinburgh Journal of Botany*, Volume 47, Number 2).

Morphologically, the plant has more recently been shown to lean closer towards the *Brachycalyx* rhododendrons, having foliage - albeit evergreen - arranged in whorls at the branch tips - the leaves either paired or in threes - near-identical leaf indumentum, flowers and new growth that are produced from within the same terminal bud, and pollen that is tricolporate, subspheroidal and conspicuously granulated. A rehousing was also evidenced when a paper authored by Kathleen Kron and Elizabeth Powell - *The Molecular Systematics of Rhododendron Subgenus Tsutsusi* - was published in Volume 66 of the *Edinburgh Journal of Botany* during 2009, their datasets of *matK*, *ndhF*, *trnS-trnG*, *nrlTS* and *rpb2* DNA gene sequences all showing that *R. tashiroi* was indeed, and incontestably, a member of the *Brachycalyx* clade.

Regrettably, *R. tashiroi* is a rare find in British gardens. It was only introduced into UK cultivation during 1971, with a plant flowering at Edinburgh Botanic in May of 1975, but to grow the species well, considerable summer heat is required, which is usually absent in northern climes. H. H. Davidian has reported that the Edinburgh plant succumbed in 1980 (*The Rhododendron Species*, Volume 4, 1995), while Peter and Kenneth Cox state that the species was short lived at Glendoick (*The Encyclopedia of Rhododendron Species*, 1997). That is certainly not the case in the wild, as Koichiro Wada cites Yakushima plants with 1m trunk girths and heights to around 5m. He also notes the island's high humidity, which would chime with the more hospitable conditions a west coast garden could provide, such as at Muncaster in Cumbria, where the portraits opposite were secured.



R. tashiroi



R. tashiroi



R. tashiroi

R. decandrum

Hardiness:

H5-6.

Flowering Period:

April-May.

Distribution in the wild:

W & S Honshu & Shikoku, Japan.

Growing on mountain slopes along the margins of deciduous forests, at elevations of 600-1,500m.

Identification:

Shrub or small tree, 1 to 3m high; young shoots densely pilose at first, but quickly glabrous.

Leaves deciduous, chartaceous, broadly rhombic, 2 to 6cm long by 2 to 4cm wide, apex acuminate;

upper surface dark green, appressed-pilose at first, becoming glabrous; lower surface appressed-pilose at first, becoming glabrous or sparsely pilose-glandular, the midrib and veins moderately pilose-glandular.

Petiole 4-13mm long, sparsely villous-glandular.

Inflorescence 1-3-flowered, opening before the leaves expand; winter flower buds conoid,

the outer surface of their scales glabrous, or densely appressed-pilose, the scale margins densely ciliolate.

Pedicel 5-10mm long, villous-glandular, more densely so at the base.

Calyx 0.5-2mm long, the lobes saucer-shaped, their outer surface and margins sparsely pilose-glandular.

Corolla rotate-funnel-shaped, purple through rose-purple to magenta, rarely white, with darker purple spotting on the upper lobes.

Stamens 7-10, equal to or longer than the corolla; filaments glabrous.

Ovary villous-glandular.

Capsule cylindrical, 9-12mm long, glandular.

Seed Collections:

Russell 919	1987
-------------	------

Two unauthenticated collections, made by members of the Japanese Rhododendron Society, featured on the 1997 Seed Exchange run by the American Rhododendron Society.

R. decandrum was first described by Tomitarô Makino when writing in Volume 1 of the *Journal of Japanese Botany*, this published during 1917. Specific status is still currently maintained herein despite the relatively recent reclassification of the species as a variety of *R. dilatatum* by Makino's successors. The authors of the recent Chinese revision of *Brachycalyx* also follow this approach, although in their text the plant is given subspecies ranking as *R. dilatatum* ssp. *decandrum*. These two azaleas are clearly related, but the consistent difference in stamen number - 7 through 10 for *R. decandrum*, as compared with just 5 for *R. dilatatum* - is significant and precludes consideration of *R. decandrum* as a subspecies or variety of *R. dilatatum*.

Western horticulturalists regard the species as being most closely related to *R. reticulatum*, as *R. decandrum* differs only in the glandular nature of the hairs on the petiole and ovary, indeed some treatments have already posited synonymy, notably H. H. Davidian in Volume 4 of his *The Rhododendron Species* (1995). Other authors - Cox & Cox in their *Encyclopedia of Rhododendron Species*, 1997, and McQuire & Robinson in *The Pocket Guide to Rhododendron Species*, 2009 - share this view, but maintain the specific species designations as detailed in the Subgenus *Tsutsusi* monograph written for the Edinburgh Revision classification by David Chamberlain and Sally Rae and published in the *Edinburgh Journal of Botany*, Volume 47, Number 2, 1990).

Japanese botanists have further delineated white-flowering plants of *R. decandrum* as *R. dilatatum* var. *decandrum* forma. *albiflorum*, which if nothing else, shows a consistency in opting for illegal epithets, although this time it is William Jackson Hooker who is turning over in his grave.

Cultivation requirements are identical to those for *R. reticulatum*.



R. decandrum

R. wadanum

Hardiness:

H5-6.

Flowering Period:

April-May.

Distribution in the wild:

C & SE Honshu, Japan.

Growing in deciduous woodland at elevations of 400-2,000m.

Identification:

Shrub or small tree, 1.5 to 3m high; branchlets usually glabrous.

Leaves deciduous, chartaceous, rhombic through rhombic-ovate,

3 to 7cm long by 2 to 6cm wide,

apex acute, tip blunt;

upper surface sparsely pubescent at first, becoming glabrous;

lower surface sparsely pubescent,

the midrib moderately villous towards the base.

Petiole 3-7mm long, densely villous.

Inflorescence 1-2-flowered, opening before the leaves expand;

winter flower buds oblong-lanceolate, the lower scales broadly ovate,

their outer surface and margins densely pubescent.

Pedicel 4-10mm long, pilose-glandular.

Calyx c. 3mm long, saucer-shaped,

the outer surface sparsely pubescent, the margins moderately so.

Corolla funnel-campanulate,

purple through rose-pink,

with darker purple flecks at the base of the upper lobes.

Stamens 10, unequal; filaments glabrous.

Ovary ovoid, densely villous.

Style short-stalked stipitate-glandular along the lower half.

Capsule oblong, 10-13mm long, hirsute.

Seed Collections:

None documented, although members of the Japanese Rhododendron Society

contributed seventeen unauthenticated gatherings to the

American Rhododendron Society Seed Exchange between 1976 and 2005.

Tomitarô Makino, writing in the 1917-published Volume 1 of the *Journal of Japanese Botany*, was the first botanist to formally describe *R. wadanum*.

Glandular hairs on the pedicel and style are cited as the characteristics that differentiate this species from its closest relative, *R. reticulatum*, and are the reason why its specific status is maintained herein, as it was by the authors of the latest taxonomic revision of *Brachycalyx*, and that of 1990 vintage - the David Chamberlain and Sally Rae Subgenus *Tsutsusi* update for the Edinburgh Revision (*Edinburgh Journal of Botany*, Volume 47, Number 2). A number of other Western botanists and horticulturalists would beg to differ however, questioning the unique nature of those distinctions, because sticky styles and pedicels can also be found on any number of plants that fall within the wide morphological remit of *R. reticulatum*. A full DNA analysis of the chromosome chains, when such is available, will provide a definitive answer.



R. wadanum



R. wadanum







R. amagianum



R. amagianum - appressed leaf hairs

R. amagianum

Hardiness:

H3-4.

Flowering Period:

May-July.

Distribution in the wild:

Shizuoka, Kanagawa & Mie Prefectures, Honshu, Japan.

Growing on limestone crevices in deciduous woodland and on serpentine rock, at elevations of 300-1,000m.

Identification:

Shrub or small tree, 1 to 6m high; branchlets densely rufous- or white-pubescent at first, becoming glabrous.

Leaves deciduous, chartaceous, rhombic through rhombic-ovate, 5 to 8cm long by 2.5 to 7cm wide, apex acute or acuminate;

upper surface dark green, lustrous, sparsely rufous-pilose at first, then glabrous, the margins pilose;

lower surface pale green, glabrous, or moderately pilose, the midrib densely to sparsely rufous-pilose towards the base.

Petiole 3-10mm long, densely rufous-villous.

Inflorescence 2-4-flowered, usually opening after the leaves expand; winter flower buds oblong through oblong-lanceolate, the 8-10 scales ovate,

their outer surface glabrous, or moderately to densely appressed-pilose, the hairs yellowish-brown, their margins sometimes densely white-pilose.

Pedicel 4-10mm long, densely rufous-villous.

Calyx 2-3mm long, saucer-shaped, the outer surface and margins densely rufous-villous.

Corolla rotate-funnel-shaped,

brick-red through reddish-orange, purplish-pink through rose-purple, rarely white, with darker purple flecks at the base of the upper lobes; the tube short, the lobes spreading and deeply divided.

Stamens 8-10, unequal, shorter than the corolla; filaments glabrous.

Ovary ovoid, densely appressed rufous-villous.

Style crimson, pilose along the lower half.

Capsule obliquely cylindrical, 10-20mm long, densely rufous-pilose.

Seed Collections:

Doleshy 831	1984	Russell 965	1987
Kurashige 179	1987	W&H 819	1987
Russell 949	1987		

Close to twenty unauthenticated collections, made by members of the Japanese Rhododendron Society, have featured on the annual American Rhododendron Society Seed Exchange lists published between 1976 and 2000.

It is not known who first discovered *R. amagianum* on the Amagi Mountains of Honshu's Izu Peninsula, but Tomitarô Makino, a botanist working at Tokyo University, first described the species in 1931, writing in Volume 7 of the *Journal of Japanese Botany*, or as he would have known it, *Shokubutsu Kenkyu Zasshi*. The wild endemic distribution is quite localised, with plant populations centred on just three prefectures - Kanagawa, Mie and Shizuoka - plus a fourth, disjunct community, resident on Izu Ōshima, one of the volcanic islands some fourteen miles east of the Izu Peninsula in the Philippine Sea.

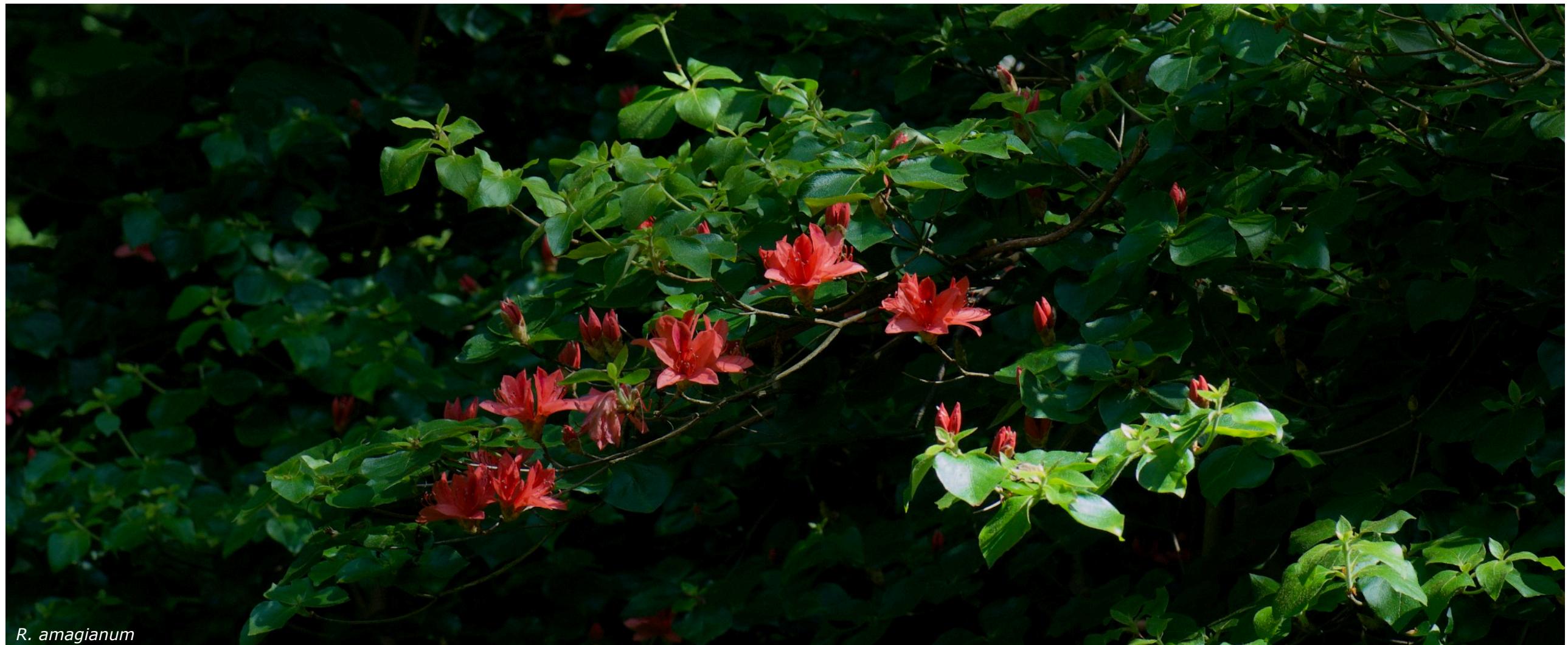
Western descriptions of *R. amagianum* are significantly at variance with those found in *Flora of Japan* and the recently published Chinese study of the *Brachycalyx* species. This is due principally to a lack of herbarium material and authenticated live specimens in Western collections, which David Chamberlain, Peter and Kenneth Cox, and H. H. Davidian all highlight as being problematical in their various publications, so the identification bullet points opposite take account of the Japanese and Chinese texts. Equally, the 2010 revision proposal to make *R. sanctum* synonymous with *R. amagianum*, is also adopted herein.

The four botanists who wrote the paper - Jin Xiao-Feng, Ding Bing-Yang, Zhang Yue-Jiao and Hong De-Yuan - carried out an exhaustive study of both herbarium specimens and

plants in the wild, and concluded that the two species could not be distinguished from each other morphologically and that they also shared a common distribution.

R. amagianum is closely allied to *R. weyrichii*, with the key feature differences from its relative being: the petioles, which are densely villous as opposed to sparsely pubescent; the leaf midribs, the abaxial surface of such being hairy in contrast to both upper and lower surfaces being pubescent, and then later, glabrescent; the leaf upper surface, which is shiny, not matt; and finally, the flowers, which open after leaf expansion rather than before or as the new growth extends.

Plants or seed of *R. amagianum* are believed to have first been introduced into British gardens during the late 1930s, though no collector field numbers were documented for the arrivals. Experience has shown that quite high summer temperatures are a prerequisite for the species to grow well, so while hardy across most of the country, plants succeed best in the UK's southern gardens, where a small bush, little more than a metre or so high, is the norm for a mature specimen. The small tree, hidden away off the beaten track in the woods at Muncaster Castle, Cumbria, therefore, and topping 3m in height, is an exception, though clearly, one closer to what Mother Nature had in mind.



R. amagianum



R. chilanshanense (ETOT 136)

R. chilanshanense

Hardiness:

H4-5.

Flowering Period:

May.

Distribution in the wild:

Mount Chilan, Taiwan.

Growing in mixed forests at elevations of 1,600-1,700m.

Identification:

Shrub to 2m high;

branchlets appressed filiform-hairy at first, becoming sparsely glabrescent.

Leaves deciduous, chartaceous, scattered near the branch tips,

rhombic-ovate through ovate,

3.5 to 4.5cm long by 1.5 to 2cm wide,

apex acute, tip blunt;

upper surface glabrous, the margins undulate or minutely crenulate;

lower surface sparsely pilose towards the base.

Petiole 7-11mm long, sparsely spreading pilose.

Inflorescence 2-3-flowered, opening as the leaves expand.

Pedicel 5-10mm long,

densely strigose-glandular, the hairs golden, sometimes whitish-pubescent.

Calyx 1-3mm long, saucer-shaped,

their outer surface sparsely villous and densely glandular.

Corolla broadly funnel-campanulate,

reddish-purple or pink,

with darker purple flecks at the base of the upper lobes.

Stamens 10, rarely 8, unequal, exserted;

filaments glabrous.

Ovary ovoid, densely strigose-glandular, the hairs golden.

Style glabrous, or sparsely pilose-glandular along the lower half.

Seed Collections:

ETOT 136	1992
----------	------

R. chilanshanense is the most recently discovered Subsection *Brachycalyx* species.

Endemic to just one single mountain in Taiwan, with a distribution further restricted to an area within 100m of the summit environs, Tony Kirkham and Mark Flanagan had unknowingly bought seed back to the UK on their Kew-sponsored expedition to Taiwan in 1992, this listed in their field notes as a gathering of what they had believed to be *R. lasiostylum*, not a new-to-science taxon. Seed of all the rhododendrons collected on their Taiwan expedition had been sent to Yuji Kurashige at the Akagi Nature Park in Gunma Prefecture, Honshu, Japan, and when those *R. lasiostylum*-labelled plants flowered for the first time, the botanist knew he was looking at a brand new species.

Writing in Volume 56 of the *Edinburgh Journal of Botany*, Kurashige described *R. chilanshanense* in 1999, indicating that the plant resembled another species endemic to Taiwan, *R. mariesii*, as it had identically shaped corollas and leaves that were widest just below the middle. But those blades possessed a unique and distinctive feature: undulate margins. A relationship with both *R. wadanum* and the plants of *R. reticulatum* Viscistylum Group was also evidenced in the glandular style, while other notable morphological characteristics - including vegetative growth and inflorescence from the same terminal bud; deciduous, monomorphic and chartaceous leaves; and the leaf hair type - all pointed to a placement within Subsection *Brachycalyx* and this has now been confirmed through an analysis of the plant's DNA, which also validated the specific status ranking.

Mark Flanagan, writing in the book he co-authored with Tony Kirkham - *Plants from the Edge of the World*, 2005 - reported that *R. chilanshanense* was proving difficult to cultivate in southern England, with both Kew and Wakehurst Place loosing their specimens and the sole survivor at the Valley Gardens, Windsor, 'a poor and ailing little plant' just prior to the work's publication. Yet as with many of the other Subsection *Brachycalyx* species, and as the photographs show, the west coast micro-climate on a Cumbrian hillside adjacent to the Gulf Stream-moderated Irish Sea, has proved far more benign.



R. chilanshanense (ETOT 136)

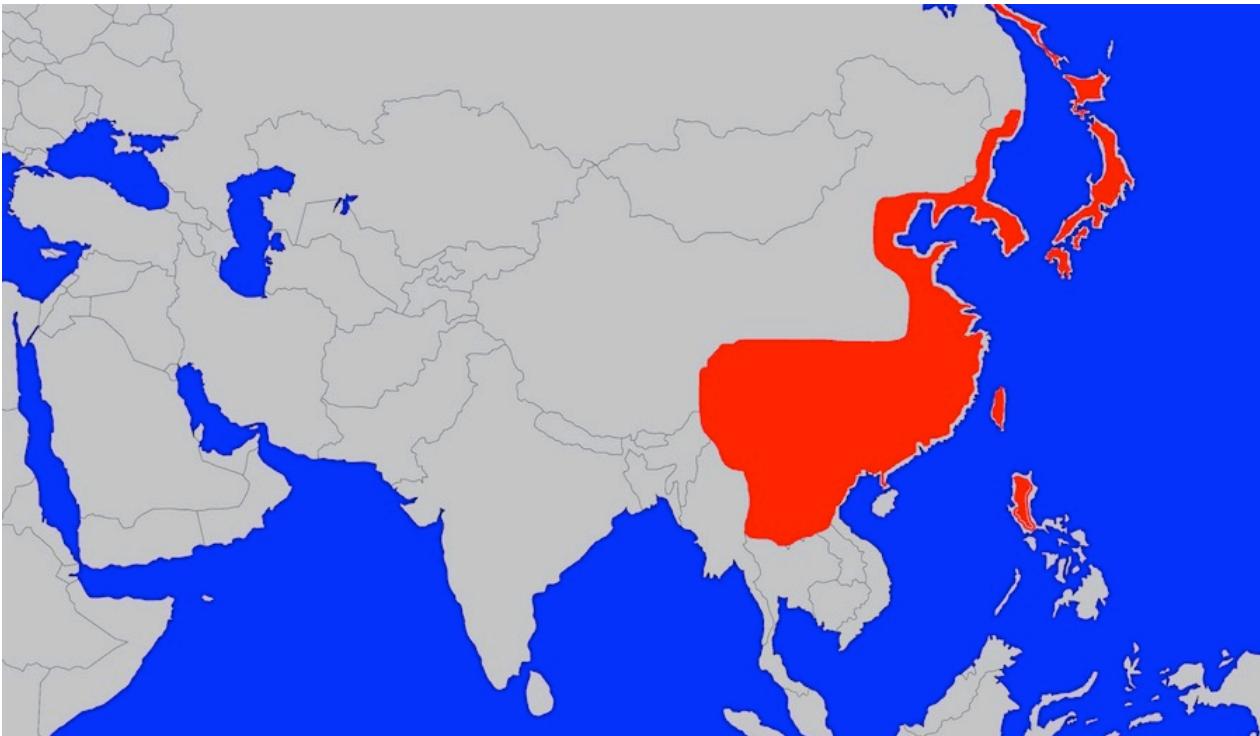


R. chilanshanense (ETOT 136)



R. chilanshanense (ETOT 136)

Section *Tsutsusi* Subsection *Tsutsusia*:



Taxa:

- R. atrovirens*
- R. breviperulatum*
- R. eriocarpum*
- R. indicum*
- R. kaempferi*
- R. kanehirae*
- R. kiusianum*
- R. microphyton*
- R. nakaharae*
- R. noriakianum*
- R. oldhamii*
- R. poukhanense*
- R. ripense*
- R. rubropilosum*
- R. saxicolum*
- R. scabrum*
- R. serpyllifolium*
- R. simsii*
- R. stenopetalum*
- R. subsessile*
- R. taiwanalpinum*
- R. tosaense*
- R. tschonoskii*
- R. tsusiophyllum*

Taxonomic Revision:

Subsection *Tsutsusia* comprises all of the dimorphic- or monomorphic-leaved 'evergreen' azalea species as detailed in the 1996 Edinburgh Revision classification of Subgenus *Tsutsusi* Section *Tsutsusi* with the exception of *R. tashiroi*, as genetic evidence has shown this taxon to be a member of Subsection *Brachycalyx*.

