R.H.S. PUBLICATIONS

YEAR BOOKS

FRUIT

Much practical information has been included this year. Reprints of outstanding papers read at the Thirteenth International Horticultural Congress include "New Varieties of Fruit in the U.K.," by J. M. S. Potter, "The Genetics and Breeding of Fruit Trees," by M. B. Crane and "Harmonizing Chemical with Biological Control of Orchard Insects," by Dr. W. A. Ross. Mr. R. J. Garner has described the double-working of fruit trees to overcome incompatibility and Mr. Eric W. Hobbis, orchard renovation by top-grafting. Miss R. Elston writes on decorative Apple Blossoms. Foliage sprays for correcting nutrient deficiencies of fruit trees are described by Dr. E. Bould and Mr. A. P. Preston advises on new Apple rootstocks. Reports of the Fruit Show, the Fruit Group's excursions and discussions, including Miss B. A. Crang's excellent talk on the preservation of fruit, are of practical importance.

LILY

Dr. W. B. Turrill of Kew contributes a scholarly article on the Lilies of the Balkans, while Mr. L. H. J. Williams describes the Lilies and Fritillaries he saw in Nepal. Colonel F. C. Stern tells of his new *aurelianense* hybrids and Dr. Yeates discusses the new *speciosum* × *auratum* hybrids in New Zealand. Miss E. K. Field's useful descriptions of Lily bulbs are well illustrated by her facile drawings. Dr. Neil W. Stuart's article on the effects of storage temperature on the forcing responses of the Easter Lily has been reprinted from the Report of the 13th International Horticultural Congress. Mrs. Maxwell's description of Lilies in her garden in Scotland and Mrs. Norman Henry's account of Lilies in her garden in Pennsylvania contrast well. The Lily Group discussions on hybridization and cultivation reveal new and practical information. Major Knox Finlay's article on Nomocharis at Keillour is of particular interest. Reports of Lily Shows here and abroad together with descriptions and illustrations of new varieties and award plants show current trends.

DAFFODIL and TULIP

Mr. C. H. Curtis, to whom this volume is dedicated, has written about his fifty years with the Narcissus and Tulip Committee. Major Habershon points out common mistakes connected with the culture of Daffodils. Mr. J. P. Taylor's account of Daffodils and Tulips at Covent Garden through the years has special charm and Daffodils in a London Garden by Mr. D. A. Lloyd will be of interest to town gardeners. Mr. J. L. Richardson recounts experiences in the raising of new Daffodils, and Mr. Cyril F. Coleman writes on Daffodil Literature. Dr. A. J. Bateman's scientific article entitled "The Genetics of Narcissus—Sterility" will be of use to hybridizers. Mr. M. Zandbergen describes the great Spring Show at Heemstede and Guy Wilson gives a colourful account of Holland in Tulip time. Notes range from observations on the Polyodorous Tulip to Daffodils on postage stamps.

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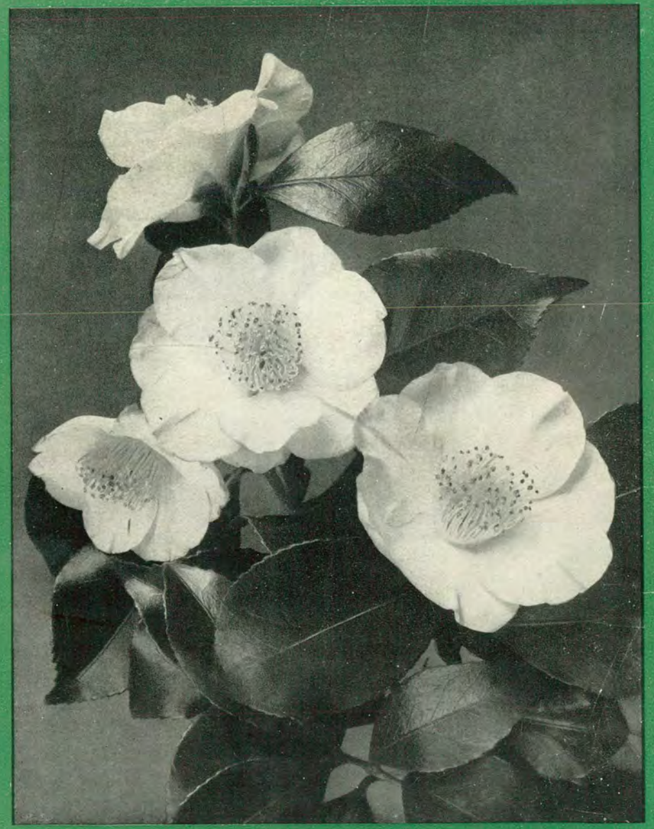
THE ROYAL HORTICULTURAL SOCIETY