Subsection Morphology:

Shrubs or rarely small trees, multi-branched, 0.1 to 3m high, sometimes to 5m; occasionally erect but usually bushy, sometimes creeping or prostrate; young shoots from the axils of the terminal-flower-bud's lower scales, the branchlets moderately through densely brown-strigose, sometimes red- or grey-brown, often shiny, rarely becoming glabrescent to near glabrous, occasionally glandular or with both glandular and eglandular hairs present.

Leaf scales absent.

Leaves either monomorphic or dimorphic - respectively: persistent; or with deciduous summer leaves and persistent winter leaves - these alternate, scattered or crowded at the branch tips, linear through lanceolate, elliptic and oblong to broadly ovate, 0.3 to 8.8cm long by 0.3 to 4cm wide; densely to moderately strigose, especially along the midrib, the hairs long and red-brown, but sometimes near glabrous;

winter leaf persistency from near-deciduous to near-evergreen, climate dependent.

Petiole 0.5 to 13mm long, moderately through densely strigose,
the hairs usually brown, occasionally red- or grey-brown, and sometimes appressed,
rarely glandular.

Inflorescence terminal, rarely terminal and axillary, umbellate, 1-15-flowered;
the inner surface of the bud scales sometimes viscid.

Pedicel 1 to 28mm long, moderately through densely brown-strigose,
the hairs sometimes appressed and occasionally shiny,
rarely glandular or with both glandular and eglandular hairs present.

Calyx variable, 5-lobed, these minute to large, mostly c. 0.5mm long, rarely to 20mm.

Corolla funnel-shaped through funnel- to tubular-campanulate,
0.5 to 6cm long,
white or pink, lavender to rose, purple, red or near-orange, rarely with any yellow tones,
with or without spots;
the outer surface mostly glabrous, rarely with glandular hairs.

Stamens 5-10, rarely less or more, equal or unequal;
shorter than, as long as, or longer than the corolla;
filaments usually pilose at the base or along the lower half, rarely glabrous.

Ovary conoid or ovoid, 1-4mm long, densely hairy, occasionally glandular.

Style declinate, usually glabrous, sometimes hairy or glandular near the base.

Capsule ovoid or conoid, through oblong, 4 to 13mm long,
densely through sparsely strigose or bristly.

Seeds elongate, without wings or appendages,
or with a very short appendage at each end.



R. kanehirae (ETE 623)



R. oldhamii



R. indicum (W. 7709)

R. indicum

Hardiness:

H3-4.

Flowering Period:

June-July.

Distribution in the wild:

C, S & W Honshu, Kyushu, Shikoku & Yakushima, Japan.
Growing in ravines, between rocks alongside streams,
at elevations of 60-1,100m.

Identification:

Prostrate, low or medium-sized shrub, densely branched,
0.5 to 1m high, rarely to 2m;

young shoots slender, densely red-brown strigose.

Leaves dimorphic, chartaceous, alternate or clustered at the branch tips.

Spring leaves deciduous,

narrowly-lanceolate through oblanceolate to elliptic-lanceolate,

2 to 4cm long by 0.3 to 1.3cm wide, apex obtusely-acute;

upper surface dark green, shiny, strigose, the hairs red-brown and scattered,
the margins crenulate and strigose;

lower surface paler, glaucous, strigose,

the hairs long, red-brown and restricted to the midrib.

Summer leaves persistent, smaller,

1 to 1.8cm long by 0.3 to 0.5cm wide,

colouring crimson to red-purple in winter, but otherwise identical to the spring leaves.

Petiole 1-3mm long, densely red-brown strigose, the hairs long.

Inflorescence terminal, 1-2-flowered,

opening just prior to or as annual growth begins;

winter flower buds oblong-ovoid through ovoid, apex acute,
the ovate scales glabrous on both surfaces,

sometimes with a tuft of brown hairs at the apex, the margins pilose.

Pedicel 3-6mm long, densely brown-strigose,

often hidden by the flower bud scales or young leaves.

Calyx minute, c. 1mm long,

the outer surface and margins densely through moderately brown-strigose, the hairs long.

Corolla widely funnel-shaped, large, 3.5 to 5cm long,

bright scarlet-red through rosy-red,

the outer surface glabrous, the inner surface pilose,

the lobes elliptic and rounded at the apex.

Stamens 5; filaments papillose along the lower half and puberulous at the base.

Ovary ovoid, densely shiny brown-strigose, the hairs long.

Style straight, glabrous, sometimes strigose at the base.

Capsule ovoid-oblong, 6 to 8mm long, densely red-brown strigose.

Seed Collections:

W 7709	1914	KQ 356	1989
JR 992	1987	SOJA 356	1989
Kurashige 984	1987		

R. indicum was the very first evergreen azalea to be introduced into Europe, arriving during 1680, on ships of the Dutch East India Company, which brought plants sourced from Japan to Holland via Batavia, their colony on the island of Java (today, the Indonesian capital, Jakarta). The species was described by Carl Linnaeus - as *Azalea indica* - in 1753 and included in his masterwork *Species Plantarum*. A more detailed description was later penned by Robert Sweet in the early 1830's, this appearing within the second edition of his *Hortus Britannicus: a catalogue of all the plants indigenous or cultivated in the gardens of Great Britain*, and it is to this lexeme that modern botanists refer.

Direct imports into British gardens and nurseries began around 1833 and continued on and off for the next century, with variously coloured forms, including many cultivars, arriving from China and Japan. All were given specific or varietal status, which would later be reduced to synonymy, though the occasional horticulturally-important moniker slipped through the net to survive at pseudo-group status. In its native home, Japanese gardeners and horticulturalists have been cultivating the species for close on four hundred years, with well-over 150 individual forms recognised, though a great many of these are undoubtedly hybrids - natural or directed - with the island's other endemic evergreen azalea species.

In tandem with *R. eriocarpum*, *R. indicum* is one of the base species that has been used to produce the vast array of crosses grouped under the 'Satsuki Azalea' banner, of which the total number of named cultivars easily runs into the thousands. It is not, however, associated in any way with the 'Azalea Indica' of the forced-houseplant trade, whose even more extensive membership was primarily derived from *R. simsii*, which is endemic across much of China and Southeast Asia, but is not a resident of Japan or the Korean Peninsula. The most likely reason for the non-inclusion of *R. indicum* in the Azalea Indica fraternity's parental ensemble, is that the species does not respond well to being accelerated into flower under heated glass.

Until quite recently, the two species discussed above were also regarded as being the pair most closely related to *R. indicum* morphologically, although when in bloom, the latter's five stamens would quickly identify it from both *R. eriocarpum* and *R. simsii*. In 2009 however, a paper was published in the *Edinburgh Journal of Botany* that questioned those assumptions, the aforementioned *Molecular Systematics of Rhododendron Subgenus Tsutsusi* (*Rhodoreae*, *Ericoideae*, *Ericaceae*). From phylogenetic analysis of five separate regions along the DNA chains of the thirty rhododendrons examined, the study's authors, Kathleen Kron and Elizabeth Powell, demonstrated that a separate clade existed within Subsection *Tsutsusia* that contained *R. indicum*, *R. serpyllifolium*, *R. tschonoskii* and *R. tsusioiphllum*, but that that membership did not extend to incorporate the likes of *R. simsii* or *R. eriocarpum*.

The first wild-collected seed of *R. indicum* to be introduced into the UK is likely to have been that gathered by Ernest Wilson in 1914, a portion of which would have been sent to the Royal Botanic Garden, Kew, from the Arnold Arboretum of Boston, Massachusetts, who were sponsoring the expedition. Three George Forrest field numbers from his 1904-1906 plant hunting trip to China - F 2282, F 4173 and F 4173a - returned herbarium material and may have included seed, but if so, his sponsor - A. K. Bulley and Bees Seeds Ltd - for whatever reason, did not successfully bring them to market.

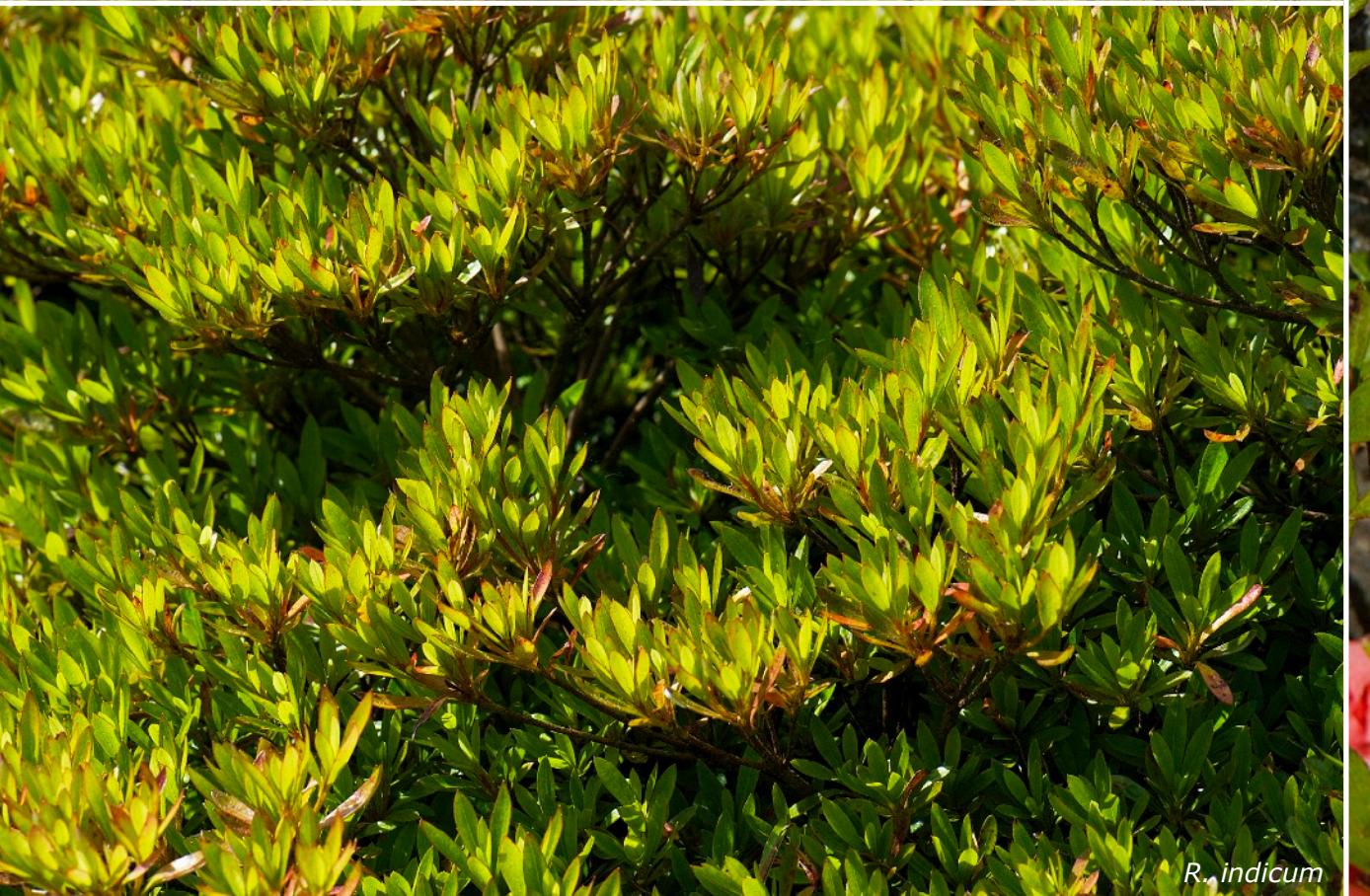
Young plants of *R. indicum* grown outdoors require additional winter protection until, as they mature, a higher degree of hardiness is developed and a cold tolerance equal to that of a typical Kurume azalea hybrid is achieved. Specimens do best in the UK's southern gardens, with even the hardiest forms usually performing and flowering poorly in Scotland, though a few buck that trend along the east coast. Summer heat is the key to success, providing the soil remains moist, so not putting a check on growth.



R. indicum



R. indicum (JR 992)



R. indicum



R. indicum (W 7709)



R. kaempferi 'Daimio'



R. kaempferi 'Eastern Fire'

R. kaempferi

Hardiness:

H3-5.

Flowering Period:

May-June.

Distribution in the wild:

S Hokkaido south through Honshu, Shikoku & Kyushu to Yakushima Island, Japan.

Growing in thickets on sunny hillsides, on grassy mountain slopes, in and at the margins of open woodland, at elevations from sea level to 1,600m.

Identification:

Large upright shrub or small tree, 1 to 3m high, rarely to 5m, branches tiered; young shoots densely red-brown strigose; bark on mature stems cinnamon-brown and finely striate.

Leaves dimorphic, chartaceous, scattered or clustered at the branch tips.

Spring leaves deciduous, scattered along the branchlets, lanceolate through elliptic to ovate,

2 to 5cm long by 1 to 2.5cm wide, sometimes to 7cm long or 4cm wide, apex acute; upper surface green, shiny, red-brown strigose, the margins serrulate and strigose;

lower surface paler, red-brown strigose, densely so on the midrib.

Summer leaves semi-persistent, smaller, clustered at the branch tips, oblong-obovate through obovate to elliptic,

1 to 2cm long by 0.5 to 1cm wide, otherwise identical to the spring leaves.

Petiole 1-4mm long, densely red-brown strigose.

Inflorescence terminal, 2-4-flowered;

winter flower buds ovate, the scales widely ovate, densely strigose outside, their margins ciliate.

Pedicel 4-6mm long, densely brown-strigose.

Calyx 3-5mm long, the lobes orbicular-ovate and rounded, their outer surface and margins densely brown-strigose.

Corolla funnel-shaped, 2.6 to 3.8cm long, salmon-red through brick-red to pink, rarely white or purple, with faint to moderate crimson or purple spotting on the upper three lobes, the outer surface glabrous, the inner surface sparsely pilose, the lobes orbicular-ovate.

Stamens 5, rarely 6, unequal, as long or longer than the corolla; filaments densely puberulent along the lower half or at the base.

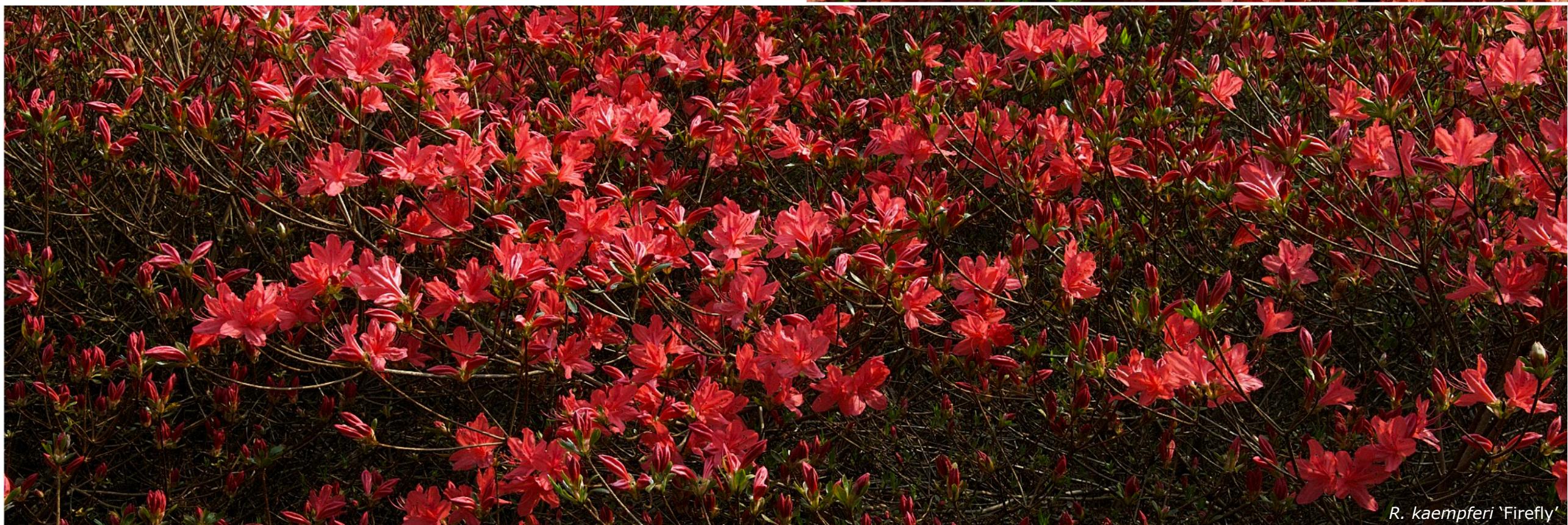
Ovary ovoid, densely red-brown strigose.

Style exserted, glabrous.

Capsule ovoid through ovoid-oblong, 7 to 9mm long, densely brown-strigose.

Seed Collections:

W 7709a	1914/1915	Kurashige 971	1987
Doleshy 825	1983	Russell 941	1987
Doleshy 803	1984	W&H 757	1987
Kurashige 443	1987	W&H 763	1987
Kurashige 544	1987	AGS 177	1988
Kurashige 545	1987	KQ 99	1989
Kurashige 603	1987	KQ 384	1989
Kurashige 604	1987	KQ 399	1989
Kurashige 672	1987	KQ 434	1989
Kurashige 751	1987	SOJA 099	1989
Kurashige 752	1987	SOJA 384	1989
Kurashige 756	1987	SOJA 399	1989
Kurashige 759	1987	SOJA 401	1989
Kurashige 765	1987	SOJA 434	1989
Kurashige 768	1987	EJE 298	2003
Kurashige 772	1987		





R. kaempferi

R. kaempferi is one of many plants named after the German naturalist and physician, Engelbert Kaempfer (1651-1716) who, at the age of thirty-two, embarked on what would become a ten-year working tour of the Near and Far East, taking-in Russia, Persia, Arabia, India, Java and Siam. The trip would conclude in Japan, where Kaempfer spent just over two years - from September 1690 to the end of October 1692 - ostensibly employed as chief surgeon at the Nagasaki trading post of the Vereenigde Oost-Indische Compagnie, the Dutch East India Company. His main task however, set by the Governor General of Batavia, Johannes Camphuys, was to garner as much up-to-date intelligence on all things Japanese as he could, and previously unknown-to-science plants, found on trips to Edo (Tokyo) and elsewhere, were part of that remit.

Kaempfer's *History of Japan*, containing much of that garnered humint, was published posthumously in 1727, but his first venture into print, *Amoenitatum Exoticarum*, which appeared in 1712 and was written in Latin, details and illustrates all of the many botanic finds he made, including the nascent *R. kaempferi*, along with species of maple, bamboo, pines and other azaleas, plus his premier Japanese botanic introduction, *Ginkgo biloba*, the Maidenhair Tree, a specimen of which, grown from the seed he bought back all those years ago, can still be found flourishing at the botanical garden in Utrecht.

It is suspected that viable seed or living plants of *R. kaempferi* reached Europe through the auspices of the VOC sometime before 1854, as Jules Émile Planchon was able to describe a specimen of the species in Volume 9 of *Flore des Serres et des Jardins de L'Europe*, which was published during that same year. UK gardens had to wait until 1878, when - if tentative historical records are ever proved correct - Charles Maries, a plant hunter employed by the Chelsea nursery of James Veitch & Sons, introduced the species amongst the 500 or so new discoveries he made between 1877 and 1879 on expeditions to China, Japan and Taiwan. Failing that, seed collected by Charles Sprague Sargent in 1892 most definitely arrived at Kew from the Arnold Arboretum in 1894.

One of the most widespread of Japan's endemic azalea species, *R. kaempferi* can be found on all of the main islands of the archipelago, from southern Hokkaido all the way down the chain to Yakushima Island. Larger leaves and a taller, more upright habit, with the branches forming distinctive tiers, are the morphological differences that distinguish the taxon from its closest ally, *R. indicum*. These characteristics also identify it from plants that are intermediate between *R. kaempferi* and the compact, mound-forming species, *R. kiusianum*, which are currently described as *R. kiusianum* var. *sataense*. Sizeable and stable populations of this 'variety' exist in the wild, but almost certainly, their hybrid status will be confirmed following DNA analysis and the plants officially redesignated as naturally occurring Kurume Azaleas, which is how they are treated herein, four volumes hence.

Some authorities contend that because *R. kaempferi* is 'only marginally distinct' from *R. indicum*, it would be better treated as a variety of the latter, this argument advocating a return to the ranking first proposed by Karl Maximovich back in 1870 within *Mémoires de l'Academie Imperiale des Sciences de Saint Petersbourg*, Series 7, Volume 16. However, all the recent major treatments of the Subsection *Tsutsusia* species - including Fred Galle's *Azaleas* of 1985 vintage; the David Chamberlain/Sally Rae-authored Edinburgh Revision monograph (*Edinburgh Journal of Botany*, Volume 47, Number 2, 1990); and Volume 4 of H. H. Davidian's *The Rhododendron Species* (1995) - maintain specific status.

Hardy in cultivation across most of the UK, *R. kaempferi* should succeed wherever rhododendrons can be grown, even in exposed gardens, but while tolerant of an open position, too much sun will quickly cause the flower colour to fade in intensity, especially in southern locales devoid of even a modicum of midday shade, so site accordingly.



R. kaempferi (W&H 757)



R. simsii

R. simsii

Hardiness:

H1b-2.

Flowering Period:

May.

Distribution in the wild:

C, E, S & W China; NE Upper Myanmar; Laos; N Thailand; Vietnam;
S Taiwan; and the S Ryukyu Islands, Japan.

Growing in pine forest, at woodland margins, in open upland thickets,
on cliffs, rocks and banks along rivers and streams, and on dry slopes,
at elevations of 500-2,700m on the mainland,
and from sea level to around 300m on Taiwan and the Ryukyu Islands.

Identification:

Large shrub, 1 to 3m high, multi-branched, twiggy, often straggly;
young shoots densely shiny brown-strigose.

Leaves dimorphic, alternate, scattered on the branchlets.

Spring leaves mostly deciduous, chartaceous,
ovate, elliptic-ovate through obovate to oblanceolate,
2 to 7cm long by 0.6 to 2.3cm wide,
apex acute, obtuse or acuminate;

upper surface green, usually sparsely strigose,

the margins strigose, slightly revolute and finely crenulate;

lower surface paler, densely strigose, especially on the veins and midrib.
Summer leaves persistent, smaller, more coriaceous than chartaceous,

0.8 to 3.8cm long by 0.4 to 1.3cm wide,

more densely hairy above, otherwise identical to the spring leaves.

Petiole 2-6mm long, densely red-brown strigose.

Inflorescence terminal, 2-6-flowered;

winter flower buds ovoid through oblong-ovoid, the scales ovate through orbicular-ovate,
their outer surface densely brown-strigose along the middle, the margins ciliate.

Pedicel 4-8mm long, densely shiny brown-strigose.

Calyx 3-7mm long, the lobes ovate or lanceolate,
their outer surface brown-strigose, their margins ciliate.

Corolla widely funnel-shaped, 2.5 to 6cm long,

white through rose-pink, rose to red, purplish-red through to vermillion-red,
with darker red or black-crimson spotting on the upper three lobes,
the outer surface glabrous, the inner surface glabrous or sparsely pilose,
the lobes oval or oblong-oval, rounded.

Stamens 10, rarely 8-9, unequal, the longest equal in length to the corolla;
filaments pubescent along the lower half.

Ovary ovoid, densely shiny brown-strigose.

Style exserted, glabrous, strigose at the base.

Capsule ovoid-oblong, 6-10mm long, densely brown-strigose.

Seed Collections:

W 569	1906/1909	Valder 150	1974/1975
W 3473	1906/1909	GUIZ 233	1985
W 3474	1906/1909	CNW 816	1994
F 7832	1912/1914	CNW 894	1994
F 26024	1924/1925	PW 99	1994
F 26027	1924/1925	Valder 121	1994/1995
KW 10231	1931	QLG 110	1996
KW 5	1938/1939	AC 5080	2002
KW 71	1938/1939	AC 5137	2002
KW 499	1938/1939	NN 0954	2009
KW 22036	1956	JN 12345	2012



Introduced into Europe sometime around 1793, *R. simsii* was first described as *Azalea indica* during 1812 by John Sims, the first editor of *Curtis's Botanical Magazine* after the death of William Curtis, the journal's founder, in 1799. A coloured illustration accompanies his text in that publication's Volume 36 - under tab 1480 - this drawn from a specimen grown by James Vere of Kensington Gore, London. A decade later, in 1822, Mr Vere's greenhouse superintendent of the time - Thomas Blake - speaking at a meeting of the Horticultural Society of London, outlined his method for coercing the species into flowering early. This was swiftly reported to a wider audience in the Society's magazine:

'The compost in which he keeps the plants is peat earth, to which has been added one quarter of leaf mould, or, if that cannot be procured, of rotten dung very much decayed. The young plants, which are struck in the summer, grow about nine inches high before the winter; these are kept in small sixty-sized pots through the winter, and in spring are shifted into large sixty-sized pots. In two or three months the roots will fill the pots, when they are again shifted into some of a larger size. The young plants are thus changed into new and larger pots twice in every year, during the summer, until the autumn of the third year, when their buds begin to swell, and to show for flower. Mr. Blake does not suffer the leading shoot to hang loose, but keeps it always tied up to a straight stick; this, he conserves, encourages the growth of the plant as well as keeps it in a handsome form. The plants are kept in the greenhouse, as near the glass as possible, and have as much air as can be given; but they are never taken out of the house, and they are always kept damp by means of pans placed under the pots; it is not necessary, however, to keep water continually in the pans, as if they were aquatics. When the plants are in a flowering state Mr. Blake removes them into the hot-house, about January, the sudden heat causing the blossom to expand better. In about a month, half of the flowers will have opened; the plant is then replaced in the green-house, where it continues in beauty about six weeks. On the 16th of February, Mr. Blake exhibited to the Society a plant upwards of six feet high, in full bloom, and in great beauty, especially considering the season of the year.'

Transactions of the Horticultural Society of London, Volume 4, 1822.

It took another thirty years before the forcing trade took-off commercially, with Belgium and Holland leading the charge, but once fully established, a vast plethora of frost tender hybrids with large, overblown, yet stunning flowers in a multitude of colours and forms, would be offered annually. And these were absolutely perfect for the Victorian hot-house conservatories and greenhouses of Kensington Gore and elsewhere, which were then stuffed full of ferns and other tropical expats, though it is unlikely that Thomas Blake's precise horticultural methodology was universally adopted.

The 'Indian Azaleas' as they became known, soon took Europe by storm and today, hundreds of thousands, if not millions of plants are produced each year, though the number of cultivars available is much reduced from the 800-plus assortment offered in the 1920s. In the main, they are treated like cut flowers and dumped just as soon as the blooms fade even though - if nurtured as house plants - each will prove long-lived and flower repeatedly year after year, like the 2m-tall Vere specimen, though perhaps not quite as intensely as that chemically-flushed, light- and heat-enhanced initial purchase.

However, describing *R. simsii* as *Azalea indica* or even *R. indicum* is wrong, as it has no association with the continental landmass that brought the Himalayan mountain range into being, nor with the true *R. indicum* that is native to Japan. Jules Émile Planchon vainly attempted to correct this misnomer in 1854 - writing in *Flore des Serre*, Volume 9 - his new

botanically correct epithet an honorific for John Sims. But trying to steer the fixated horde away from the collective 'Indian Azaleas' terminology was a fool's errand, just as expecting anyone to call the tropical rhododendrons anything other than 'Vireyas' will be, despite their new, bright and shiny, nomenclaturally accurate 'Schistanthe' name tag.

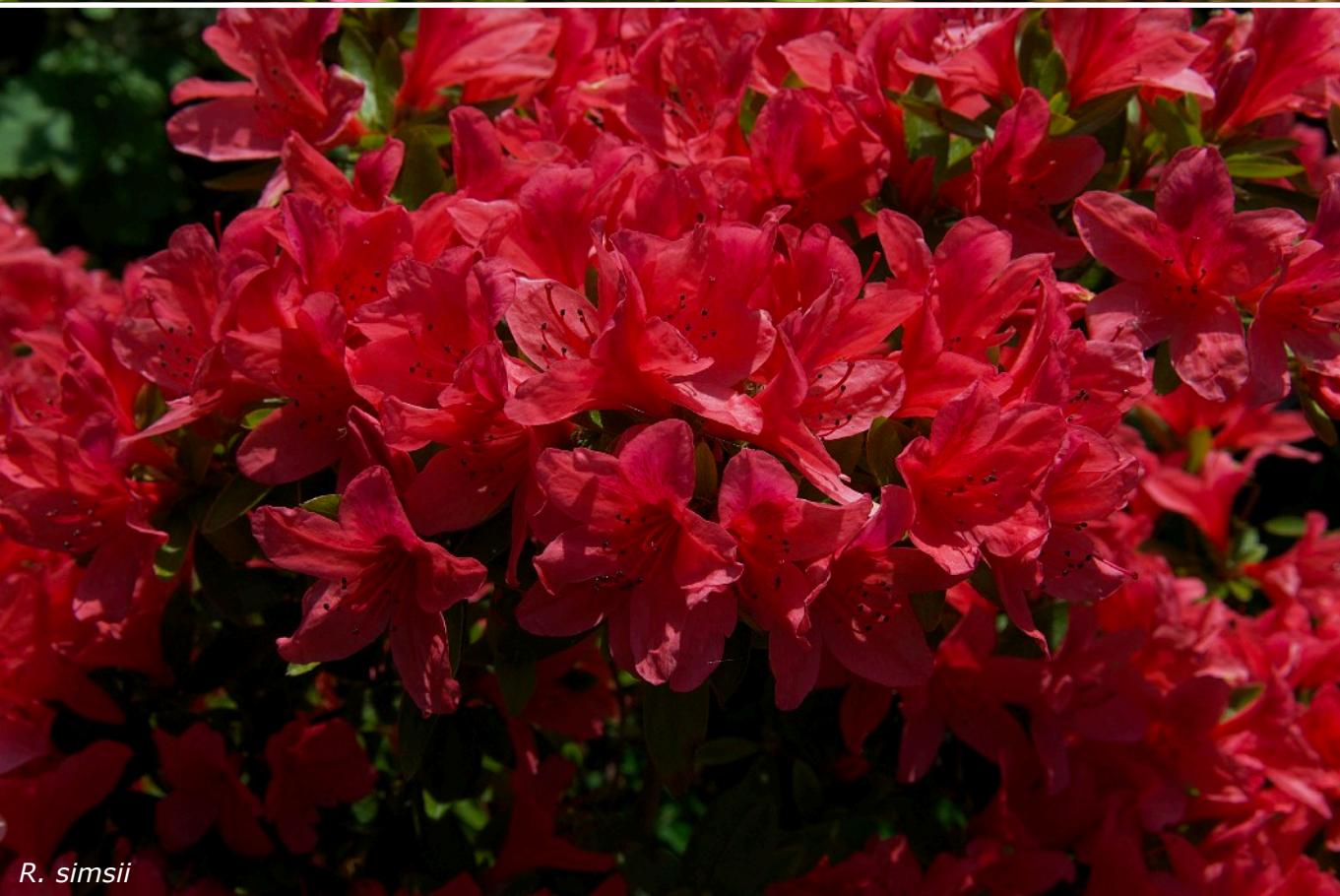
R. simsii has one of the largest distributions of any rhododendron species extant today, growing in all suitable temperate areas from western China across to the East China Sea, though it is absent from Korea and the main islands of Japan (where *R. indicum* is endemic). As indicated above, these two rhododendrons are clearly similar, but they can easily be distinguished: through a stamen count when in bloom, *R. simsii* having 10, while the *R. indicum* total is only 5; and from the width of their leaves when out of flower, the foliage of *R. indicum* being narrower. A closer relationship exists with *R. scabrum*, but here the leaves of *R. simsii* will be found to be smaller and more hairy, the flowers too, equally diminutive, while the style is glabrous throughout its length. The most clear-cut identifier however, will be found on the flower bud scales: those present on *R. scabrum* have a sticky inner surface; those on *R. simsii*, do not.

The Chamberlain-Rae Edinburgh Revision monograph of 1990 vintage delineated all those plants with white through rose-pink flowers as *R. simsii* var. *mesembrinum*; those with red corollas as *R. simsii* var. *simsii*. If this separation appears illogical given the degree of synonymy imposed on other rhododendrons - where the character differences were far greater - you would not be the only baffled rhodophile echoing Mr Spock. Colour is the only separator here and there is no apparent geographic or altitudinal reason for varietal status to be applied, as both forms completely overlap in the wild. Botanically, therefore, the division is redundant and abandoned herein, though Mesembrinum Group would preserve the epithet if anyone felt such was appropriate.

In UK cultivation the species should be considered tender and grown under glass unless you possess a west coast garden whose acreage is enhanced by the gentle caress of the Gulf Stream. In either case, plants will prove free-flowering and mature specimens provide a profusion of blooms year after year. Yet a search for outdoor examples of such will prove these to be quite rare. Of course, virtually every household throughout the entire country will be familiar with *R. simsii* through one of its many hybrids, barcoded examples being available in each and every supermarket, garden centre and florist as small, dazzlingly-flowered pot plants in the weeks immediately before and after Christmas. But a mature and thriving garden plant will prove as scarce as hen's teeth.



R. simsii 'Mesembrinum Group'



R. simsii



R. simsii (GUIZ 233)

R. scabrum

Hardiness:

H2-3.

Flowering Period:

April-May.

Distribution in the wild:

Ryukyu Islands, Japan.

Growing amongst scrub and grass, and at the margins of pine woodland, on hillsides from sea level to elevations of 200m.

Identification:

Shrub, 1 to 2m high, laxly branched; young shoots densely grey-brown strigose at first, becoming glabrescent or glabrous at maturity, the branchlets stout.

Leaves dimorphic, coriaceous, alternate.

Spring leaves deciduous, elliptic-lanceolate through lanceolate, 3 to 10cm long by 2 to 3.5cm wide, apex acute or obtuse, mucronate; upper surface dark green, sparsely grey-strigose becoming glabrous, the margins serrulate, the apex of each tooth with a strigose hair at first; lower surface paler, sparsely grey-strigose becoming glabrous, except along the veins and midrib.

Summer leaves persistent, smaller, more coriaceous than the spring leaves, oblanceolate,

3 to 4cm long by 1 to 1.5cm wide, otherwise identical to the spring leaves.

Petiole 3-12mm long, densely grey-brown pilose.

Inflorescence terminal, 2-6-flowered; winter flower buds ovoid, their apex acute, the outer scales deciduous at flowering, ovate, and acute at the apex, their outer surface densely rufous-strigose along the middle, the inner surface viscid.

Pedicel 8-16mm long, densely fulvous-strigose, the hairs both glandular and eglandular.

Calyx 5-8mm long, green, the lobes ovate, obtuse or acute, their outer surface and margins sparsely appressed grey-brown pilose, the hairs either short-stalked glandular or eglandular.

Corolla widely funnel-shaped, large, 4.5 to 6cm long and sometimes near 10cm across, rose-red through bright scarlet,

with darker spotting on the upper three lobes,

the outer surface glabrous, the inner surface pilose, the lobes ovate, their apex rounded.

Stamens 10, unequal, shorter than the corolla; filaments densely puberulous along the lower half.

Ovary ovoid, densely rufous-strigose, the hairs either short-stalked glandular or eglandular.

Style longer than the stamens, glabrous.

Capsule ellipsoid, 4-12mm long, densely brown-strigose.

Seed Collections:

None officially documented, but live plants have been introduced.

R. scabrum is only endemic to the islands of the Ryukyu Archipelago, with the largest populations found on Okinawa and Amami Ōshima. The species has also been grown in the gardens of Kagoshima Prefecture - the southern-most third of Kyushu - for close-on three hundred years, but these plants are not native. Who first discovered the azalea remains a mystery, but the taxon was described as early as 1834, George Don authoring the text for his *General History of the Dichlamydeous Plants*.

The 1990 Chamberlain-Rae Edinburgh Revision monograph divided the species into two - ssp. *amanoi* and ssp. *scabrum* - the split made, respectively, on the basis of glandular or eglandular hairs on the pedicel, calyx and ovary. Japanese botanists however, indicate that both types of hair are present at the same time, mixed together, on the pedicel, and the late H. H. Davidian, a rhododendron doyen widely known for his proclivity to maintain specific status ranking on what to others might appear the flimsiest of reasons, significantly opts to make *R. amanoi* synonymous under the earlier-described taxon (*The Rhododendron Species*, Volume 4, 1995). This position is also followed by Peter and Kenneth Cox in their 1997 *Encyclopedia of Rhododendron Species*, and is adopted here.

R. scabrum is the Japanese equivalent of the Chinese *R. simsii*, exhibiting many of the same characteristics, not least, tenderness in UK cultivation. Respectively, the two can be separated by the absence or presence of hairs on the upper surface of the mature leaves, and less dependently, by the nature of the hairs on the pedicel, calyx and ovary: glandular or eglandular. In addition, the *R. scabrum* pedicel is longer and its corolla both longer and clearly wider across, for the species is graced with the largest flowers borne by any member the subsection. The definitive distinction however, is the inner surface of the flower bud scales: sticky for *R. scabrum*; non-viscid for *R. simsii*.

With one or two named selections excepted - Koichiro Wada's 'Red Emperor' clone featured opposite, for instance - most British gardeners can only grow *R. scabrum* under glass, and even those sheltered oases along the west coast need to provide a near frost-free environment if their specimen is to succeed long-term. Roger Notcutt, founder of the then fledgling East Anglian nursery business, was the first person to introduce the species into UK cultivation during 1909, with an Ernest Wilson collection - again, of live plants rather than seed - arriving via the Arnold Arboretum in 1915. Growing to around 1m high, outwith one of those favoured locales dotted along the western seaboard or an equally advantageous site in the southern counties, a pot-grown specimen would be the perfect occupant for a cool conservatory, able to be moved out onto the patio during the summer months, where increased light levels will lead to the production of more flower buds, yet returned indoors to avoid the damaging cold winds and killing frosts of winter.



R. scabrum 'Red Emperor'



R. serpyllifolium



R. serpyllifolium



R. serpyllifolium

R. serpyllifolium

Hardiness:

H3-4.

Flowering Period:

April-May.

Distribution in the wild:

C & S Japan.

Growing in volcanic soils on rocky mountain-valley slopes and in mixed woodland, at elevations of 300-900m.

Identification:

Low shrub, to 1.2m high, multi-branched; young shoots very short and slender, densely chestnut-brown strigose.

Leaves monomorphic, mostly deciduous, thin, usually crowded at the branch tips as if whorled, obovate-oblong through elliptic, very small, 0.3 to 1cm long by 0.3 to 0.5cm wide, rarely longer or wider, apex acute, obtuse or rounded; upper surface bright green, sparsely brown-strigose at first, the margins densely strigose; lower surface pale green, glabrous, the midrib densely strigose; the hairs on both surfaces emerging from pustules.

Petiole near sessile, 0.5-1mm long, rarely to 2mm, brown-strigose.

Inflorescence terminal, mostly single-flowered; winter flower buds ovoid, the scales widely ovate, their outer surface glabrous bar a sparse clump of strigose hairs at the apex.

Pedicel very short, 1-2mm long, densely brown-strigose and hidden by the bud scales.

Calyx minute, 0.5mm long, the lobes rounded, their outer surface and margins densely strigose.

Corolla funnel-shaped, 1 to 1.2cm long, pale- through rose-pink, pale-purple or white, often with darker red flecking on the upper three lobes, the outer surface glabrous, the inner surface pilose, the lobes oval through oblong, their apex rounded.

Stamens 5, unequal, longer than the corolla; filaments papillose along the lower half or third. Ovary ovoid through ovoid, densely brown-strigose.

Style exserted, glabrous.

Capsule oblong, c. 5mm long, densely brown-strigose.

Seed Collections:

None officially documented, but live plants have been introduced.

R. serpyllifolium was the next of the evergreen azalea species to receive a botanic description, Asa Gray penning the text in a contribution to Volume 2 of the *Narrative of the Expedition of an American Squadron to the China Seas and Japan*, published in 1857. This was the three-year US Navy mission, under the command of Commodore Matthew Perry, which culminated in the signing of the Convention of Kanagawa in 1854 and forced the opening of Japan to the Western nations. *Azalea serpyllifolia*, Gray's nom-de-guerre choice of epithet, became *R. serpyllifolium* just over a decade later courtesy of a Friedrich Miquel revision published in *Annales Musei Botanici Lugduno-Batavi*, which hit the book shops in Amsterdam sometime between 1865 and 1866. The Bunzō Hayata *R. serpyllifolium* of 1906 vintage was therefore nomenclaturally illegal from the moment it was conceived, with the taxon it described now referable to and placed in synonymy under, *R. nakaharae*.

Japanese botanists describe the true *R. serpyllifolium* as being semi-evergreen and having leaves that are dimorphic, though as the spring and summer leaves are also said to be near identical, the potential for confusion is high. All Western descriptions adhere to the monomorphic treatment and deciduous leaf option as detailed in the identification bullet points overleaf, with the variance in botanical observations likely due to climatic factors or a lack of sufficiently diverse specimens in UK gardens and herbaria. White flowered forms were previously given varietal status as *R. serpyllifolium* var. *albiflorum*, a distinction still maintained in Japan despite the use of such a terminating epithet being felonious.

Until quite recently, *R. serpyllifolium* was considered to be morphologically distinct, with no close relatives. There was a slight resemblance with the much larger-growing Chinese species, *R. minutiflorum*, which, as the Latin moniker makes clear, also has tiny leaves (but is yet to be introduced into UK cultivation), as there also was with the rarely-grown-in-cultivation, though endemically widespread *R. tschonoskii*, which has much larger leaves, but equally small corollas. However, the Kron-Powell molecular systematics study published in the *Edinburgh Journal of Botany* during 2009, showed clear evidence of a clade within Subsection *Tsutsusia* that was distinct from the other members, and that held *R. indicum*, *R. serpyllifolium*, *R. tschonoskii* and *R. tsusiphyllosum*. This was affirmed across five individual sequences that encompassed three chloroplast and two nuclear regions of the DNA chains.

The combination of tiny leaves and equally small flowers easily distinguishes a specimen of *R. serpyllifolium* from one of *R. indicum* or *R. tschonoskii*. Flower shape can be used to separate the species from *R. tsusiphyllosum* when they are in bloom, the former having funnel-shaped corollas as opposed to the latter's tubular-campanulate adornments. Otherwise, identification relies on the nature of the leaves, respectively: mostly deciduous; compared with semi-evergreen. A clear-cut identifier for those with a magnifying lens is the number of cells in the ovary, *R. serpyllifolium* having 5, while *R. tsusiphyllosum* has only 3.

R. serpyllifolium was first introduced into British gardens by the Veitch Nurseries, a Charles Maries collection that flowered in 1882. This was followed by a batch of plants destined for the Royal Gardens that was despatched to the UK in 1895 by the Yokohama Growers Association. Other gatherings have surely arrived since, but none can be linked with a specific collector's field number. In UK cultivation, hardiness has proved somewhat problematic, with forms gathered from the lower environs of the distribution proving tender away from the west coast, while those from the upper reaches of the range will happily grow outdoors along the east coast if given a sheltered site. Sufficient summer heat to fully ripen the new growth is also a prerequisite. Tick those boxes and the result will be a mature bush, usually spreading much wider than it grows tall, which is a dazzling site when in full bloom and near-obsured by a blanket of flowers. Yet *R. serpyllifolium* remains a rare find even in specialist gardens, and appears only infrequently on nursery stock lists.



R. serpyllifolium



R. serpyllifolium

R. kiusianum

Hardiness:

H5.

Flowering Period:

May-June.

Distribution in the wild:

Kyushu, Japan.

Growing on wind-swept rocky mountain and volcanic slopes and summits, in open grassy meadows, in and at the margins of dwarf pine scrub, in volcanic ashes and on pumice flats, at elevations of 700-1,700m.

Identification:

A low, compact shrub, often prostrate, rarely upright, 0.15 to 1m high, but taller in cultivation, densely twiggy; young shoots densely red-brown strigose, the hairs long.

Leaves dimorphic, chartaceous, scattered or clustered at the branch tips.

Spring leaves deciduous, scattered along the branchlets, broadly elliptic through ovate to obovate, 0.8 to 3cm long by 0.5 to 1.5cm wide, apex acute or obtuse, mucronate;

upper surface dark green, shiny, sparsely red-brown strigose, the margins entire or serrulate, strigose;

lower surface paler, sparsely red-brown strigose, but moderately so on the midrib.

Summer leaves semi-persistent, the uppermost persistent,

smaller, thicker, clustered at the branch tips, oblong-ob lanceolate through ob lanceolate to elliptic or ovate, 0.5 to 1.5cm long by 0.3 to 0.8cm wide, otherwise identical to the spring leaves.

Petiole very short, 0.5-2mm long, densely red-brown strigose.

Inflorescence terminal, 2-3-flowered; winter flower buds ovate with an acute apex,

the scales widely obovate, their outer surface brown-strigose along the middle, densely so at the top and along the margins.