VINCENT SQUARE, LONDON, S.W.1

R.H.S. RHODODENDRON AND CAMELLIA YEAR BOOK 1954

THE RHODODENDRON AND CAMELLIA



YEAR BOOK . 1954

THE ROYAL HORTICULTURAL SOCIETY

THE INCLUSION of the genus Camellia in the *Rhododendron YearBook* will be welcomed. A tribute is paid to the late Lord Aberconway and his achievements in raising hybrid Rhododendrons at Bodnant. The late Mr. Lionel de Rothschild's notes on Rhododendron species are concluded. The Dowager Marchioness of Londonderry describes her famous gardens at Mount Stewart in Northern Ireland. Mr. Eric Savill has written a valuable account of the transfer of the Stevenson collection of Rhododendron species from Tower Court to Windsor. Mr. H. H. Davidian continues the revision of the Series of Rhododendron with accounts of the Campylogynum and Saluenense Series, and with Dr. S. Macqueen Cowan contributes other notes connected with nomenclature. From America comes an account by Mr. Ralph Peer of his quest for the Yellow Camellia, a useful illustrated article on *C. Sasanqua* by Mr. K. Sawada, notes on propagation by Mr. James S. Wells and descriptions of the Tacoma and Seattle Rhododendron Shows. Reports of R.H.S. Shows, Trials and Awards are included.

COVER ILLUSTRATION

Camellia japonica
'alba simplex' 'Snow Goose'

Photograph
J. E. Downward

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Acknowledgements

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THE LATE LORD ABERCONWAY, C.B.E., LL.D., D.SC., V.M.H.,
in the gardens at Bodnant with Rhododendrons 'Elizabeth' and 'Cowslip',
both of which were raised at Bodnant

THE RHODODENDRON AND CAMELLIA YEAR BOOK

1954

NUMBER EIGHT

THE ROYAL HORTICULTURAL SOCIETY
VINCENT SQUARE, S.W.1
LONDON

PUBLISHED NOVEMBER 1953

PRINTED IN GREAT BRITAIN
BY W. & J. MACKAY & CO., LTD., CHATHAM

CONTENTS

CONTENTS

LIST OF ILLUSTRATIONS

LORD ABERCONWAY AND RHODODENDRONS AT BODNANT

IT has become traditional in the horticultural world to associate the name of the late Lord ABERCONWAY and the gardens at Bodnant with the cultivation of Rhododendrons, and his achievements in this field certainly equal those of any of the great growers of the century.

The position of the Bodnant gardens with the natural dell and its river and the blue mountains sprinkled with snow in the distance make a natural setting for a woodland garden of unparalleled beauty and visitors to Bodnant in the spring months will long remember the lovely effects obtained, gardening on a scale such as probably no other private individual can indulge in to-day. Each week-end, walking constantly round the garden with his gardener and often a party of friends, Lord ABERCONWAY directed and planned his plantings and crosses with indefatigable energy. Many will remember with pleasure among the great days of their life the tours round the Bodnant gardens led by him.