Pedicel 3-6mm long, densely ascending red-brown strigose.

Calyx 2-3mm long, the lobes oval or rounded, their outer surface and margins red-brown strigose.

Corolla funnel-shaped, small, 1.5 to 2cm long, rose-purple through purple, salmon-red through salmon-orange, pink or white, the outer surface glabrous, the inner surface pilose, the lobes oval through oblong-oval, their apex rounded.

Stamens 5, rarely 6, unequal, as long or longer than the corolla; filaments puberulous along the lower half or at the base.

Ovary ovoid, densely red-brown strigose.

Style as long or longer than the corolla, glabrous.

Capsule ovoid through oblong-ovoid, 4-6mm long, brown-strigose.

Seed Collections:

W 11248	1918
W 11250	1918
W 11255	1918
Doleshy 8	1965
Doleshy 37	1967
Doleshy 43	1967
KQ 294	1989
SOJA 294	1989
SOJA 298	1989

Four unauthenticated collections, made by members of the Japanese Rhododendron Society, featured on the 1976, 1978, 1979 and 1981 annual Seed Exchange run by the American Rhododendron Society.



R. kiusianum received specific status ranking in 1914 courtesy of a Tomitarô Makino botanic description that appeared in Volume 27 of *Shokubutsu-gaku zasshi*, the magazine of the Tokyo Botanical Society. It had previously suffered the ignominy of first being classified as *R. indicum* var. *amoenum* forma. *japonicum* by no less an authority than Karl Maximovich; then as *R. kaempferi* var. *japonicum*, thanks this time going to the equally distinguished Alfred Rehder; as *R. indicum* var. *japonicum*, a dismal first stab attempt by Makino himself that would soon be self-discredited; and lastly, from that doyen of British trees and shrubs, W. J. Bean, as *R. amoenum* var. *japonicum*. Ernest Wilson would opt for *R. obtusum* forma. *japonicum* seven years later in 1921, a partially successful clawback redesignation and an obfuscation that was maintained through two editions of *The Species of Rhododendron*, but in the end, Makino would emerge triumphant from this nomenclature battle royal.

The species habit - compact if not prostrate in the wild, often forming a multi-branched low dome, with quite small leaves - is unique for an endemic Japanese azalea and therefore the principal identifying feature that separates *R. kiusianum* from its closest relatives. In a garden situation, such forms could easily be mistaken for the Taiwanese native *R. nakaharae*, but these shrubs flower much later in the season and are truly prostrate, rarely growing higher than 0.3m.

Ernest Wilson was the first Western plant hunter to collect and introduce the species into cultivation, seed from the haul of capsules he gathered on the Kirishima mountains of southern Kyushu in 1918, sent-on to the Royal Botanic Garden, Kew, by the expedition's sponsors, Boston's Arnold Arboretum. The species quickly proved easy to grow, was found to be very hardy and is extremely free-flowering. It is completely sun-tolerant in the north, with plants succeeding admirably throughout Scotland, but in southern gardens a modicum of midday shade is necessary to prevent leaf scorch. With a slow-growing nature and small footprint, the species is also the absolutely perfect subject for the modern urban garden, where space is usually at a distinct premium.

Many authorities and classification treatments continue to maintain the natural hybrid between *R. kiusianum* and *R. kaempferi* as *R. kiusianum* var. *sataense*, even though clear evidence from field report studies of the wild plant populations on Mount Takakuma and other areas in Kyushu show that such a diagnosis is wrong. These observations conclude that although there are some stable populations exhibiting characteristics midway between the two species, there are also many more plants showing wide variations, and that all these forms - stable or otherwise - match many of the cultivated forms of the Kurume or Obtusum azalea hybrids. Gene sequencing and phylogenetics will be able to categorically resolve the issue, but in anticipation of that conclusion, *R. x sataense* will be found detailed with all the other Natural Hybrids in Volume 6 of this text.

Although *R. kiusianum* is endemic only to the island of Kyushu, the varying degrees of exposure and altitude tolerated throughout its range have lead to the natural development of many fine forms and a diverse range of flower colours. Over many hundreds of years, these have been supplemented by selections made from cultivated stock, as well as plants interbred from the best forms, which means the tally of named clones available today in Japanese horticulture is somewhat staggering. The best of these can sometimes be found in the UK's specialist rhododendron nurseries, so a check of what is in stock should be made prior to a potential purchase, allowing a run-of-the-mill specimen to be eschewed in favour of a true gem.



R. kiusianum (W 11250)



R. kiusianum



R. kiusianum



R. kiusianum 'Album'



R. kiusianum 'Deep Pink'



R. kiusianum 'Mountain Gem'



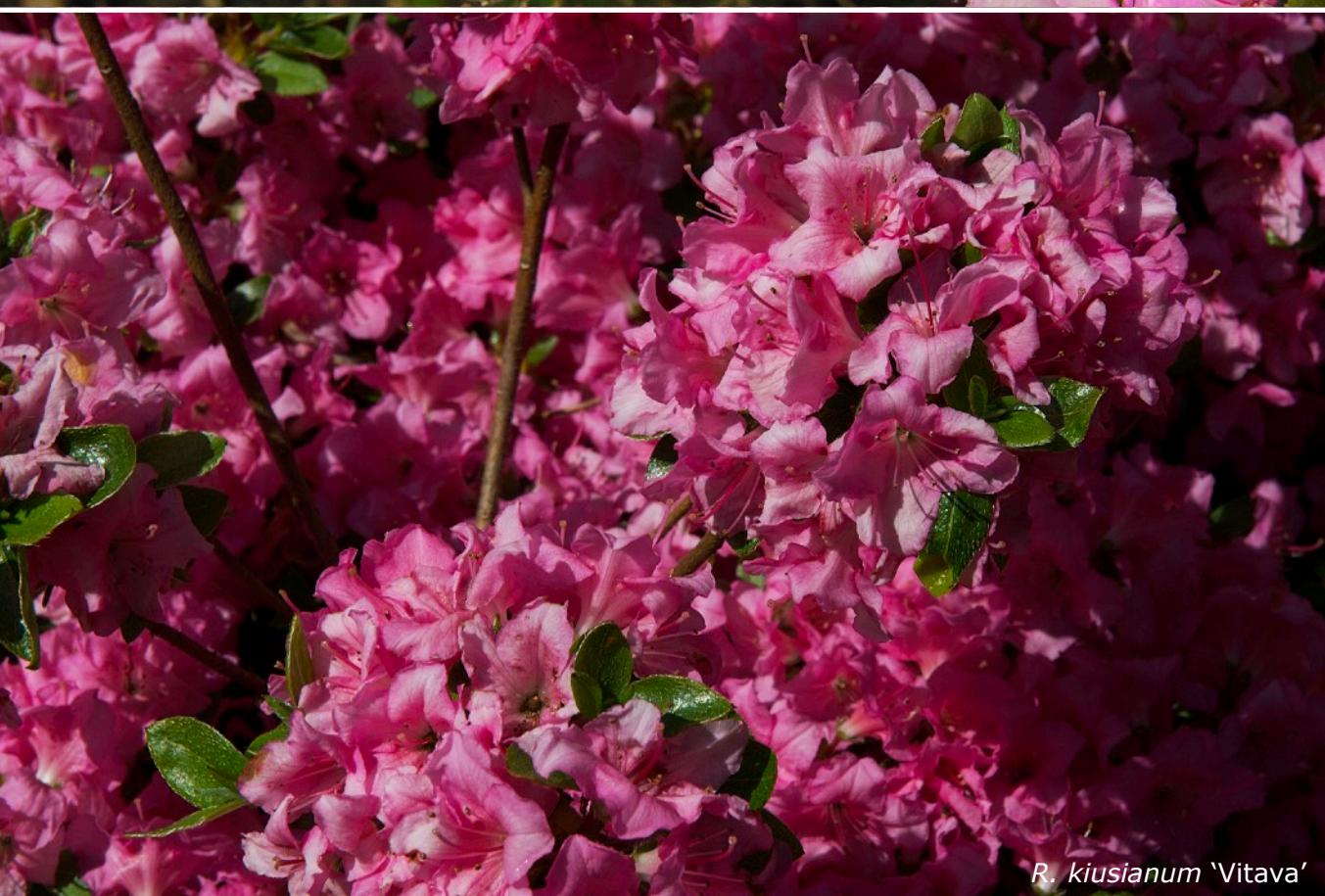
R. kiusianum 'Fujimusume'



R. kiusianum 'Komo-kulshan'



R. kiusianum 'Tenshi'



R. kiusianum 'Vitava'



R. tsusioiphllum

R. tsusioiphllum

Hardiness:

H5-6.

Flowering Period:

June-July.

Distribution in the wild:

C Honshu, Japan.

Growing amongst rocks on mountain slopes at elevations of 500-2,100m.

Identification:

Dwarf shrub, to 0.5m high, multi-branched, prostrate or decumbent to mounding; young shoots densely brown-strigose. Leaves monomorphic, semi-persistent, thick, chartaceous, nearly sessile, very small, elliptic through obovate, 0.4 to 1.2cm long by 0.2 to 0.7cm wide, their apex acute and mucronate; upper surface dark green, brown-strigose at first, becoming glabrous at maturity, the margins ciliate; lower surface paler, brown-strigose at first, becoming glabrous at maturity except along the midrib. Petiole very short, 0.5-1mm long, densely brown-strigose. Inflorescence terminal, 1-4-flowered; winter flower buds ovate, the scales orbiculate, their outer surface glabrous, the margins ciliate. Pedicel 0.5-3mm long, densely brown-strigose. Calyx irregularly 4-5-lobed, minute, 0.5-1mm long, the lobes oval through oblong, their outer surface and margins densely brown-strigose. Corolla tubular-campanulate, 0.6 to 1cm long, pink in bud opening white, the outer surface densely pilose, the inner densely pilose, the lobes 4-5, oval, very small. Stamens 4-5, very small, included within the tube, shorter than the corolla; filaments puberulous along the lower half. Ovary ovoid, 3-celled, densely brown-strigose. Style included, glabrous. Capsule ovoid, c. 4mm long, brown-strigose.

Seed Collections:

Kurashige 771

1987

In addition, a single unauthenticated gathering, made by a member of the Japanese Rhododendron Society, appeared on the 1978 American Rhododendron Society Seed Exchange.

Junichi Sugimoto was the botanist who first described *R. tsusiophyllum* when writing in Volume 31 of *Shokubutsu Kenkyu Zasshi*, the Journal of Japanese Botany, this published during 1956. As with many of the other Subsection *Tsutsusia* species, there are significant differences between the current Japanese and Western botanic descriptions, not least that of dimorphic foliage rather than the monomorphic leaves detailed opposite. Again, climatic factors could account for these differences, but not - in this case - an unrepresentative sampling of the population, for in the wild, *R. tsusiophyllum* has a distribution that is restricted to a small area of central Honshu.

Eighty-five years before Sugimoto put pen to paper, the species was pigeonholed into its very own, completely independent genus, by Karl Maximovich, *Tsusiophyllum tanakae* appearing in Series 7, Volume 16 of *Mémoires de l'Academie Imperiale des Sciences de Saint Petersbourg*, which was published in 1871. Almost certainly that means that dried herbarium material was resident in one of the seventy-odd cases of specimens that the Russian botanist took back with him to the Saint Petersburg Botanical Gardens at the end of his expedition in 1864. Japanese botanists still appear split on its status, with the authors of *Flora of Japan* initially opting for *R. tanakae* in 1953 (as per Jisaburo Owhi), but then reverting back to Maximovich's standpoint from around 1993 (at the instigation of Kunio Iwatsuki). Two behaviours influenced this decision: one concerns the nature of how the anthers open; while the other focuses on whether the walls separating each pollen sac break down or not. Both are morphologically valid factors, but Western botanists do not consider them to be of sufficient significance to outweigh the characteristics that clearly demonstrate a close relationship with Japan's other endemic rhododendron species.

In 2009 of course, the point became mute, as the Kron-Powell phylogenetic study *The Molecular Systematics of Rhododendron Subgenus Tsutsusi* not only showed that *R. tsusiophyllum* was indeed a rhododendron, but that it occupied the same genetic clade within the *Tsutsusia* subsection where *R. indicum*, *R. serpyllifolium* and *R. tschonoskii* were also in residence.

A soupçon of confusion exists over when exactly *R. tsusiophyllum* was introduced into UK cultivation as one set of sources indicate a date around 1915, others that the 1987 gathering made by Yuji Kurashige was the first recorded entry, with one doyen maintaining that in 1995 its arrival was still awaited. Whenever it docked, the species has certainly proved to be hardy, succeeding outdoors wherever rhododendrons can be grown, though it requires an open and well drained position in the garden to thrive. Identifying an unlabelled plant will present few problems, as the tubular-campanulate white corollas, covered in long soft hairs are distinctive, as is the prostrate spreading habit, plus the tiny leaves. But rarely will you be able to find a specimen on which to practise your keying skills.



R. oldhamii

Hardiness:

H2-3.

Flowering Period:

May-July.

Distribution in the wild:

N Taiwan.

Growing in thickets near water, on sandstone cliffs and grassy mountain slopes, from sea level to elevations of 2,800m.

Identification:

A spreading, multi-branched shrub, 1 to 3m high, sometimes more;

young shoots densely red-brown glandular-setose,

intermixed with scattered, adpressed pubescent hairs;

bark greenish-brown, striate.

Leaves dimorphic, chartaceous.

Spring leaves deciduous,

ovate-lanceolate through elliptic-lanceolate,

3.5 to 8.8cm long by 1.8 to 2.5cm wide,

their apex acute or obtuse, and mucronate;

upper surface dark green, densely red-brown adpressed-bristly,

the hairs longer on the midrib,

usually becoming glabrescent at maturity,

the leaf surface rough to the touch, the margins slightly revolute and bristly;

lower surface paler,

the hairs mirroring the upper surface, but persistent.

Summer leaves evergreen, smaller, ovate-lanceolate,

1.5 to 2cm long by 0.8 to 1cm wide,

otherwise identical to the spring leaves.

Petiole 4-13mm long, densely brown-strigose, sparsely long-stalked glandular.

Inflorescence terminal, 1-4-flowered;

winter flower buds ovoid, the scales oblong-ovoid with a viscid inner surface,

their outer surface densely adpressed-hairy along the middle, the hairs yellowish.

Pedicel 6-10mm long,

densely red-brown setose and sparsely to moderately long-stalked glandular.

Calyx 3-8mm long, the lobes unequal, triangular-ovate or ovate-lanceolate,

their outer surface pilose-glandular, the hairs red-brown,

the glands long-stalked, but often present only on the margins.

Corolla funnel- to tubular-funnel-shaped, 2.5 to 5.4cm long,

bright brick-red through red to coral-pink,

the upper lobes with or without dark purple flecking,

the outer surface glabrous, the tube tapering towards the base,

the lobes oval through oblong-oval.

Stamens 8-10, unequal, the longest slightly smaller in length than the corolla;

filaments puberulent along the lower half.

Ovary ovoid, densely yellow-brown setose-glandular, the glands long-stalked.

Style longer than the stamens, exserted, glabrous.

Capsule broadly ovoid, 6-15mm long,

densely through sparsely setose-glandular, the glands long-stalked.

Seed Collections:

W 11175	1918
RV 681115	1968
RV 9803	1970
RV 9804	1970
RV 9819	1970
RV 73/106	1973
ETE 475	1993
ETE 485	1993

*R. oldhamii*

R. oldhamii was named for Richard Oldham, who encountered the species near Tamsui, on the island of Taiwan, during 1864. Employed as a botanical collector by the Royal Botanic Gardens, Kew, his trip to the Far East was beset with problems from the get-go, none of which impressed Sir William Jackson Hooker, Kew's then recently ensconced and first Director, who judged the promoted member of the gardening staff to be a lazy dilettante. That Oldham sent back well over 13,000 dried herbarium specimens before dying from dysentery - contracted while suffering from fevers and heart disease - at the age of just 27, appears not to have shifted Hooker's mind-set by so much as an iota. Indeed, Oldham was the last full-time plant hunter Kew ever employed.

By whatever route, the species gained its botanic description from the pen of Karl Maximovich in 1870, his text appearing in Series 7, Volume 16, No. 9, of *Mémoires de l'Academie Imperiale des Sciences de Saint Petersbourg*.

Distinguishing *R. oldhamii* from the other members of Subsection *Tsutsusia* is made easy by the dense covering of usually sticky bristles on the branchlets, petioles, pedicels, calyx margins and ovaries, plus the appressed and stiff hairs on both the upper and lower leaf surfaces. Those leaves are also larger than the blades sported by most of its contemporaries, including *R. simsii*, which is probably the taxon's closest relative. The large funnel-shaped corolla is also distinctive, but if needed, a final confirmation that *R. oldhamii* is to hand is provided by the inner surface of the flower bud scales, which mirror those found on *R. poukhanense*, *R. ripense*, *R. scabrum* and *R. stenopetalum*, in being tacky to the touch.

Charles Maries takes the 1878 credit for introducing *R. oldhamii* into British gardens, but although the seed was successfully germinated by his employers - the Veitch Nurseries of Chelsea - it is not thought that any of those plants survived the rigours of successive English winters outdoors or the ministrations of being cultivated under glass. Fast-forward forty years, and seed from Ernest Wilson's 1917-19 expedition to Japan, Korea and Taiwan reintroduced the species during 1918, after which, a further fifty orbits of the Sun would be traversed by Planet Terre before the Rhododendron Venture collections of John Patrick and Chien Chang Hsu arrived in the late 1960s and early 1970s. Currently, all the forms of *R. oldhamii* in UK cultivation appear to have come from the lower altitudes of the distribution, so can only be successfully grown outdoors if sited in a west coast garden with good shelter and Gulf Stream-moderated winter lows.



R. oldhamii (ETE 475)



R. oldhamii



R. stenopetalum

R. stenopetalum

Hardiness:

H3-4.

Flowering Period:

April-June.

Distribution in the wild:

S Honshu, & Shikoku, Japan.

Growing in sunny thickets and open pine woodland on hillsides,
at elevations of 150-900m.

Identification:

Small shrub, 1 to 2m high, rarely to 3m, laxly branched;
young shoots densely through moderately greyish-pilose and strigose,
the soft hairs short-stalked glandular, the stiff hairs eglandular,
both types mixed and spreading.

Leaves dimorphic, chartaceous, crowded on the upper branches.

Spring leaves deciduous, soft,
clustered at the branch tips as well as scattered along the stems,
ovate-elliptic through ovate-lanceolate to lanceolate, linear-lanceolate or linear,
2.5 to 7.5cm long by 0.4 to 2.5cm wide,
their apex acute or acuminate, and mucronate;
upper surface green, rough, densely through moderately brown-strigose,
the margins densely strigose;

lower surface paler, densely strigose, especially so along the veins and midrib.

Summer leaves semi-persistent, thicker, smaller, rugulose,
elliptic-obovate through oblong-oblanceolate to oblanceolate or linear-lanceolate,
1.2 to 4cm long by 0.2 to 1cm wide, their apex obtuse and mucronate;
upper surface sparsely strigose; lower surface moderately to densely strigose.

Petiole 2-5mm long, densely greyish-pilose and strigose,
the soft hairs short-stalked glandular, the stiff hairs eglandular,
both types mixed and spreading.

Inflorescence terminal, 2-10-flowered;
winter flower buds ovoid, usually with 10 oblong-lanceolate scales,
their outer surface densely brown-strigose and minute-pilose, the hair types mixed,
their margins short-stalked glandular-pilose, the inner scale surface viscid.

Pedicel 1-2.8cm long, densely pilose and moderately strigose,
the soft hairs short-stalked glandular, the stiff hairs longer and eglandular,
both types mixed and spreading.

Calyx large, green, 15-30mm long,
the lobes broadly oblong through lanceolate to linear-lanceolate,
their outer surface and margins densely through moderately glandular-pilose,
the hairs spreading and long- or short-stalked.

Corolla widely funnel-shaped, 3.6 to 5cm long,
lilac-pink through reddish-purple,
with darker purple flecking on the upper three lobes,
often fragrant,

the outer surface glabrous, the inner surface pilose,
the lobes ovate through ovate-oblong, their apex rounded.

Stamens 5, sometimes 7, rarely 10, unequal, the longest equal in length to the corolla;

filaments pubescent along the lower half.

Ovary ovoid, densely long-stalked glandular-strigose.

Style glabrous,

sometimes short-stalked glandular-pilose at the base.

Capsule oblong-ovoid, 8-13mm long,
densely long-stalked glandular-ciliate.

Seed Collections:

W 7794	1914
Kurashige 975	1987
W&H 796	1987

In addition to the three authenticated gatherings listed above,
four additional collections, made by a member of the Japanese Rhododendron Society,
were listed on the 1976, 1977, 1978 and 1979 Seed Exchange
run by the American Rhododendron Society.

*R. stenopetalum*

R. stenopetalum was first described as *Azalea stenopetala* by Robert Hogg when writing in the 1865-published, Volume 6, of the *Gardener's Year Book, Almanack and Directory*. This citation and description was later amended by David Mabberley to conform to ICBN rules in 1990, his text appearing in the Berlin-published *Feddes Repertorium: Zeitschrift für Botanische Taxonomie und Geobotanik*. The Edinburgh Revision botanists pronounced the species identical to *R. macrosepalmum*, which had received a description penned by Karl Maximovich in 1870 (Volume 19, *Gartenflora: Monatschrift für Deutsche und schweizerische Garten und Blumenkunde Herausgegeben*) - with a backup published in Volume 15 of the *Bulletin de l'Academie Imperiale des Sciences de Saint-Petersbourg*, during 1871 - the former being cited by most authors, the latter by *The International Plant Names Index* (when last checked). But of course, Hogg's earlier description has botanical precedence, resulting in *R. macrosepalmum* being sunk into nomenclatural synonymy.

The large calyx - hairy and sticky, with long narrow lobes - is the main characteristic used to identify the species from nearly all the other members of Subsection *Tsutsusia*, with only its most closely allied relative, *R. ripense*, being excepted. Here, stamen number, scent and the nature of the hairs on the ovary and capsule jointly come into play to help separate the pair: *R. stenopetalum* has just 5 stamens (though some forms can have up to 10), is graced with often fragrant corollas, and has hairs on the ovary and capsule that are glandular; in contrast, *R. ripense* always has 10 stamens, its flowers are never scented, and the ovary and capsule are populated with non-sticky eglandular hairs.

Two more widely grown clones - *R. stenopetalum* 'Linearifolium' and its less popular white-flowered compatriot 'Macrocarphyll' - are in fact aberrant forms that originated as sports. The former has linear through linear-lanceolate leaves up to 7.5cm long, deeply divided purplish-red corollas of a similar strap-like shape, with each lobe up to 4cm long, while the latter has near-normal foliage. Both are only known in cultivation and a good few observers would describe 'Linearifolium' as 'monstrous' - to quote a well-known doyen, no longer with us, but who shall nevertheless remain nameless. Yet in and out of flower, it has a quiet, delicate charm, sufficient in and of itself to secure the sport an Award of Merit from the Royal Horticultural Society back in 1984. Moreover, it has proved to be far hardier than the actual species in UK gardens.

'Linearifolium' was described and named by Philipp Franz von Siebold and Joseph Gerhard Zuccarini in *Abhandlungen der Mathematisch-Physikalischen Classe der Königlich Bayerischen Akademie der Wissenschaften, Munich*, Volume 4, Part 3, the text completed posthumously by the latter and published in 1846. But as luck would have it, the epithet is 'nomen illegitimum' within Genus *Rhododendron*, having first been conceived and published in October 1804 by Jean-Baptiste Lamarck and Jean Louis Marie Poiret (within Volume 6 of the *Encyclopédie Méthodique Botanique*). Because otherwise, the nomenclature precedence rules would have seen the true species classified as an adjunct of the sport.

Introduced into British gardens almost five decades before its forebear arrived - John Standish, of the Standish & Noble Sunningdale Nursery, Ascot, was the horticulturalist responsible for the importation - 'Linearifolium' was flowering in the UK as early as 1867, though the 'Macrocarphyll' sport is a much more recent arrival. The true species entered the UK in 1914, an Ernest Wilson collection of seed, made on the island of Shikoku, arriving at Kew soon after it was gathered, once again via the Arnold Arboretum. But those plants, plus any grown from subsequent reintroductions, have proved too tender for gardens along the east coast, where a cool greenhouse is required to see specimens safely through the rigours of winter. Along the west coast however, the species succeeds admirably outdoors, forming a dome-shaped mound that is wider than it is high, with the shrub free flowering from quite a young age.



R. stenopetalum 'Macrocarphyll'



R. stenopetalum 'Macrocarphyll'



R. stenopetalum 'Linearifolium'

R. tschonoskii

Hardiness:

H4-5.

Flowering Period:

May-June.

Distribution in the wild:

S Kuril Islands, Hokkaido, C & N Honshu, Shikoku & Kyushu, Japan;
S Korea; Kamchatka, N Kuril Islands & Sakhalin, Russia.

Growing in moist woodland, on sunny rocky hillsides, on shaded rocks and exposed cliffs,
on subalpine and alpine mountain slopes and summits,
at elevations of 150-2,800m.

Identification:

Shrub, 0.3 to 1.5m high, but in shade to 2 or 3m, multi-branched,
a twiggy-mat to erect and spreading; young shoots densely rufous-strigose.

Leaves monomorphic, deciduous or semi-persistent, thick, chartaceous,
crowded at the branch tips,

lanceolate through oblanceolate to elliptic-lanceolate or elliptic,
0.5 to 4.5cm long by 0.3 to 2cm wide,

their apex acute and mucronate;

upper surface dark green, sparsely strigose, the hairs rufous or whitish,
long, weak and scattered,

more densely concentrated on the midrib, the margins strigose;
lower surface paler, sparsely strigose, the hairs rufous or whitish,

long, weak and scattered,

more densely concentrated on the midrib and the prominent veins.

In autumn, the leaves change from green to crimson, orange-red or reddish-brown,
before the majority are shed.

Petiole 2-8mm long, densely rufous-strigose, appearing near sessile.

Inflorescence terminal, 2-6-flowered;

winter flower buds broadly ovoid, the scales widely ovate,
their outer surface densely strigose on the upper half.

Pedicel 4-8mm long, densely strigose or setose, the hairs brown or whitish.

Calyx minute, 0.5-1.5mm long, the lobes oval,
their outer surface and margins densely brown-strigose.

Corolla funnel-shaped, very small, 0.5 to 0.9cm long,
white,

the outer surface glabrous, the inner surface densely pilose on the upper lobes,
the 4-5 lobes elliptic through oblong, their apex rounded.

Stamens 4-5, sub-equal, longer than the corolla;
filaments densely pilose along the lower half.

Ovary ovoid, 4-5-celled, densely brown-strigose.

Style glabrous.

Capsule ovoid, 3-4mm long, densely through moderately brown-strigose.

Seed Collections:

W 7657	1914/1915	Kurashige 183	1987
W 9595	1917/1919	Kurashige 501	1987
Doleshy 52	1967	Kurashige 656	1987
Doleshy 510	1971	W&H 709	1987

Between 1974 and 2019, some sixteen unauthenticated collections,
made by members of the Japanese Rhododendron Society,
also appeared on the Seed Exchange lists of the American Rhododendron Society.



R. tschonoskii



R. tschonoskii

R. tschonoskii has the most northerly distribution of any member of the subsection, its range taking in the Kamchatka Peninsula, Sakhalin and the Kuril Islands. It is present across the whole of Hokkaido, can be found in north and central Honshu, and there are populations established as far south as Shikoku and Kyushu, and on the southern half of the Korean peninsula. The species was discovered by Sukawa Chonosuke on the peaks of northern Japan in 1865. Previously an assistant to Karl Maximovich during the Russian's 1860-1864 expedition of the archipelago, he naturally sent specimens of his new find to his friend and colleague at the Saint Petersburg Botanical Garden. Maximovich responded with an 1870-published botanic description in Series 7, Volume 16, of *Mémoires de l'Academie Imperiale des Sciences de Saint Petersbourg*, and the rhododendron became the first of eight different taxa he would name for Chonosuke in honour of their friendship, the Slavic language transliteration of the Japanese surname being Tschonoski.

As is the case with several other members of the subsection, differing opinions on the azalea's leaf morphology are extant: Japanese botanists report semi-persistent dimorphic foliage and detail the usual character differences in size and shape that exist between the Spring and Summer blades; Western doyens, from their herbarium material and cultivated

rather than wild plants, once again opt for monomorphic leafage.

The Edinburgh Revision's 1990 Subgenus *Tsutsusi* monograph, written by Sally Rae and David Chamberlain, divided the species into two varieties on the basis of leaf size and altitudinal distribution. Writing in *The Rhododendron Handbook 1998*, Doctor Chamberlain's species entry for *R. tschonoskii* var. *tschonoskii* states that it is endemic between the 1,500 and 1,800m contours and has leaves that are just 0.5 to 2.5cm long and 0.3 to 1cm wide. For *R. tschonoskii* var. *trinerve*, resident between the altitudes of 700 through 1,000m, those blade dimensions are 2.5 to 4.5 cm long and 1 to 2cm wide.

In contrast however, Japanese botanists give figures of 150 to 2,000m as the range for var. *tschonoskii*, 700 to 2,200m for var. *trinerve*, and 1,800 to 2,800m for a third form they designate as var. *tetramerum*, which has 4-lobed corollas more often than 5-lobed, plus stamens that are shorter than the corolla rather than longer.

However, the character trait of varyingly 4- or 5-lobed corollas is also present in the other two varieties, with of course the number of stamens, and cells in the ovary, changing correspondingly. Further, given the Japanese altitude figures quoted above, there is clearly no geographic boundary between the overlapping populations, with their leaf dimensions also homogenised in relation to elevation, climate and exposure, with no other significant morphological difference between the three varieties highlighted in these texts. The need, therefore, for any infraspecific division to be maintained, is unwarranted.

But for completists: *R. trinerve* was described by Adrien Franchet in the *Bulletin de l'Herbier Boissier*, published in 1897, the epithet signifying the three prominent veins on the leaf undersurface, though again, this characteristic is shared to some degree across the entire *R. tschonoskii* population regardless of where, altitudinally, an individual specimen might be sited; while *R. tschonoskii* forma. *tetramerum* was defined by Tomitarô Makino in 1904, the status change published in Volume 18 of *Shokubutsu-gaku zasshi* singling-out those plants established on alpine slopes above the 1,800m contour with 4-lobed corollas, which were considered unique at the time.

R. tschonoskii is morphologically distinct from the other Subsection *Tsutsusia* azaleas, those very small, 4- to 5-lobed white corollas, often hidden by the foliage, the 4 or 5 stamens within each funnel, and the near-deciduous, autumn-colouring leaves, quickly keying the taxon from each of its cohorts. Genetically, the recently published Kron-Powell DNA study shows that *R. indicum*, *R. serpyllifolium* and *R. tsusiphyllyum* are its closest relatives.

The first plant hunter to introduce the species into UK cultivation was Charles Maries, who sent seed to his employer, the Chelsea-based Veitch Nurseries, in 1878. Subsequent gatherings were made by Professor Charles Sargent in 1892, and Ernest Wilson in 1914, with the latter making a second gathering in 1917, this from what is now South Korea. Growing the species in a British garden presents few problems as *R. tschonoskii* is fully hardy and will thrive if given a well-drained spot in an open position. Set on a raised bank in a rock or peat garden, the small flowers can be appreciated up-close without the need to get down on all fours or employ a pair of binoculars, however, the taxon is really one for the rhododendron enthusiast, as autumn colour apart, there is little else striking enough to tempt a purchase.

R. atrovirens

Hardiness:

H2.

Flowering Period:

April-May.

Distribution in the wild:

NE Yunnan, Sichuan & Guizhou, China.

Growing in thickets and in evergreen broad-leaved forests,
at elevations of 750-1,800m.

Identification:

Large shrub or a small tree, 1 to 2m high, rarely to 3m;
young shoots densely brown-strigose.Leaves monomorphic, persistent, chartaceous,
lanceolate through ovate-lanceolate to elliptic,2 to 8cm long by 1 to 3cm wide, their apex long and acuminate;
upper surface dark green, densely shiny brown-strigose at first,
becoming glabrescent or glabrous, the midrib excepted,

the margins entire or crenulate, strigose;

lower surface pale green, densely shiny brown-strigose,
especially on the midrib.

Petiole 2-8mm long, densely brown-strigose.

Inflorescence terminal, 2-4-7-flowered;

winter flower buds ovoid, usually with 10 ovate scales, these mucronate at the apex,
their outer surface setulose along the middle, their margins ciliate.

Pedicel 4-8mm long, densely brown-strigose.

Calyx 1-2mm long, the lobes triangular or rounded,
their outer surface and margins densely appressed brown-pilose.Corolla funnel-campanulate, 1.5 to 3cm long,
red, purple-red to pink,with darker red flecking at the base of the upper three lobes,
the outer surface glabrous, the inner surface pubescent, the lobes oblong.Stamens 10, unequal, the longest equal in length to the corolla;
filaments pubescent along the lower half.

Ovary ovoid, densely shiny brown-strigose.

Style longer than the stamens, glabrous.

Capsule ovoid-oblong, densely brown-strigose.

Seed Collections:

AC 1024	1995
AC 2018	1996

It was the French missionary priest, Abbé Jean-Marie Delavay, who was the first plant hunting Westerner to encounter *R. atrovirens*, discovering a population of the species during May 1882 at Tchen-fong-chan, in Yunnan Province. The botanical description for the new-to-science find, written by Adrien Franchet, was published four years later in 1886, in Volume 33 of the *Bulletin de la Société Botanique de France*.

The taxon is graced with leaves that have a long-acuminate apex, and branchlets, petioles, leaf undersides, pedicels, calyx and ovary that are densely appressed-hairy. These swiftly key the species from its two closest relatives, *R. simsii* and *R. microphyton*.

Once thought to be an intermediate between the pair, field study has established that the endemic populations of the larger-growing *R. atrovirens* are isolated from both taxa.

Until 1995, when Alan Clark introduced the species into UK cultivation from China's Yunnan province, *R. atrovirens* had been absent from any and all British gardens. Yet not a single thriving specimen has been encountered in the years since growing outdoors. Even along the west coast, in those near frost-free establishments benefiting from Gulf Stream-enhanced microclimates, and this despite a second batch of capsules being secured from Daguan County in 1996, which - according to the field notes - were gathered from plants growing at an altitude of 2,600m.

R. microphyton

Hardiness:

H2-3.

Flowering Period:

April-May.

Distribution in the wild:

N Guangxi, W Guizhou, SW Sichuan & W Yunnan, China; NE Upper Myanmar; Thailand.
Growing on open mountain slopes, along ridges and in gullies amongst scrub,
in thickets, and at the margins of evergreen forest,
at elevations of 1,500-2,500m.

Identification:

Upright twiggy shrub, 1 to 2m high, rarely to 5m;
young shoots densely red-brown strigose.

Leaves monomorphic, persistent, chartaceous or moderately coriaceous,
crowded at the branch tips,
lanceolate through ovate-lanceolate to elliptic, 0.5 to 4.6cm long by 0.3 to 1.6cm wide,
their apex acute, obtuse or rounded;
upper surface dark green, sparsely to moderately red-brown strigose,
especially so along the midrib,
the margins finely crenulate, strigose above;
lower surface pale green, moderately to densely red-brown strigose,
especially so along the midrib.

Petiole 1-5mm long, densely red-brown strigose.

Inflorescence terminal, or terminal and axillary,
with the lateral buds set immediately below the single terminal bud,
3-7-flowered;

winter flower buds ovoid, usually with 7-10 ovoid scales,
their outer surface hairy at the apex, their margins ciliolate.

Pedicel 3-6mm long, densely shiny red-brown strigose.

Calyx 1-2mm long, rarely to 4 or 5mm,
the lobes shallowly lanceolate, triangular or rounded,
their outer surface and margins densely red-brown strigose,
the hairs long and lustrous.

Corolla tubular-funnel-campanulate, small, 1.1 to 2cm long,
rose through rose-purple to pink or near-white,
with purple, carmine or crimson spotting on the upper three lobes,
the outer surface glabrous or finely pilose,
the lobes oblong with a rounded apex,
the tube 0.5 to 1cm long, cylindrical, slender, gradually dilating upwards.

Stamens 5, exserted, unequal, as long or longer than the corolla;
filaments linear, puberulent along the lower half or at the base.

Ovary ovoid or conoid, densely shiny red-brown strigose, the hairs long.
Style longer than the stamens, glabrous.

Capsule ovoid through oblong-conoid, 4-8mm long,
densely shiny red-brown strigose and puberulent.

Seed Collections:

F 6768	1910	R 25239	1932	CNW 891	1994
F 7504	1912/1914	Yu 15821	1937	CNW 1087	1994
F 7505	1912/1914	KW 62	1938/1939	CNW 1088	1994
F 12084	1912/1914	KW 461	1938/1939	CNW 1089	1994
F 12085	1912/1914	SBEC K113	1981	AC 2090	1996
F 17918	1917/1919	SBEC K143a	1981	AC 2093	1996
McLaren AA 121	1932/1939	AC 692	1993	KR 3908	1996
McLaren C 47	1932/1939	AC 807	1993	KR 3939	1996

R. microphyton was another Jean-Marie Delavay discovery, made in 1884, on the mountains of Dali Prefecture in western Yunnan. Herbarium specimens were sent to Adrien Franchet at the Muséum National d'Histoire Naturelle in Paris, who composed the species description that was published in Volume 33 of the *Bulletin de la Société Botanique de France*, during 1886.

Chinese botanists currently differentiate between plants with near-white through rose corollas that have a glabrous outer surface, and those with reddish corollas that have a fine covering of pilose hairs, citing var. *microphyton* and var. *trichanthum* respectively. However, these differences were considered insufficient to require infraspecific or indeed, any other status, by the Edinburgh Revision botanists, as well as H. H. Davidian, and that position is maintained herein. Equally, use of the var. *trichanthum* epithet within Genus *Rhododendron* is illegal under the nomenclature precedence rules given that Alfred Rehder first conceived and published the name in 1945, thirty-seven years before A. L. Zhang reused it in Volume 4 of *Acta Botanica Yunnanica*.

The key characteristic of terminal and axillary flower buds, which often results in the whole stem appearing to be in bloom, is unique within Subsection *Tsutsusia*, and taken in concert with the long corolla tube, the dense and shiny covering of hairs on the pedicel, and the moderate to dense covering of hairs on the leaf under surface, the species is easily separated from its allies.

George Forrest was the first plant hunter to successfully introduce the taxon into UK cultivation, although instead of in 1910, the possibility exists that seed was returned under F 4172 from his first expedition to Yunnan and eastern Tibet between 1904 and 1906. If so, the ministrations of A. K. Bulley and his employees at Bees Seeds Ltd once more proved ineffective. Regrettably however, *R. microphyton* is effectively frost-tender, especially those forms gathered from lowland areas, so it remains a rare find in British gardens, even in those venerated venues along the western seaboard. Moreover, incorrectly labelled plants, with a corolla stamen count that hits seven and no axillary flowers present along the stems, are the only specimens growing outdoors to have so far posed for photographs.



R. ripense

R. ripense

Hardiness:

H3-4.

Flowering Period:

April-May.

Distribution in the wild:

W Honshu, N Kyushu & Shikoku, Japan.

Growing on rocks and banks alongside rivers and streams,
at elevations of 50-500m.

Identification:

Low shrub, 1 to 1.5m high, or to 2m in shade, multi-branched, upright and spreading;
branchlets densely pilose and strigose,
the soft hairs grey-brown, glandular and spreading,
the bristles brown, eglandular, ascending and loose,
the two hair types densely mixed.

Leaves dimorphic, chartaceous.

Spring leaves deciduous, thin, lanceolate through oblanceolate,
2.5 to 5cm long by 0.8 to 1.5cm wide,
their apex acute or obtuse, and mucronate;
upper surface dark green,

densely reddish-grey appressed-pilose especially on the midrib,
the margins equally hairy;

lower surface paler, densely reddish-grey appressed-pilose especially on the midrib.
Summer leaves semi-persistent, smaller, thicker, oblanceolate,

1.5 to 4cm long by 0.5 to 1cm wide,
otherwise identical to the spring leaves.

Petiole 2-3mm long, densely pilose and strigose,
the soft hairs grey-brown, glandular and spreading,
the bristles brown, eglandular, ascending and loose,
the two hair types densely mixed.

Inflorescence terminal, 1-3-flowered;

winter flower buds ovoid, the scales ovate through oblong-ovate,
their outer surface strigose along the middle, their inner surface viscid.

Pedicel 1-1.5cm long, densely pilose and strigose,
the soft hairs grey-brown, glandular and spreading,
the bristles brown, eglandular, ascending and loose,
the two hair types densely mixed.

Calyx 10-15mm long, rarely to 20mm, the lobes lanceolate,
their outer surface hairs dense through moderate,
strigose on the lower half, glandular-pilose on the upper half and margins,
the glands short-stalked.

Corolla widely funnel-shaped, 3.5 to 5cm long,
lilac through rose-purple,

often with darker purple flecking on the upper lobes,
the outer surface glabrous, the inner surface sparsely pilose,
the lobes oblong through oblong-ovate, their apex rounded.

Stamens 10, unequal, the longest equal in length to the corolla;
filaments densely papillose along the lower half.

Ovary ovoid, densely brown-strigose, eglandular.

Style longer than the stamens, glabrous.

Capsule ovoid through conoid, 8-12mm long,
densely brown-strigose, eglandular.

Seed Collections:

None officially documented, although an unauthenticated gathering,
made by a member of the Japanese Rhododendron Society,
was listed on the 1979 American Rhododendron Society Seed Exchange.



R. ripense

Tomitarô Makino was the first professional plant collector to encounter *R. ripense*, discovering the species in Kōchi Prefecture on the southern coast of Shikoku during 1884. He subsequently wrote the botanic description that appeared in Volume 22 of *Shokubutsugaku zasshi*, the magazine of the Tokyo Botanical Society, which was published in 1908. Makino's assignment of specific status was soon challenged by Ernest Wilson and Alfred Rehder in their 1921 publication *A Monograph of Azaleas*, within which they describe the species as a variety of *R. mucronatum*. This ranking was accepted in the 1990 Edinburgh Revision Subgenus *Tsutsusi* monograph written by David Chamberlain and Sally Rae, with the final concluding publication - 1996's *The Genus Rhododendron: Its Classification & Synonymy* - also maintaining varietal status.

The problem, is that *R. Mucronatum* is a directed pollination pairing of *R. ripense* with *R. stenopetalum* - hence the lack of italics, a small 'x' and the use of a capital 'M'. And given the fact that the hybrid does not exist in the wild, it cannot be credited with specific species status. Even through a long list of eminent doyens - unaware of the plant's true nature - did just that. To single-out but three: in 1824, writing in *The Botanical Register* (Volume 10, Plate 811), no less an authority than John Lindley; in 1829, William Jackson Hooker (*Curtis's Botanical Magazine*, Volume 56, Plate 2901); and the cherry on the cake, George Don in 1834's *A General History of the Dichlamydeous Plants*. In all fairness, given the lack of knowledge about most of the genus at that time, with few if any tools available to botanists for true scientific analysis, such mistakes are hardly surprising. In the 19th century. Or even in the first half of the 20th. But by the 1980s, the plant's widespread use in Japanese gardens over a period of several hundred years was known, as was the fact that *R. Mucronatum* can easily be matched to a plant described as Jedogawa-tsutsuji in Ihei Ito's book *Kinshu Makura*, which was first published in 1692 and is better known to English-speaking rhododendron enthusiasts through the 1984 translation by Kaname Kato and Doctor John L. Creech - *A Brocade Pillow: Azaleas of Old Japan*.

On the plus side, H. H. Davidian got it right for both *R. Mucronatum* and *R. ripense* in 1995 when Volume 4 of his *The Rhododendron Species* was published, while Doctor Chamberlain had his 'road to Damascus' moment sometime between putting the Edinburgh Revision to bed and penning the species entries for *The Rhododendron Handbook 1998*, though *The Encyclopedia of Rhododendron Species* (Peter and Kenneth Cox, 1997) was still wedded to the Edinburgh Revision formulation when it arrived on the book stalls just pre the conversion. However, the co- if not lead-author of the Edinburgh texts, Doctor James Cullen, stubbornly stuck to the old view in his 2005-published tome *Hardy Rhododendron Species*, which as well, ignored major advances in genetics and DNA research regarding chromosome polyploidy, and that conceit is inexcusable.

R. ripense is most closely related to *R. stenopetalum*, sharing many of the same features, yet the two species can easily be separated when out of bloom by the nature of the hairs on the ovary and capsule - glandular for *R. stenopetalum*; eglandular for *R. ripense*. When in flower, *R. ripense* will be seen to have fewer corollas in the truss - 1 to 3, rather than 2 through 6 to 10 - and more stamens in each corolla - 10, as opposed to the *R. stenopetalum* count of 5 through 7.