Hybridization at Bodnant followed certain definite lines and the one which Lord ABERCONWAY, working in conjunction with his son, the present Lord ABERCONWAY, and with his successive head gardeners, the late Mr. F. C. PUDDLE and his son Mr. C. E. PUDDLE, pursued furthest was the production of deep red hybrids, largely originating in crosses with *R. Griersonianum*, 'the Bodnant bloody reds' as they have been affectionately termed. Probably the one of which he was most proud, is 'Elizabeth' (*repens* × *Griersonianum*) F.C.C. 1943, a very free flowering bush with flowers of a deep blood-red colour, and of a modest size so that it is suitable for every Rhododendron garden, however small Another merit of R. 'Elizabeth' is the ease with which it can be propagated from cuttings.

Lord ABERCONWAY also used *R. Griersonianum* as a parent for crosses with larger growing species and out of these came such fine plants with deep red flowers as 'Laura Aberconway' (*Griersonianum* × 'Barclayi'), 'Matador' (*Griersonianum* × *strigillosum*) and 'Gretia' ('Portia' × *Griersonianum*), while among those with lighter coloured flowers were 'Vanessa' ('Soulbut' × *Griersonianum*), surely one of the most beautiful pastel shaded Rhododendrons yet raised, 'Fabia' (*dichroanthum* × *Griersonianum*) and 'Sunrise' (*Griffithianum* × *Griersonianum*). Another very

lovely plant growing only to a few feet in height was 'Winsome' ('Humming Bird' × *Griersonianum*) which many will remember from the exhibit at Chelsea in 1950 when it received an Award of Merit.

He was pleased that all these hybrids were considerably hardier than some of their parents and would grow well in gardens where such plants as *R. Griffithianum* and *R. Griersonianum* would not survive. They were also much more free-flowering and thus were developed two most valuable garden characteristics which had not always been prominent in their parents. Another character of these hybrids is the early age at which they flower.

The raising of dwarf-growing hybrids, which would be suitable for the rock garden or the small garden, was another very successful part of the Bodnant programme and one which will undoubtedly benefit the smaller gardens which are being made now, and which are likely to be made in the next few decades. In addition to 'Elizabeth', there are 'Ethel' ('F. C. Puddle' × *repens*) F.C.C. 1940 with flowers described as a 'rich shade of light crimson-scarlet' and with a coloured calyx of the same shade; 'May Morn' ('May Day' × *Beanianum* pink form) A.M. 1946 with flowers of a delicate coral pink colour and 'Rufus' (*repens* × *sanguineum*).

Two early flowering Rhododendrons of very great merit were raised at Bodnant namely 'Cilpinense' (*ciliatum* × *moupinense*) with pale pink flowers, and 'Choremia', the latter a cross between *R. haematodes* and *R. arboreum* and producing a large truss of very brilliant waxy-red flowers. It received a F.C.C. when shown in February, 1948. Another even more brilliant red, perhaps the strongest scarlet yet raised, is 'Welkin' ('Eros' × *haematodes*) which also received a F.C.C. at Chelsea, 1952 and was figured in the Society's Journal. This hybrid showed well the petaloid calyx often derived from *R. haematodes* or *R. dichroanthum*. 'Welkin' also has a beautifully shaped bell, a character which it may have inherited from 'Penjerrick', through 'Eros' and 'Amaura'.

Lord ABERCONWAY was also very interested in a range of hybrids which he raised from *R. haematodes*; he considered this to be a fine parent and greatly admired the brilliance of colour which it transmitted to its offspring as well as the heavy calyx which it passed on to its hybrids although itself being without it. In addition to 'Choremia' and 'Welkin' there were 'Aspansia' ('Astarte' × *haematodes*) A.M. 1945, 'Phoebus' ('F.C. Puddle' × *haematodes*) and 'Vega' ('Fabia' × *haematodes*).

Other notable red hybrids from Bodnant include 'Redwing', 'Portia' and 'Cardinal' (*arboreum* × 'Barclayi') F.C.C. 1937; some of these have

grown to a great size there. In addition there were a number of very fine hybrids with flowers of lighter shades such as 'Hiraethlyn' (*haematodes* × *Griffithianum*) and 'Elros' ('Eros' × *Elliottii*) A.M. 1948, an attractive plant with rosy salmon-pink flowers.