Historical records detail the arrival of *R. Mucronatum* into UK cultivation as early as 1819, but fail to provide an exact date for that of *R. ripense*. The species is known to have been long in cultivation, but just when it docked and who masterminded the importation are likely to remain a mystery until time travel becomes possible. More importantly, the species is easy to grow and flowers freely from a young age, but because of its more lowland distribution in Japan, the shrub is best suited to the more milder UK gardens, but will succeed along the east coast if given sufficient protection from the elements.



R. tosaense

Hardiness:

H3-4.

Flowering Period:

April-May.

Distribution in the wild:

S Honshu, Kyushu & Shikoku, Japan.

Growing on exposed hillsides, in thickets and woodland, at elevations of 50-900m.

Identification:

Twiggy shrub, 1 to 1.5m high, but to 2.5m in shade, multi-branched, dwarf and compact, to erect and lax; young shoots slender, densely grey-brown strigose.

Leaves dimorphic, quite thin.

Spring leaves deciduous, chartaceous, fairly small, scattered along the shoots, lanceolate through oblanceolate, 0.7 to 4cm long by 0.2 to 1cm wide, their apex acute or subacute, and mucronate; upper surface dark green, strigose, the hairs grey and scattered, the margins entire and strigose;

lower surface paler, strigose,

the hairs brown and scattered, but denser along the veins and the midrib.

Summer leaves semi-persistent, smaller, crowded on the upper branchlets, linear through oblanceolate,

0.5 to 1cm long by 0.1 to 0.5cm wide,

colouring purplish-crimson in autumn, otherwise identical to the spring leaves.

Petiole 1-3mm long, densely grey-brown strigose.

Inflorescence terminal, 1-3-flowered, but sometimes as many as 6-flowered; winter flower buds ovoid, the scales widely ovate,

their outer surface densely short-papillose, their margins strigose.

Pedicel 2-8mm long, densely brown-strigose, the hairs ascending.

Calyx minute, 1-3mm long, the lobes lanceolate or rounded, their outer surface and margins strigose.

Corolla funnel-shaped, 1.6 to 2.5cm long,

white, white flushed pink, pink, lilac-purple through purplish-red,

with darker spotting on the upper lobe,

the outer and inner surfaces glabrous,

the lobes oblong-oval through oval, their apex rounded.

Stamens 5, rarely 6-10, unequal, the longest equal in length to the corolla;

filaments puberulous along the lower half.

Ovary ovoid, densely brown-strigose.

Style exserted, glabrous.

Capsule oblong through oblong-ovoid, 5-10mm long,

moderately through densely brown-strigose.

Seed Collections:

W 7801	1914
Kurashige 385	1987

In addition to the two detailed above, a trio of unauthenticated collections, made by members of the Japanese Rhododendron Society, appeared on the Seed Exchange lists of the American Rhododendron Society in 1978, 1979 and 1988.

R. tosaense was described by Tomitarô Makino in 1892, his text featuring in Volume 6 of *Shokubutsu-gaku zasshi*, the magazine of the Tokyo Botanical Society.

The species is distinct, especially as it often sheds many of its summer leaves in the autumn, but before leaf fall, and when the plants are not in flower, there is a similarity with *R. indicum*. Any hesitancy in making an identification can be dispelled by examining the leaf margins: if notched to any degree, the plant to hand will be *R. indicum*; without teeth, it will be *R. tosaense*. The dimorphic rather than monomorphic leaves, especially the linear through oblanceolate summer leaves, and the larger corollas, distinguish the species from *R. serpyllifolium*.

A 1914 Ernest Wilson collection was the first introduction of the species into British gardens, seed arriving at Kew via the Arnold Arboretum. There were additional gatherings of plants and seeds in the 1940s and 1950s respectively that reached the US and may have travelled-on to the UK, but the next documented arrival was a collection by Yuji Kurashige made in 1987. Successful cultivation of *R. tosaense* in the UK is dependant on available summer heat and the altitude at which the gathering was made, maximising both being the ideal. Plants from the higher elevations of the range perform well along the east coast when given sheltered sites, but the species does best in southern England, where branches and buds can fully ripen, and frosts are usually tempered.

R. subsessile

Hardiness:

H1b-2.

Flowering Period:

May.

Distribution in the wild:

Luzon, Philippines.

Growing on mountain slopes in mossy pine and oak woodland,
at elevations of 2,100-2,600m.

Identification:

Large shrub or a small tree, 1 to 3m high, rarely to 4m, multi-branched;
young shoots densely chestnut-brown strigose.

Leaves dimorphic, thick.

Spring leaves deciduous, quite small,
elliptic through elliptic-lanceolate to lanceolate,

1.5 to 4cm long by 0.6 to 1.4cm wide,
their apex acute and distinctly mucronate;
upper surface hairs initially of two types,

white-appressed and silky rufous-grey, the latter soon lost,
the margins somewhat recurved and strigose;

lower surface with silky rufous-grey hairs at first, soon glabrous.
Summer leaves persistent, smaller, c. 1.5cm long by 0.7cm wide,
otherwise identical to the spring leaves.

Petiole 2-6mm long, densely chestnut-brown strigose.

Inflorescence terminal, 2-4-flowered;
winter flower buds ovate, the scales ovate,
their outer surface densely through moderately strigose.

Pedicel 2-7mm long, densely rufous-strigose.
Calyx small, 2-3mm long, the lobes oval or rounded,
their outer surface densely brown-strigose,

their margins densely covered with long brown hairs.

Corolla funnel-campanulate, small, 1.5 to 2cm long,
lilac through violet-purple to rose or cerise-pink,
the outer surface glabrous, the lobes oblong-oval through oval.

Stamens 6-10, unequal, as long or longer than the corolla;
filaments papillose or puberulous towards the base.

Ovary ovoid, densely rufous-strigose.

Style glabrous, sparsely appressed brown-hairy at the base.

Capsule conic-ovoid, densely appressed rufous-hairy.

Seed Collections:

None officially documented, but seed and live plants have been introduced.

R. subsessile was described by Alfred Barton Rendle writing in Volume 34 of the *Journal of Botany, British and Foreign*, published in 1896.

The species is most closely related to the Taiwanese endemic *R. rubropilosum*, this despite the two islands being separated by a 150-mile-wide body of water, the Luzon Strait. Clear similarities can be seen in height and habit, leaf shape and size, corolla shape and size, and in the dense covering of appressed hairs that cover the young stems and branchlets, petioles and pedicels. But equally clear differences can differentiate the pair, notably: monomorphic leaves on *R. rubropilosum*, these being dimorphic on *R. subsessile*; pink through lavender corollas on the former, as opposed to lilac through violet-purple to rose on the latter; stamens that are never longer than the corolla, set against stamens that are never shorter; and a densely hairy lower leaf surface compared with a glabrous under surface at maturity.

R. subsessile is tender and while it has been introduced into cultivation - by Michael Black during the 1970s - it is unlikely to succeed outdoors anywhere in the UK. Edinburgh Botanic reported the loss of a live plant seven years after it was sent to them in 1973 (H. H. Davidian, *The Rhododendron Species*, Volume 4, 1995), and Peter and Kenneth Cox, writing in their 1997-published *Encyclopedia of Rhododendron Species*, describe specimens grown in their greenhouse at Glendoick, as 'not very showy'.

R. eriocarpum

Hardiness:

H2-3.

Flowering Period:

May-July.

Distribution in the wild:

S Kyushu, Yakushima, and the Ryukyu Islands, Japan.

Growing in thickets, in open woodland, and on sunny rocky slopes, at elevations from sea level to 900m.

Identification:

Shrub, 0.5 to 1.5m high; branchlets densely brown-strigose.

Leaves monomorphic, persistent, obovate through elliptic, 1 to 3cm long by 0.5 to 1.5cm wide, their apex obtuse and mucronate;

upper surface dark green, strigose, especially so on the midrib, the margins entire; lower surface pale green, strigose, especially so on the nerves and midrib.

Petiole 2-5mm long, densely brown-strigose.

Inflorescence terminal, 1-3-flowered;

winter flower buds acutely ovoid, the scales ovate, their outer surface densely papillate, their apex and margins strigose.

Pedicel 5-10mm long, densely brown-strigose.

Calyx 2-3mm long, the lobes ovate but rounded at the apex, their outer surface and margins densely brown-strigose.

Corolla funnel-campanulate, 2 to 5cm long,

white through purplish-pink to red, with darker red flecking at the base of the upper lobes,

these glabrous outside and pilose inside,

the lobes ovate through oblong-ovate, with a rounded apex, divided to half the length of the corolla or to the base.

Stamens 8-10, unequal; filaments papillate along the lower half.

Ovary ovoid, densely brown-strigose.

Style stout, glabrous, sometimes sparsely strigose at the base.

Capsule ovoid, 7-10mm long, densely brown-strigose.

Seed Collections:

None officially documented, but seed and live plants have been introduced.

Takenoshin Nakai was the first botanist to describe *R. eriocarpum*, including the species within his book *Trees and Shrubs Indigenous in Japan Proper*, which was published in Tokyo during 1922. His colleague, Bunzô Hayata, is credited with conceiving the original basionym, although he identified the species first as a variety of *R. indicum* - in 1913 - and then of *R. simsii* - in 1921 - but such is life. A plant population established on one of the northern Ryukyu Islands was the first to be professionally sampled, but the name of the collector is not known.

As is apparent, the species is most often confused with either *R. indicum* or *R. simsii*, despite having monomorphic rather than dimorphic leaves. Stamen number quickly keys *R. eriocarpum* from *R. indicum* - 8 to 10, as opposed to 5 - but from *R. simsii* the differences are less apparent if endemic geography and GPS positioning is excluded. *R. eriocarpum* usually has smaller leaves and also tends to have fewer flowers in the inflorescence, although the pigmentation of those corollas is of no help as the two taxa share a similar range of hues. The shape of the leaf apex and the size of the calyx, however, along with the shape of the calyx lobes, can be used to distinguish between the two plants: *R. eriocarpum* sporting a blunt rather than pointed leaf tip and having a shorter calyx - 3mm long, rather than 5mm - with lobes that are rounded at the apex, not acute.

R. tamurae, described by Genkei Masamune in 1929, is now considered synonymous.

On Yakushima Island, natural hybrids between *R. eriocarpum* and *R. indicum* have become established and selections made from these swarms are said to have become the first Satsuki hybrids (though any grains of truth remaining in that origin story are shrouded in centuries of subsequent obfuscation). Very old plants with absolutely stunning floral displays - the choicest individuals arising from natural, undirected, insect-engineered, cross-pollination; admired and appropriated from the wild long ago - can still be seen thriving in many of the local gardens.

R. eriocarpum is only borderline hardy in UK gardens, with the flower buds regularly succumbing to even mild frosts, so cultivation outdoors is restricted to the most sheltered spots along the west coast embraced by the North Atlantic Drift. Elsewhere, named clones may be found with - or usually without - a 'Gumpo' motif appended to their labels, and while these were once considered 'pure', they are now better re-classified as Satsuki Azalea hybrids.



R. eriocarpum



R. eriocarpum



R. eriocarpum



R. nakaharae (ETOT 195)

R. nakaharae

Hardiness:

H3-4.

Flowering Period:

June-August.

Distribution in the wild:

N Taiwan.

Growing in tall grassland on mountain slopes at elevations of 350-1,000m.

Identification:

Prostrate shrub, 0.1 to 0.3m high, much-branched, compact and creeping; young shoots densely shiny brown-strigose.

Leaves small, monomorphic, persistent, chartaceous, scattered along the branchlets, elliptic-ovate through elliptic to lanceolate, 0.3 to 1.2cm long by 0.2 to 1cm wide, rarely to 2.5cm long, their apex acute or obtuse;

upper surface dark green, the hairs scattered, pilose, developing from raised pustules, the margins slightly recurved, strigose; lower surface pale green, the hairs scattered, pilose and shiny.

Petiole 0.5-2mm long, densely brown-strigose.

Inflorescence terminal, 1-3-flowered.

Pedicel 3-4mm long, densely shiny brown-strigose.

Calyx 2-4mm long, the lobes oval through ovate, sometimes narrowly so, their outer surface and margins densely strigose, the hairs long.

Corolla funnel-campanulate, 2 to 3.5cm long, brick-red through rose-red, the outer surface glabrous, sometimes villous on the tube, the inner surface villous at the base, the lobes obovate-orbicular, their apex rounded.

Stamens 10, rarely 4-6, half as long as the corolla; filaments villous along the lower half.

Ovary conoid-ovoid, densely pilose.

Style glabrous.

Capsule conoid, 4-8mm long, densely strigose.

Seed Collections:

RV 681114	1968
ETOT 195	1992
ETE 248	1993

R. nakaharae is named for the Japanese botanist Genji Nakahara, who first collected the species from Mount Shichiri, in northern Taiwan, sometime during July of 1905. The name of the type location changed after Japanese rule of the island came to an end in 1945, but the area is probably within the boundaries of Yangmingshan National Park, which also encompasses Mount Seven Star, whose slopes were home to the RHS 2002 Award of Garden Merit clone. Bunzô Hayata wrote the species botanic description that appears in Volume 25 of the *Journal of the College of Science, Imperial University of Tokyo*, published in 1908. Two years earlier, he had penned the text for a very similar Taiwanese plant, naming it *R. serpyllifolium*. This epithet was later found to be illegitimate - Friedrich Miquel, revising an Asa Gray description of 1857 vintage, having already used it to describe a Japanese species azalea in 1865-66 - but as the plants themselves proved to be identical to *R. nakaharae*, the need for a replacement moniker was synonymically unnecessary.

Another Taiwanese species with a similar distribution to *R. nakaharae*, which is also now considered synonymous, is *R. sikayotaizanense*. Described by Genkei Masamune in 1939 and gifted with larger calyx lobes - 4mm long as opposed to 2mm - and fewer stamens - 4 to 6, rather than 10 or 6 - even arch-splitter H. H. Davidian was content to see the taxon sunk (*The Rhododendron Species*, Volume 4, 1995).

R. nakaharae was first introduced into British gardens during 1941, Mr D. Hiranuma sending seed from Japan to the Royal Botanic Garden, Edinburgh, five months before World War II commenced in the Pacific theatre. Post that interruption, the Cox nursery at Glendoick would also import Japanese plants in 1957, Doctor T. Rokujo including the clone 'Mariko' in the consignment (though it would be the canny Arthur George, owner of Hydon Nurseries in Godalming, Surrey, who would gain the plant its Award of Merit in 1970). During the early 1960s, seed and plants - including the soon-to-be-named clone 'Mount Seven Star' - would arrive from Taiwan via America, and towards the end of that decade, wild collected seed would be gathered by John Patrick and Chien Chang Hsu on the first of their Rhododendron Venture expeditions in 1968. Teams from Kew and Edinburgh would complete the last officially documented introductions in the early 1990s.

In cultivation, *R. nakaharae* is often grown in the rock garden because of its prostrate form and good sun-tolerance, but as Mark Flanagan and Tony Kirkham report in their 2005 book, *Plants from the Edge of the World*, the species thrives in a niche habitat of head-high miscanthus grassland, at elevations below 1,000m, which makes its cold-tolerance all the more surprising. Morphologically, the creeping or mound-forming growth habit, the small leaves and the dark red flowers are distinct, with the species rarely mistaken for any other Subsection *Tsutsusia* azalea. Flowering can occur quite late in the season, with the plants sometimes opening all their blooms at once, or alternatively, just a few at a time, in a piecemeal progression over a period of several weeks.

A surrogate spelling of the species name - *R. nakaharai* - though often found in the most respected publications detailing Genus *Rhododendron*, does not feature in the online database of the International Plant Names Index.





R. rubropilosum (RV Collection)

R. rubropilosum

Hardiness:

H3-5.

Flowering Period:

May-June.

Distribution in the wild:

C Taiwan.

Growing on sunny, grassy, mountain slopes, and at the margins of woodland, at elevations of 1,000-3,400m.

Identification:

Twiggy shrub to 3m high, narrowly upright to spreading, branches ascending; young shoots densely appressed hairy, these grey- to red-brown and flattened. Leaves monomorphic, persistent, scattered as well as clustered at the branch tips, oblong-lanceolate through elliptic-lanceolate,

1.3 to 4.3cm long by 0.5 to 1.8cm wide,

their apex acute and mucronate;

upper surface dark green, densely appressed-hairy,

the hairs scattered, pale grey and silky;

lower surface pale green, densely red-brown strigose.

Petiole 3-6mm long, densely red-brown appressed-hairy.

Inflorescence terminal, 2-4-flowered;

winter flower bud scales ovate,

their outer surface strigose along the middle, their margins ciliate.

Pedicel 3-6mm long, densely red-brown strigose.

Calyx 1.5-4mm long, the lobes oblong,

their outer surface and margins densely brown-strigose.

Corolla funnel-shaped, small, 1 to 1.5cm long, rarely to 2.5cm, pink through lavender,

with darker pink or rose spotting within,

the lobes oblong and spreading.

Stamens 7-10, unequal, usually shorter than the corolla; filaments sparsely pubescent at the base.

Ovary ovoid, densely hairy, these grey and soft.

Style glabrous, but with some brown, appressed hairs at the base.

Capsule conic-ovoid, 5-8mm long, densely brown-strigose.

Seed Collections:

W 10939	1918	RV 69/212	1969	CP 10069	1975
RV 681112	1968	RV 9831	1970	CP 10093	1975
RV 681113	1968	RV 74/005	1974	ETE 264	1993

Genji Nakahara discovered *R. rubropilosum* in October 1906 while investigating the flora on Taiwan's highest mountain - then known as Mount Morrison, today as Yushan or Jade Mountain - and a botanic description composed by Bunzô Hayata soon followed, appearing in the 1911-published, Volume 30, of the *Journal of the College of Science, Imperial University of Tokyo*.

R. rubropilosum is most closely related to two other native Taiwanese species, namely *R. breviperulatum* and *R. taiwanalpinum*.

From *R. breviperulatum*, the most obvious differences are the stamen count - 7 to 10, as opposed to 5 or 6 - and the number of corollas resident in the inflorescence - 2 to 4, instead of 3 through 6. But there are also variations in the indumentum hairs, such as colour, shininess and type. For instance, those on the outer surface of the *R. rubropilosum* calyx are brown-strigose, while they are white-pilose for *R. breviperulatum*.

From *R. taiwanalpinum*, the differences are less substantive, as the hairs cloaking the branchlets, petioles, pedicels, calyx, ovary and capsule are the same type and colour, and the two species may also have the same number of flowers in the inflorescence and stamens in each corolla. However, for *R. rubropilosum*, the stamen filaments are only hairy at the base and they are shorter in length than the corolla. The style too is glabrous for most of its length, though a few adpressed hairs are present at the base. A final key is offered by the length of the calyx lobes, with those on *R. rubropilosum* usually exceeding the 2mm-maximum span of *R. taiwanalpinum*, sometimes by as much as double.

There is also a clear resemblance with a species endemic to the Philippines, *R. subsessile*. Character contrasts here are leaf type, flower colour and stamen length, with *R. rubropilosum* having monomorphic leaves, pink to lavender coloured flowers, and stamens never longer than the corolla, while on the other hand, *R. subsessile* has dimorphic leaves, lilac through violet-purple corollas, and stamens that are never shorter than the corolla. Hardiness ratings too are significantly at variance, the H4-5 of *R. rubropilosum* allowing it to be cultivated outdoors across most of the UK, while the H2 of *R. subsessile*, confines it to a life under heated glass.

Ernest Wilson's final expedition to the Far East arrived in Taiwan in 1918, and seed gathered under W 10939 was the initial introduction of the species into British gardens. An undocumented John Creech collection docked some five decades later, with two Rhododendron Venture lots from John Patrick and Chien Chang Hsu also arriving in 1968. Specimens grown from Christopher Page's 1976 gathering are likely to prove the hardiest in UK cultivation as the capsules were sourced from a population of plants growing close to the 3,400m contour, the pinnacle of the distribution.

A point to note: the location of hairs running along the style of *R. rubropilosum* can sometimes be at odds with the accepted botanic description. This can be seen on a number of cultivated clones - long-established plants growing in botanic institutions and bearing the appropriate laser-engraved label - that instead of being glabrous for most of their length, have styles that are actually quite hirsute - as shown opposite, below - with the hairs pointing outwards or even curled, and coloured white rather than brown. The likely cause is cross-pollination with *R. taiwanalpinum* and once a DNA check has confirmed such, natural hybrid status for those individuals concerned should be applied.



R. rubropilosum (Page 10093)



R. rubropilosum



R. rubropilosum (RV Collection)



R. poukhanense

R. poukhanense

Hardiness:

H4-5.

Flowering Period:

April-May.

Distribution in the wild:

Tsushima Island, Japan; Jeju-do Island, C & S Korea.

Growing in scrub and thickets, in open Pine woodland, on rocks and boulders (especially alongside rivers or streams), in open lowland countryside and on grassy mountain slopes, from sea level to elevations of 1,800m.

Identification:

Shrub, 1 to 2m high, densely branched, prostrate or creeping to low and compact, but upright and loosely branched in shade; young shoots densely brown- or grey-strigose at first, but near glabrous by the second year.

Leaves dimorphic, chartaceous, alternate and crowded on the upper branchlets.

Spring leaves deciduous, oblanceolate through elliptic-lanceolate, 2.8 to 8cm long by 0.5 to 2.5cm wide, their apex acute and mucronate;

upper surface dark green, sparsely grey- or brown-strigose, the hairs shiny and scattered, the margins strigose;

lower surface paler, sparsely grey- or brown-strigose, the hairs shiny and scattered.

Summer leaves semi-persistent, smaller, thicker, mostly shed at the onset of winter with only a few held until spring, oblanceolate through lanceolate, 1.5 to 2cm long by 0.4 to 0.8cm wide;

upper surface glabrescent at maturity, otherwise identical to the spring leaves, but turning orange or crimson at fall.

Petiole 3-8mm long, densely brown-strigose.

Inflorescence terminal, 2-4-flowered,

opening slightly before or as the Spring leaves expand;

winter flower buds narrowly ovoid, the scales elliptic with a viscid inner surface, their outer surface densely grey-brown- or brown-strigose.

Pedicel 5-10mm long, densely or moderately brown-strigose.

Calyx 3-8mm long, green, the lobes oblong-oval through ovate-lanceolate, their apex rounded or acute,

their outer surface and margins densely through moderately brown-strigose, the hairs long.