Lord ABERCONWAY was particularly fond of Rhododendron 'Penjerrick' and often remarked that he knew of no other Rhododendron to surpass it for beauty of form. He was able to obtain a number of plants from the original cross and these are planted freely at Bodnant. Rhododendron enthusiasts will remember especially the 'Penjerrick' walk on the hillside beyond the river where one walks under a whole series of big bushes of varying colour forms. It is so arranged that one does not see it from a distance, but suddenly arrives at one end, an unexpected surprise and undoubtedly one of the great features of the garden. When once Lord ABERCONWAY had decided that a particular plant was unusually good, he would plant it freely and always advocated this as one of the principles of good gardening. The lavish planting at Bodnant of 'Penjerrick', 'Loderi', 'Redwing' and 'Elizabeth' among the Rhododendrons, of certain Magnolias, Eucryphias and the 'Norquinco' form of *Embothrium lanceolatum* pay abundant tribute to the success of this principle.

The Rhododendron species were not neglected, and especially prominent are such charming plants as *R. Williamsianum* and the freely flowering ring of this Rhododendron encircling a small pool is an attractive feature. In April the plantings of the deciduous Azalea species such as *R. Albrechtii* and *R. Schlippenbachii* below the house and the groups of *R. Augustinii* as well as the fine specimens of *R. Davidsonianum* are of unusual beauty. There are some very richly-coloured forms obtained from breeding together the two best forms he could find of *R. Davidsonianum* and it is surprising how much improvement the best of these show over the commonly accepted plants of the species. The same improvement has been attained also in the case of *R. Albrechtii*.

Other lines of hybridization led from *R. concatenans* to the beautiful orange bell-flowered 'Conroy' which was shown at Chelsea in 1950 to receive an Award of Merit, and from the yellow form of *R. cinnabarinum* and the orange form of 'Royal Flush' to 'Bodnant Yellow', a F.C.C. plant with yellow flowers with corollas of a thick waxy texture. Lord ABERCONWAY always maintained that it should be regarded as a separate hybrid from 'Lady Chamberlain' since he had used a different form of 'Royal Flush' from that used for 'Lady Chamberlain' and his fine plant certainly justifies its separate name, since it is very distinct and he rightly regarded it as one of the plants of which he was most

proud. Lord ABERCONWAY also raised one of the best dwarf blue-flowering Rhododendrons in 'Bluebird' and he considered, probably rightly, that it was the purest blue of that range of hybrids.

Another plant of great beauty at Bodnant is the white-flowered R. 'Sir Charles Lemon', a form of *R. arboreum*, with the bright rust-coloured indumentum on the undersides of the leaves. This grows particularly well at a point of vantage near the front door.

The tender Rhododendrons were not neglected and many will remember the beautiful bowls of 'Javanese hybrids' from Bodnant often to be seen on the President's table for his speech at the Annual General Meeting as well as the enormous flowers of *R.* 'Tyermanii' on the wall of the big conservatory at Bodnant or in vases at the Rhododendron Show. In the frames of tender Rhododendrons and against the wall of the frame yard, protected in cold spells by thick canvas curtains, were a number of beautiful hybrids raised from yellow flowering species and these included 'Chrysaspis', 'Chrysomanicum' and several others which had accentuated the depth of colour and freedom of flower of their parents. Unfortunately, however, they had not in this case attained any much greater hardiness.

The Camellias at Bodnant were a feature in which Lord ABERCONWAY took an ever-increasing interest during the later years. *Camellia Williamsii* 'J. C. Williams' was one of his favourite plants and he once wrote that he regarded it as one of the best shrubs ever introduced to our gardens, a judgement with which many may well agree. The plant of *C. reticulata semiplena* against the house was unusually prodigal with its flowers and confirmed well Lord ABERCONWAY's contention that in order to flower Camellias freely they should be planted where they could get some sun and not always with a north aspect.