Corolla widely funnel-shaped, 3.2 to 4.2cm long, rose through pale lilac-purple,

with dark red or purple-brown flecking on the upper three lobes, moderately fragrant,

their outer surface glabrous, the inner surface sparsely pilose, the lobes oblong through oblong-ovate, rounded at the apex.

Stamens 10, unequal, the longest equal in length to the corolla; filaments papillose along the lower half.

Ovary ovoid through conoid, densely brown-strigose.

Style usually glabrous, sometimes puberulous near the base.

Capsule ovoid through oblong-conoid, 6-10mm long, densely brown-strigose.

Seed Collections:

BEC 271	1982
NEKG 27	1989
NEKG 31	1989
H&S 92/423	1992
HC 970195	1997

In addition to those above, an unauthenticated gathering made by Johannes Hedegaard appeared on the 1979 American Rhododendron Society Seed Exchange list, with another, by Kristian Theqvist, on the 2014 roll call.

*R. poukhanense*



R. Yedoense 'Yodogawa'

R. poukhanense is named for the peak on which it was first found, Mount Poukhan, known today as Bukhan Mountain and part of the Bukhansan National Park to the north of South Korea's capital city Seoul. Père Urbain Jean Faurie, a French missionary priest who collected throughout Japan, Korea and Taiwan, as well as on Sakhalin Island and in Hawaii, found the species on the first of three visits to Korea. This took place sometime between 1874 and 1883, slipped in amongst his principal botanical explorations of Honshu, Kyushu and the northern Ryukyu Islands. The species would also have been collected on Faurie's second and third trips to Korea in 1906 and 1907, these concentrating on the flora of Jeju-do Island and carried out with another colleague from Missions Etrangères de Paris, Émile Joseph Taquet.

Augustin Abel Hector Léveillé, ensconced at the Muséum National d'Histoire Naturelle after ill health curtailed his own religiously-funded collecting career, went to work on those herbarium specimens and in 1908, wrote the description for *R. poukhanense* that appears in Volume 5 of *Repertorium Specierum Novarum Regni Vegetabilis*.

All was good with that appraisal until 1920, which was when Takenoshin Nakai noticed similarities between *R. poukhanense* and *R. yedoense*, and adhering to botanic precedence, reduced the former to a variety of the latter. And it is this ranking downgrade that has now become problematical, because despite being described as a species by Karl Maximovich in Volume 35 of *Gartenflora: Monatschrift Für Deutsche Und Schweizerische Garten Und Blumenkunde Herausgegeben Von E. Regel*, published in 1886, *R. yedoense* is in fact a cultivated form of *R. poukhanense*. One that sports double-flowered blooms. And which had escaped the confines of its poorly managed horticultural environment to establish itself out in the wild.

Of course, the rules set down by the *International Code of Nomenclature for algae, fungi, and plants* are inflexible on the matter - like the stated viewpoint of the International Flat Earth Research Society - and they require botanists the world over, to maintain the true species as a variety of a hybrid. For all eternity. Which is simply barmy! And flies in the face of the genetic evidence. So a divergence must occur, and in consequence herein, Maximovich's escapee will be found in the Evergreen Azalea Hybrids section of Volume 7, while Hector Léveillé's citation is returned to specific status. And the sooner the botanic fraternity rejoin the real world, rather than adhering to one where concepts similar to those of Samuel Rowbotham hold sway, the better it will be for all concerned.

When out of bloom, *R. poukhanense* can be confused with two red-flowering species, *R. scabrum* and *R. simsii*, though the near-deciduous summer leaves should help with an identification in the winter months. Otherwise, the hairs on the calyx must be examined, with *R. scabrum* having glandular hairs, *R. simsii* quite short hairs, while those resident on *R. poukhanense* will be both eglandular and long. There is also a resemblance with *R. ripense* and its white-flowered garden form, *R. Mucronatum* (another hybrid often listed as a species despite DNA corroboration of its status). Here again, the summer leaves are key, with the quantity of hairs present on the upper surface of the mature leaf separating-out the two individuals: *R. poukhanense* being glabrescent; *R. ripense* and its hybrid being densely appressed-pilose. The branchlets too mirror this packing density, with those of *R. poukhanense* bare of hairs soon into the second year, while *R. ripense* keeps its bristles, which may also, sometimes, be glandular.

R. poukhanense was introduced into British gardens in 1913, young plants from a 1905 John George Jack collection made on Mount Poukhan being despatched to the Royal Botanic Gardens, Kew, from the Arnold Arboretum. These actually flowered the following year and the species has proved popular ever since, being easy to grow and garnering a reputation as one of the hardiest 'evergreen' azaleas available in the UK.



R. poukhanense



R. poukhanense (BEC 271)

R. breviperulatum

Hardiness:

H3-4.

Flowering Period:

April-May.

Distribution in the wild:

E & N Taiwan.

Growing in mountain forests at elevations of around 2,500m.

Identification:

Large, multi-branched shrub, 1 to 3m high; young shoots slender, densely shiny brown-strigose.

Leaves monomorphic, persistent, chartaceous, scattered as well as clustered at the branch tips, ovate-elliptic through oblong-obovate, 1 to 3cm long by 0.6 to 1.7cm wide, their apex obtuse and mucronate;

upper surface scabrid, sparsely shiny brown-pilose, the margins entire; lower surface reticulate, sparsely shiny brown-pilose, the midrib densely strigose.

Petiole 3-7mm long, moderately appressed-hairy.

Inflorescence terminal, 3-6-flowered; winter flower bud scales ovate,

their outer surface strigose along the middle, their margins glabrous.

Pedicel 4-6mm long, densely shiny brown-setose, the hairs appressed.

Calyx 1-4mm long, the lobes ovate through oblong-oval, their outer surface white-pilose, their margins ciliate.

Corolla funnel-campanulate, small, 1.5 to 1.8cm long, rose-pink,

with crimson to red flecking at the base of the upper three lobes, the lobes oblong and deeply divided.

Stamens 5 or rarely 6, unequal, the longest only just equal in length to the corolla; filaments glabrous or sparsely pubescent at the base.

Ovary conoid, densely pilose.

Style pilose at the base.

Capsule conical, pubescent.

Seed Collections:

ETOT 69	1992
---------	------

R. breviperulatum was described in 1913 by the Japanese botanist Bunzô Hayata, writing in Volume 3 of *Icones Plantarum Formosanarum*, yet it was only introduced into Western gardens in 1977, the Agriculture Administrator of the USDA's Crops Research Division, John Creech - an acknowledged, if not legendary azalea expert - responsible for the gathering. A second undocumented re-introduction followed eleven years later in 1988, with the Mark Flanagan and Tony Kirkham authenticated collection docking in 1992, but the species still remains very rare in UK cultivation.

Some botanists and classifications - the 1996 Edinburgh Revision and the 1998 RHS *Rhododendron Handbook* texts included - have removed its specific status ranking and placed *R. breviperulatum* as a variety *R. rubropilosum*, in doing so, stating that the only major characteristic that differentiates the two are the stamens. These are apparently 'appendiculate' in the former and 'not appendiculate' in the latter. However, there are other, rather more significant variations, specifically: *R. breviperulatum* has 5-6 stamens in each corolla and 3-6 flowers in the inflorescence; while *R. rubropilosum* has 7-10 stamens and 2-4 flowers. There are also a number of more minor differences - for instance, in the indumentum hairs on the branchlets, leaves, petioles, pedicles, calyx, ovary and capsule. Further fieldwork in Taiwan was clearly necessary before the change to Hayata's specific status was applied, because our knowledge of the species - then and now - was and is, evidently far from exhaustive. As the latest DNA analysis confirms, aligning as it does, with the case for retention of that original ranking.

This new dataset was presented in a 2008-published paper written by Hsin-Chien Chang and Jenn-Che Wang - *The Phylogenetic Study of Rhododendron Section Tsutsusi in Taiwan* - and from the four sections of genetic code examined, it shows clearly that *R. breviperulatum* resides in a closely related, but separate clade, to *R. rubropilosum*. That scientific placement rules out any morphological assessment where the former is made a variety, or indeed a subspecies, of the latter.

Within this new cladistic grouping, *R. breviperulatum* appears to be most closely related to *R. taiwanalpinum*. Again, fewer stamens and more corollas in the flower truss will tell the two apart, with the *R. breviperulatum* filaments also shorter than the corollas and glabrous.



R. breviperulatum (ETOT 69)



R. breviperulatum (ETOT 69)



R. breviperulatum (ETOT 69)



R. breviperulatum (ETOT 69)



R. kanehirae

Hardiness:

H3-4.

Flowering Period:

April-May.

Distribution in the wild:

N Taiwan.

Growing in and at the margins of mountain forests, and along the banks of streams, at elevations from sea level to 400m.

Identification:

Shrub, 1 to 2.5m high, rarely to 3m, densely branched; young shoots densely chestnut-brown strigose, the hairs broad.

Leaves dimorphic, clustered at the branch tips.

Spring leaves deciduous, linear-lanceolate through oblong-lanceolate, 2 to 5cm long by 0.5 to 1.5cm wide, their apex acute;

upper surface dark green, shiny, sparsely to densely brown-strigose, the margins strigose, entire or serrulate; lower surface paler, sparsely to densely brown-strigose, especially on the midrib.

Summer leaves persistent, smaller, linear-lanceolate through narrowly-ovate, 1.5 to 3cm long by 0.2 to 0.6cm wide, otherwise identical to the spring leaves.

Petiole 1-5mm long, densely chestnut-brown strigose.

Inflorescence terminal, 1-2-flowered; winter flower bud scales acuminate at the apex, their outer surface setulose along the middle, their margins ciliate.

Pedicel 5-8mm long, densely chestnut-brown strigose.

Calyx 1-5mm long, the lobes green, oval or rounded, their outer surface densely appressed-pilose, their margins densely pilose, with all the calyx hairs chestnut-brown and shiny.

Corolla funnel-campanulate, 2.5 to 4cm long, carmine through scarlet-red, occasionally pink, the outer surface glabrous, the lobes ovate through oval.

Stamens 10, unequal, shorter than the corolla; filaments linear, pubescent along the lower half.

Ovary ovoid, densely grey or chestnut-brown strigose.

Style longer than the stamens, slightly exserted, glabrous, but with a few strigose hairs at the base.

Capsule oblong-cylindric, 6-8mm long, moderately to densely brown-strigose.

Seed Collections:

RV 69/217	1969
ETE 623	1993

R. kanehirae was first described in Ernest Wilson's *A Monograph of Azaleas*, published in 1921. Apparently, the plant hunter found the type specimen growing in the garden of a police station in Taihoku Prefecture at the northern end of Taiwan, which is where the species is endemic. At the time of the author's visit, Taiwan was still under Japanese rule, and Taihoku Prefecture - an administrative area that today encompasses New Taipei City, Taipei City, Keelung City and Yilan County - had no less than sixteen police stations, three of which bore the prefecture's motif: Taihoku Prefecture Police Administrative Division, Taihoku Police Station, and Taihoku North Police Station. Understandably, it is now probably anyone's guess as to which the plant was resident.

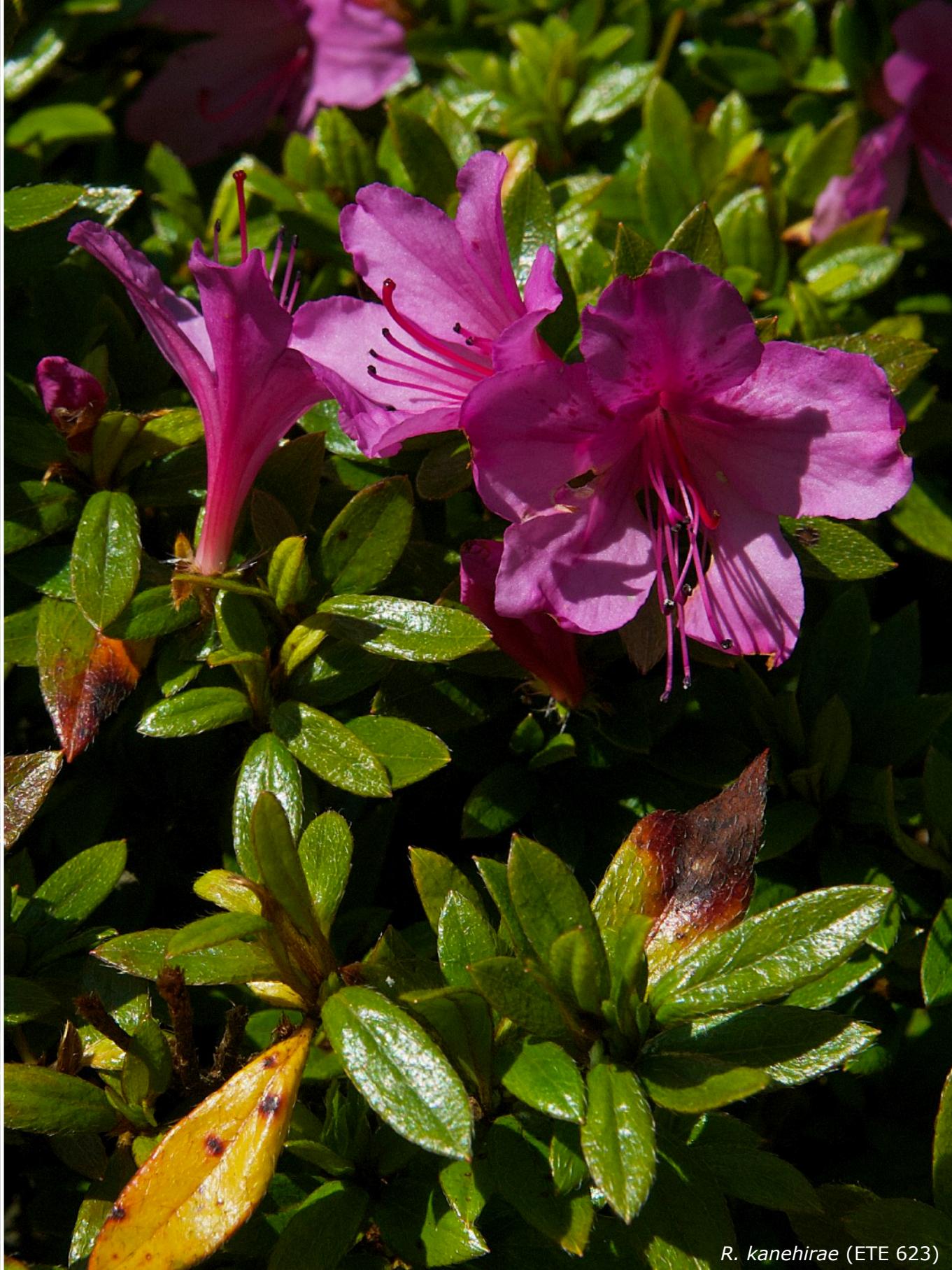
Wilson named the species for the Japanese botanist Ryōzō Kanehira, the honorific in Latin is therefore *R. kanehirae*, although a pair of alternative spellings - 'kanehirai' or 'kanehiraei' - may also be found in some texts.

Most closely resembling *R. indicum*, *R. kanehirae* can quickly be identified from its Japanese cousin by the smaller corolla with 10 stamens - as opposed to 5 - which often displays a more well-developed calyx. Otherwise the two species are near identical, though geographically separated by the East China Sea and most of the Ryukyu Islands. Before the latest DNA evidence was presented, *R. tashiroi* was also considered similar, though it has more flowers in the inflorescence and monomorphic foliage; it is also now a member of Subsection *Brachycalyx*.

R. kanehirae was only introduced into UK gardens during 1969, a collection made by John Patrick and Chien Chang Hsu under their Rhododendron Venture field number 69/217. Peter and Kenneth Cox reported that while plants raised from this gathering lived for a few years, they were not hardy enough to survive a typical winter at Glendoick, the family home, garden and nursery business to the east of Perth in Scotland (*The Encyclopedia of Rhododendron Species*, 1997). A more recent gathering, made on the 1993 Royal Botanic Garden, Edinburgh, expedition to Taiwan, which re-introduced the species under the field number ETE 623, has provided plants that grow outdoors and flower profusely in sheltered west coast locales, the hard winters of 2009/10 and 2010/11 notwithstanding.



R. kanehirae (ETE 623)



R. saxicolum

Hardiness:

H1b-2.

Flowering Period:

March-April.

Distribution in the wild:

N Vietnam.

Growing terrestrially in stony soil in woodland, and as an epiphyte attached to rocks amongst other bushes, at elevations of 400-1,800m.

Identification:

Shrub, or a small tree, 1 to 6m high; young shoots densely red-brown appressed-setose at first, soon glabrescent.

Leaves dimorphic, subcoriaceous.

Spring leaves deciduous, ovate through ovate-oblong, 4 to 7.5cm long by 2 to 3.5cm wide, their apex acuminate;

upper surface glabrescent, the midrib sparsely strigose, the margin entire; lower surface sparsely appressed-strigose.

Summer leaves persistent, smaller, 1.5 to 2cm long by 0.5 to 1cm wide, otherwise identical to the spring leaves.

Petiole 3-7mm long, densely appressed-strigose.

Inflorescence 3-5-flowered.

Pedicel 3-7mm long, densely rufous-strigose.

Calyx c. 2mm long, the lobes lanceolate, their outer surface (and margins?) densely strigose.

Corolla funnel-shaped, 1.5 to 2cm long, white tinged rose,

the outer surface glabrous, the inner surface papillate.

Stamens 5, marginally longer than the corolla; filaments hairy along the lower half.

Ovary ovoid, densely rufous-strigose.

Style glabrous, but hairy at the base.

Capsule ovoid, 7-9mm long.

Seed Collections:

KR 1874	1991
AC 450	1992
AC 481	1992
KR 2960	1994
C&G 5669	2006
CWT 6386	2011

R. saxicolum was first encountered by a Western plant collector in Tuyên Quang Province - previously Tonkin Province - in the northeast of Vietnam, the locale northwest of the capital Hanoi. The plant hunter was Eugène Poilane, a French coffee planter and botanist; the date of the encounter, November 22nd, 1929. A second collection, made from a different site in the province, took place on March 27th, 1936, with dried material from each of those gatherings - under the field numbers 17076 and 25419, respectively - swiftly despatched-off to the Muséum National d'Histoire Naturelle in Paris.

Where they were filed away and forgotten.

Until Hermann Sleumer unearthed the herbarium cards in October 1957, determined that a new-to-science species was to hand, and in consequence, penned the botanic outline that was published a year later in Volume 4 of the *Blumea Supplement*.

Yet very little is still known about *R. saxicolum*, with all published official Western sources totally reliant on that original Sleumer description and so unable to provide even a modicum of extra detail.

Keith Rushforth was the first collector to introduce seed and herbarium specimens into the UK under the field number KR 1874, these secured on his 1991 expedition to Vietnam, with a second gathering made three years later. The four other lots returned to date were garnered by Alan Clark on two solo trips, and when out exploring with Vaughan Gallavan in 2006, and Hannah Wilson and Jamie Taggart in 2011.

The field notes from Alan's 1992 expedition describe probable plants of the species growing up to 2m in height, with distinctive orange-brown hairs on the abaxial leaf midrib, while the website *Un Jardin Ordinaire* has a few in-flower photos of the rhododendron, taken on a 2005 trip to Tuyên Quang Province. It also notes that the plants were around 1m high and growing as epiphytes. The url for the page is:

https://unjardinordinair-canalblog-com.translate.goog/archives/2008/11/25/11510354.html?_x_tr_sch=http&_x_tr_sl=fr&_x_tr_tl=en&_x_tr_hl=en

It is unlikely that *R. saxicolum* will cope with the vagaries of a UK winter if planted outdoors without the added protection of a portable greenhouse, able to be wheeled into place before the first autumn frost strikes, but it could be that seed sourced from close to the apex of the range, will prove hardy enough to survive. If so, such a specimen is proving rather camera-shy.

R. noriakianum

Hardiness:

H3-4.

Flowering Period:

May.

Distribution in the wild:

N Taiwan.

Growing in open grassland on mountain slopes at elevations of 1,500-3,000m.

Identification:

Low shrub to 1m high, multi-branched, open not bushy habit;
young shoots slender,
densely brown-strigose at first, but soon glabrescent to near glabrous.

Leaves monomorphic, deciduous, chartaceous,
ovate through ovate-oblong,
0.7 to 1.8cm long by 0.4 to 0.6cm wide,
their apex obtuse and apiculate;

upper surface glabrescent to near glabrous, the margins revolute;
lower surface strigose, especially so on the midrib and the lateral veins.

Petiole 1-2mm long, densely brown-strigose.

Inflorescence terminal, 2-4-flowered.

Pedicel 2-4mm long, densely brown-strigose.

Calyx 3-4mm long, the lobes oblong with an acute apex,
their outer surface and margins densely brown-pilose.

Corolla funnel-shaped, small, 1.5 to 1.8cm long,
red through rose to dark purple.

Stamens 7-10, unequal, slightly exserted, only just longer than the corolla;
filaments pubescent along the lower half.

Ovary ovoid, densely pubescent.

Style glabrous.

Seed Collections:

RV 74/002	1974
-----------	------

It is not known who first discovered *R. noriakianum* on the mountains of northern Taiwan, but Tokio Suzuki was able to describe the species in 1935 from a specimen that had been gathered sometime during April of 1932 (*Transactions, Natural History Society of Formosa*, Volume 25). Dried herbarium material, whether in Western or Far Eastern botanic institutions, appears to be in short supply and may also be mislabelled, as some authorities describe the leaves as dimorphic, evergreen and coriaceous, while others adhere to the bullet points set out opposite.

The species is almost certainly allied to *R. nakaharae*, for it shares a similar niche habitat, though at higher altitudes. Surprisingly though, it is not as hardy, and nor does it have a prostrate or creeping form, being a small, open, twiggy shrub. The flowers are also smaller, being just 1.5 to 1.8cm long, as opposed to 2 to 3.5cm.

A relationship with *R. longiperulatum*, which has not as yet been introduced into UK cultivation, has also been suggested.

Despite the single entry shown in the seed collections table, it is probable that *R. noriakianum* too has not been introduced into UK cultivation, for Peter and Kenneth Cox report that the purple-flowered specimens germinated from the RV 74/002 gathering they once grew at Glendoick, were not the true species, and neither were they comparable to *R. nakaharae* as garden worthy plants (*Encyclopedia of Rhododendron Species*, 1997).



R. taiwanalpinum (RV 74003)

R. taiwanalpinum

Hardiness:

H4-5.

Flowering Period:

May-June.

Distribution in the wild:

NC Taiwan.

Growing in alpine meadows and on mountain peaks,
at elevations of 2,800-3,000m.

Identification:

Twiggy shrub to 1.5m high, spreading, branches ascending;
young shoots densely brown-strigose.

Leaves monomorphic, semi-evergreen, coriaceous,
clustered at the branch tips, turning reddish in winter,
ovate-lanceolate through ovate-oblong, 1.5 to 3cm long by 0.7 to 1.8cm wide,
their apex acute or obtuse, and mucronate;
upper surface dark green, densely strigose, the hairs pale grey and silky,
the margins revolute and hairy;

lower surface pale green, densely red-brown strigose.

Petiole 2-4mm long, densely red-brown appressed-strigose.

Inflorescence terminal, 1-3-flowered.

Pedicel 5-7mm long, densely red-brown hairy.

Calyx 1-2mm long, the lobes rounded,
their outer surface and margins densely red-brown hairy.

Corolla widely funnel-campanulate, small,
1 to 1.5cm long, more rarely to 2cm,
pink through lilac to reddish-purple or maroon,
with darker rose spotting within,
the lobes ovate and spreading.

Stamens 9-10, unequal, longer than the corolla;
filaments pubescent along the lower half.

Ovary ovoid, densely greyish-pubescent.

Style pubescent along the lower half, the hairs ascending.

Capsule cylindric, 5-8mm long, densely brown-strigose.

Seed Collections:

RV 9866	1970
RV 74/003	1974

R. taiwanalpinum was first described by Jisaburo Owhi in Volume 13 of the *Journal of Japanese Botany (Shokubutsu Kenkyu Zasshi)*, published in 1937. A relative newcomer to British gardens, the species still remains rare in UK cultivation, with all the specimens to be found grown from the John Patrick and Chien Chang Hsu collections made on their 1970 and 1974 Rhododendron Venture explorations of Taiwan's mountains.

The species was initially thought to be close to *R. oldhamii*, but it is devoid of any glands on the branchlets, petioles, pedicels, calyx, ovary and capsule, and in addition, has smaller flowers, shorter pedicels and calyx lobes, and a style that is distinctly hairy along its lower half rather than being glabrous.

In 1998, S. Y. Lu, Y. H. Tseng and Y. P. Yang, writing in the second edition of *Flora of Taiwan*, reduced the status of *R. taiwanalpinum* to a variety of *R. rubropilosum*. Here, the relationship is much closer, with the same dense cloak of reddish-brown appressed-strigose hairs found across the feature set of both plants. But there are also distinct differences, however, as the *R. taiwanalpinum* stamen filaments and style are hairy from the mid-point downwards, whereas for *R. rubropilosum*, they are only hairy at the base. Moreover, the former consistently has 9 to 10 stamens that are longer than the corolla, while the latter sports just 7 to 10, which are shorter. And in addition, there is a mismatch in the length of the calyx lobes, respectively to 2mm long, as opposed to 4mm long. Yet it is the most recently published genetic study examining Taiwan's evergreen azaleas that throws a rather large spanner into the works.

For each of the island's ten endemic species, Hsin-Chien Chang and Jenn-Che Wang sequenced the *matK* and *trnK* intron sequences of their chloroplast DNA, as well as the *RPB2-i* 2 intron and ITS sequences from their nuclear DNA. The results, published in a paper entitled *The Phylogenetic Study of Rhododendron Section Tsutsusi in Taiwan*, show that *R. taiwanalpinum* occupies the same clade as *R. breviperulatum*, but that this is a separate pigeonhole from the one that holds *R. rubropilosum*. This chimes with the view of H. H. Davidian as set out in the fourth volume of his *The Rhododendron Species*, published in 1995. It also mandates that specific status should be retained.

R. taiwanalpinum can be differentiated from *R. breviperulatum* by the presence of 9 to 10 stamens that are longer than the corolla, rather than 5 or 6, which are shorter; by a fewer-flowered truss, with 1 to 3 corollas as opposed to 3 through 6; and from the texture of the leaves, coriaceous against chartaceous.

In cultivation, hardiness has been found to match the more widely grown Japanese azalea species such as *R. kiusianum* or *R. kaempferi*, with *R. taiwanalpinum* also sharing their preference for a more open planting site, without overhead leaf cover, although adequate protection from the chill winds of winter will still be needed along the east coast. The plant established in Ray Wood at Castle Howard - the subject of the photographs herein - came through the recent prolonged and repeated Arctic conditions of 2009-10 and 2010-11 without detriment, and the usual early-June flowering period was unaffected by the long, decidedly cool and frosty Spring of 2013.

Just in case it had you foxed, the Latin epithet translates as 'alpine from Taiwan'.





R. taiwanalpinum (RV 74003)

Section *Tsutsusi* Subsection *Viscidula*:



Taxa:

R. nipponicum
R. semibarbatum

Taxonomic Revision:

The Goetsch-Eckert-Hall molecular systematics study published in 2005, placed *R. semibarbatum* within the same clade as *R. nipponicum*.

Previously, each species had been the sole occupant of a monotypic pigeonhole, respectively, Subgenus *Mumeazalea*, and Section *Viscidula*.

The former was devised in 1949 by Hermann Sleumer for his major revision of the genus, *Ein System der Gattung Rhododendron*, so the latter, conceived by Jinzô Matsumura and Takenoshin Nakai in 1916, takes precedence herein under the nomenclature regulations.

Both species are endemic to Japan and morphologically resemble the members of Subsection *Menziesia* more than they do the deciduous azaleas of Subsection *Brachycalyx*, while the relationship with Subsections *Azaleastrum* and *Tsutsusi* is more distant. However, plants from all these groups were present in the same overall clade following phylogenetic analysis of the DNA sequencing, hence their presence within Subgenus *Azaleastrum* in the revised G-E-H taxonomy.

As will be seen from the at times decidedly disjunct morphology below, *R. nipponicum* and *R. semibarbatum* are individually distinct.

Subsection Morphology:

Shrubs, upright and bushy, 0.6 to 3m high; branchlets either densely puberulent and stipitate-glandular, or ciliate-glandular, these hairs both long- and short-stalked, and often becoming eglandular with age; bark grey to dark brown, or shredding and papery, revealing polished reddish-brown stems.

Vegetative bud terminal, or from separate axillary buds below the terminal inflorescence.

Leaves deciduous, chartaceous, thin or thick, in irregular whorled clusters, or alternate and crowded at the branch tips, elliptic through ovate, obovate through oblong-obovate, 2 to 18cm long by 0.7 to 9cm wide; upper surface bright or dark green, glabrous or sparsely appressed-bristly, the midrib often densely pubescent, the margins entire and densely hirsute, or crenulate, with a setose hair at the apex of each notch; lower surface pale green or reticulate, glabrous or sparsely appressed-bristly, the hairs when present both with or without glands, the midrib densely pubescent, sparsely setulose, or sparsely fringed with straight to crisped unicellular hairs, the primary veins sometimes setulose.

Petiole 5-15mm long, densely pubescent and setulose-glandular, or subsessile with the leaf base decurrent.

Inflorescence 1-flowered, the buds axillary with persistent scales, crowded at the branch tips below the vegetative terminal bud, opening after the leaves have fully expanded, or 5-15-flowered and opening as or after the leaves expand.

Pedicel 3-6mm long, densely pubescent and setulose-glandular, that of *R. nipponicum* 7-15mm long, extending to 15-25mm at fruiting, pendulous, and densely glandular-ciliate, the hairs long-stalked.

Calyx 1-3mm long, the lobes often unequal, their outer surface sparsely white-pilose or sparsely short-stalked glandular, their margins setulose- or ciliate-glandular.

Corolla rotate-campanulate or tubular through tubular-campanulate, respectively, 1.5 to 2cm wide, or 1.5 to 2.4cm long, white, white flushed pink, pale yellow or yellowish tinged pale purple, sometimes with red spotting on the upper lobes, the outer surface glabrous, the inner surface densely pilose, the lobes sometimes short and sub-erect, with the tube longer than the lobes.

The *R. semibarbatum* stamen count 5, these dimorphic, very unequal and exserted, the upper 2 sterile, c. 6mm long, the filaments densely white-pilose except at the tip and the base, the anthers spherical, c. 0.5mm long; the lower 3 fertile, c. 12mm long, curved, the filaments not hairy, or sparsely puberulous at the base, the anthers oblong, c. 1.5mm long.

The *R. nipponicum* stamen count 10, these unequal and included, with filaments that are puberulous at the base.

Ovary globular, oblong-ovate or ovate, densely setulose-glandular, or densely glandular-ciliate, the hairs short- and long-stalked.

Style 8-16mm long, often straight, sometimes included, glabrous.

Capsule ovoid through globose, 3-4mm long, or oblong, 10-13mm long and pendulous, setulose-glandular or ciliate-glandular, the latter with short- or long-stalked hairs.

Seeds unwinged, with an acute appendage at one end, a truncate appendage at the other end, or with lacinate appendages at both ends.



R. nipponicum

R. semibarbatum

Hardiness:

H5.

Flowering Period:

June.

Distribution in the wild:

S Hokkaido, Honshu, Shikoku & Kyushu, Japan.

Growing in and at the margins of deciduous woodland on mountain slopes, at elevations of 300-1,500m.

Identification:

Branchlets densely puberulent and stipitate-glandular.

Vegetative bud terminal.

Leaves deciduous, thin, chartaceous, the margins crenulate, each notch with a setose hair at the apex; lower surface primary veins setulose,

the midrib densely pubescent or sparsely setulose.

Petiole 5-15mm long, densely pubescent and setulose-glandular.

Inflorescence 1-flowered, buds axillary with persistent scales, crowded at the branch tips below the vegetative terminal bud, opening after the leaves have fully expanded.

Calyx 1-2mm long, 5-lobed,

their outer surface puberulous or glabrous, their margins glabrous setulose-glandular.

Corolla rotate-campanulate, 1.5-2cm wide, white, white flushed pink, or yellowish-white, with red spotting at the base of the lobes.

Stamens 5, very unequal, dimorphic and exserted:

the upper 2 with densely white-pilose filaments except at the tip and base, the anthers spherical; the lower 3 longer,

with filaments that are not hairy, or only sparsely puberulous at the base, the anthers oblong.

Ovary densely setulose-glandular.

Style straight, glabrous.

Capsule setulose-glandular.

Seed Collections:

W 7733	1914
Kurashige 269	1987
Kurashige 802	1987
Kurashige 829	1987

In addition to the four authenticated gatherings listed above, three additional collections, made by members of the Japanese Rhododendron Society, were listed on the 1977, 1979 and 1988 Seed Exchange run by the American Rhododendron Society.

Tschenoski Sugawa - Sukawa Chonosuke is the Japanese spelling - was the first plant collector to encounter *R. semibarbatum* in the wild, sending seed and herbarium specimens to his mentor, Karl Maximovich, at the Saint Petersburg Botanical Gardens, shortly after the Russian's own expedition to the Japanese archipelago concluded in 1864. Grown under glass, the species flowered in 1870 and received a Maximovich botanic description later that same year, the text appearing in Volume 15 of the *Bulletin of the Saint-Petersburg Imperial Academy of Sciences*. UK gardens had to wait until seed was sent over from the Arnold Arboretum soon after Ernest Wilson began his hugely successful 1914-15 collecting trip to Japan, this arriving under the field number W 7733.

R. semibarbatum is easily identified when in bloom by the pendant white to yellowish, red-spotted flowers, and by the strongly dimorphic stamens that jut from the tube of each rotate-campanulate corolla. Out of bloom, reliance can be placed in the setulose-glandular branchlets, petioles, pedicels, calyx, ovaries and capsules, and in the branch-tip whorls of chartaceous leaves, each with a crenulate and hairy margin. Leaf shape and size - elliptic to ovate, rather than obovate through oblong-obovate, each 2 to 6cm long instead of 5 to 18cm in length - along with the location of the vegetative growth buds - terminal instead of lateral - and the corolla shape - rotate-campanulate, as previously mentioned, rather than tubular-campanulate - are the character differences that key *R. semibarbatum* from its subsection partner, *R. nipponicum*.

Principally grown only for its fiery, wine-red autumn leaf colour, the species is a rare find in UK cultivation, as the small solitary flowers, while often grouped into clusters, are almost always hidden beneath the leaves and so go unnoticed and unremarked. Hardiness reports vary, reflecting the altitudinal distribution range, with clones sourced from the lower elevations requiring a slightly more sheltered spot in the garden. Otherwise, cultivation is straightforward.





R. semibarbatum



R. semibarbatum



R. semibarbatum



R. nipponicum

R. nipponicum

Hardiness:

H5-6.

Flowering Period:

May-July.

Distribution in the wild:

N & C Honshu, Japan.

Growing in moist, grassy mountain fields and deciduous woodland, at elevations of 900-2,000m.

Identification:

Bark shredding, papery, revealing polished reddish-brown stems. Vegetative shoots from separate axillary buds below the terminal inflorescence.

Leaves alternate, crowded at the branch tips; upper surface sparsely appressed-bristly, the margins densely hirsute; lower surface reticulate,

glabrous or sparsely appressed-bristly, the hairs when present both with or without glands.

Petiole subsessile, the leaf base decurrent.

Pedicel pendulous, densely glandular-ciliate, the hairs long-stalked.

Corolla tubular through tubular-campanulate, 1.5-2.4cm long, white, often flushed pale purple,

or with the tube greenish-white and the lobes flushed pink, the outer surface glabrous, the lobes short and sub-erect.

Stamens 10, unequal, shorter than the corolla.

Style straight, shorter than the corolla.

Seed Collections:

W 7191	1915
Kurashige 241	1987

In addition to the two authenticated gatherings listed above, an additional collection, made by a member of the Japanese Rhododendron Society, appeared on the 1991 American Rhododendron Society Seed Exchange.

R. nipponicum was both discovered and described by Jinzô Matsumura, professor of botany at the University of Tokyo and director of its botanical gardens. He collected the species in Tomaya Prefecture during 1883, gathering specimens from a population of plants established on Mount Tateyama, the tallest peak in the Hida Mountains, and one of Japan's *Sanreizan* - 'Three Holy Mountains' - Mount Fuji and Mount Haku completing the triumvirate. His description of the rhododendron appeared in Volume 13 of *Shokubutsugaku Zasshi*, the magazine of the Tokyo Botanical Society, which was published in 1899. Ernest Wilson was the first Western collector to encounter the species, doing so during his 1914-15 expedition to Japan for the Arnold Arboretum. He was also the first to introduce the shrub into cultivation, under W 7191.

R. nipponicum is one of the most primitive species in the genus and shares many of its characteristics with the plants of Subsection *Menziesia*, as well as with the azaleas of Subsection *Sciadorhodia*. Its leaves most closely resemble those of *R. schlippenbachii*, but the shredding papery bark, unmasking stems of reddish-brown, clearly distinguish the two, as do the new shoots, which emerge from separate lateral buds rather than from within the same bud scales as the inflorescence. The pendant, tubular flowers, while not urceolate, clearly mirror those of the Subsection *Menziesia* species, populations of which are resident on the same hillsides in central Honshu, and fieldwork by Japanese botanists has shown the flowers are often flushed pale purple, this heightening the resemblance still further (a facet that is missing from Western botanic descriptions of the taxon).

Identifying *R. nipponicum* from one of its endemic neighbours is a cinch because the leaf blades are twice as large as any borne by a Subsection *Menziesia* rhododendron, far more rugose, and in addition, they have a wedge-shaped, rather than pointed base.

Mature specimens of *R. nipponicum* are a very rare find in British gardens, despite the fine foliage, the good autumn colour, and the polished red-brown bark. Cultivation requirements are similar to those for the Subsection *Sciadorhodia* azaleas, although a near fully-grown plant will rarely exceed 1m in height.



R. nipponicum



R. nipponicum

Photographic Acknowledgements:

Mirroring Volume 1, 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.

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. 60-L; p. 61-R; p. 134-AL, BL, R.

Benmore Botanic Garden, Argyll:

<https://www.rbge.org.uk/visit/benmore-botanic-garden>
p. 19-R; p. 20-BL; p. 52; p. 68-L; p. 71-BR; p. 72; p. 75; p. 77-L, AR, BR; p. 81-AR.

Branklyn Garden, Perth:

<https://www.nts.org.uk/visit/places/branklyn-garden>
p. 24-L, AR; p. 43.

Dawyck Botanic Garden, Stobo, Peebles:

<https://www.rbge.org.uk/visit/dawyck-botanic-garden>
p. 50; p. 80-BR.

Glenarn Gardens, Rhu, Helensburgh:

<https://www.discoverscottishgardens.org/garden/glenarn-glorious-gardens-of-argyll-and-bute/>
p. 109.

Glendoick Gardens Ltd, Perth:

<https://glendoick.com/>
Front Cover; p. 15-AL, AR, BL, BR; p. 23; p. 24-BR; p. 25; p. 29-BL, BR; p. 31-R; p. 33-BL; p. 53; p. 67-AR, BR; p. 137-L; p. 139.

Howick Hall Gardens & Arboretum, Alnwick, Northumberland:

<https://howickhallgardens.com/>
p. 99-R.

Inverewe Gardens, Poolewe, Wester Ross:

<https://www.nts.org.uk/visit/places/inverewe>
p. 67-AL, BL.

Lakeland Horticultural Society, Holehird Gardens:

<https://holehirdgardens.org.uk/the-society>
p. 11-R.

Leonardslee Gardens, Horsham, West Sussex:

<https://www.leonardsleegardens.co.uk/about-us>

p. 36.

Logan Botanic Garden, Stranraer:

<https://www.rbge.org.uk/visit/logan-botanic-garden/>
p. 22-B; p. 90-AL; p. 91-BL, R; p. 94; p. 95-BL; p. 100; p. 101-BR; p. 103-BL, R; p. 118-BR; p. 119-AR, BR; p. 120; p. 121-BR; p. 122-AR, BR; p. 138-AR; p. 146; p. 147-BR; p. 148-AL, BL, R.

Muncaster Castle Gardens, Ravenglass, Cumbria:

<https://www.muncaster.co.uk/>
p. 5-Title Page; p. 39; p. 47; p. 48; p. 49; p. 54-BR; p. 55; p. 58-L, R; p. 62; p. 63; p. 65-BL, R; p. 79-AL, BL, R; p. 84-BL; p. 85; p. 86; p. 87-BR; p. 88; p. 89; p. 106; p. 108-R; p. 123; Back Cover-BL.

Public Domain:

p. 34 - *Rhododendron albiflorum*, Tab 3670, *Curtis's Botanical Magazine*, Volume 65, 1839.

Ray Wood, Castle Howard, North Yorkshire:

<https://www.castlehoward.co.uk/visit-us/the-gardens/the-woodland-garden>
p. 18-AL; p. 21-R; p. 26; p. 27-AR, BR; p. 95-AL; p. 114-L; p. 115-BL; p. 128; p. 129-BR; p. 130-AR, BR; p. 151-L; p. 152-AR, BR; p. 153; Back Cover-AR.

Royal Botanic Garden, Edinburgh:

<https://www.rbge.org.uk/visit/royal-botanic-garden-edinburgh/>
p. 5-Title Page; p. 7-Contents; p. 9-Subgenus *Therorhodion*; p. 10-AL; p. 13-BR; p. 14; p. 28-L, BR; p. 32-AL; p. 33-R; p. 38-L, AR, BR; p. 42-L, AR, BR; p. 61-BL; p. 64-AL; p. 81-BR; p. 82; p. 83; p. 92; p. 95-R; p. 110-BR; p. 111-R; p. 113; p. 116-L; p. 117-AR, BR; p. 124-BR; p. 125-AL; p. 140; p. 143-L; Back Cover-AL.

Royal Botanic Garden, Wakehurst Place:

<https://www.kew.org/wakehurst>
p. 112; p. 135-L; p. 136-AR, BR; p. 138-BR; p. 143-R; p. 145-AL, AR, BL, BR.

Royal Horticultural Society, Wisley:

<https://www.rhs.org.uk/gardens/wisley>
p. 98; p. 114-AR, BR; p. 115-AR, BR.

Savill Garden, Windsor Great Park:

<https://www.windsorgreatpark.co.uk/en/experiences/the-savill-garden>
p. 56-AL; p. 96-BL; p. 105; p. 107-AL, BL; p. 115-AL; p. 142-L; Back Cover-BR.

Sir Harold Hillier Gardens, Ampfield, Romsey:

<https://www.hants.gov.uk/thingstodo/hilliergardens>
p. 45; p. 46; p. 69; p. 70-BR.

Valley Gardens, Windsor Great Park:

<https://www.windsorgreatpark.co.uk/en/experiences/the-valley-gardens>
p. 17-Subgenus *Azaleastrum*; p. 40; p. 59; p. 74-AR, BR; p. 84-AL; p. 96-AL; p. 97-AR, B; p. 103-AL; p. 141-BR.

Index of Plants:

Subgenera:			
Azaleastrum	17	poukhanense	141
Therorhodion	9	quinquefolium	44
Sections:			
Sciadorhodion	18	redowskianum	12
Tsutsusi	56	reticulatum	71
		ripense	129
		rubropilosum	137
		saxicolum	149
		scabrum	104
Subsections:			
Azaleastra	56	schlippenbachii	37
Brachycalx	64	semibarbatum	156
Menziesia	18	serpyllifolium	107
Sciadorhodia	32	simsii	101
Tsutsusia	90	stenopetalum	121
Viscidula	154	subsessile	132
		taiwanalpinum	151
		tashiroi	78
Species:			
albiflorum	34	tosaense	131
albrechtii	41	tschonoskii	124
amagianum	84	tsusiophyllum	116
atrovirens	126	vaseyi	51
benhallii	22	wadanum	81
breviperulatum	144	weyrichii	76
camtschaticum	12	yakushimense	31
chilanshanense	87		
decandrum	80		
dilatatum	66		
eriocarpum	133		
farrerae	68		
glandulosum	12		
goyozanense	30		
indicum	93		
kaempferi	96		
kanehirae	147		
katsumatae	30		
kiusianum	110		
kroniae	27		
leptothrium	60		
menziesii	20		
microphyton	127		
multiflorum	29		
nakaharae	135		
nipponicum	158		
noriakianum	150		
oldhamii	118		
ovatum	57		
pentandrum	28		
pentaphyllum	54		
pilosum	21		

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 absolutely denied.

- back cover -

<i>R. camtschaticum</i>	<i>R. taiwanalpinum</i> (RV 74003)
<i>R. chilanshanense</i> (ETOT 136)	<i>R. ovatum</i> (W 1391)