Lord ABERCONWAY imported from America a set of the forms of *Camellia reticulata* derived from those in the Temple Gardens of Kunming and took an especial interest in these, anticipating that they would make very notable additions to our range of Camellias.

Both Rhododendrons and Camellias, particularly those which could be raised from cuttings, were propagated very freely at Bodnant and often with great skill in the case of some of the more difficult species. Lord ABERCONWAY was most generous with gifts of plants to his visitors, often inviting them to make a list of their desiderata, and few came away without some little plant, while to such gardens as Wisley and the Great Park at Windsor he sent very large consignments of his best hybrids.

In addition to Rhododendrons Lord ABERCONWAY was particularly interested in white Cypripedium hybrids in which he made most

notable advances both in quality of form and size, in the pale yellow Clivias and also in Hippeastrum hybrids which he often showed at Chelsea.

The Rhododendron Show always owed much to Bodnant Rhododendrons and Lord ABERCONWAY liked to enter in as many classes as he could and always carried off a large share of the awards. These were not won, however, without hard work and on the afternoons before the show, aided by members of his family, he could always be found on the dais of the hall selecting and arranging specimens for the various classes from a great mass of material which often filled the whole area of the dais. The success in recent years of the Camellia Shows and the Camellia and Magnolia Conference was also largely due to his enthusiasm for these two genera.

In the 1952 edition of the *Rhododendron Handbook* the stud list includes no fewer than 298 hybrids raised by him while in Table III there are a further eight distinct varieties of previously registered hybrids, and these, of course, must represent only a small proportion of those actually raised and either subsequently discarded or not yet shown or named.

Lord ABERCONWAY also was a constant and enthusiastic supporter of plant hunting expeditions particularly those to Western China and the triangle between China, N. Burma and Tibet, and that beautiful species *R. Aberconwayi* was fittingly named after him, having been collected by one of the Chinese collectors whom he took over when GEORGE FORREST died. Many other species were first shown and introduced from plants grown at Bodnant.

It is good to think that the great garden at Bodnant, the mature achievement of over fifty years of planning and selection and raising of plants will be maintained through the Gardens Committee of the National Trust due to the foresight and generosity of Lord ABERCONWAY, while an ever-increasing number of the Rhododendrons raised at Bodnant are being distributed throughout the gardens of the world. Rhododendron lovers owe an unpayable debt to the four great giants among the Rhododendron raisers of the last half century, Mr. LIONEL DE ROTHSCHILD, Mr. J. C. WILLIAMS, Mr. J. B. STEVENSON and Lord ABERCONWAY, and it is unlikely that their achievements in Rhododendron growing can ever again be equalled or surpassed, although new varieties will doubtless continue to come and go.

In the preparation of this article the Editor would like to acknowledge particularly the help of the present Lord ABERCONWAY, as well as that of the Hon. ROBERT JAMES, Mr. F. HANGER and Mr. N. K. GOULD.

PATRICK M. SYNGE

RHODODENDRONS AT MOUNT STEWART, CO. DOWN NORTHERN IRELAND

by

Edith, Marchioness Dowager of Londonderry, D.B.E., LL.D.

MOUNT STEWART stands on the southern shore of the Ards peninsula in Co. Down. It is a very narrow peninsula, in shape like a dog's leg, 8 miles across at its widest, and much less nearer the sea. It runs east for about 10 miles to the Irish Sea, where it turns abruptly due south for several miles until it reaches Strangford Loch, where the mouth is only some hundred yards across. The loch runs 17 miles inland.

The house faces almost due south looking out across the loch to the Mountains of Mourne. The north side of the peninsula is encompassed by another great sheet of water, Belfast Loch, which flows almost completely round the northern shore of the peninsula, leaving only a very narrow neck of land not sea-girt, so although Mount Stewart is on the east coast it enjoys, not only island conditions, but the influence of the Gulf Stream which flows up the Irish Sea as well. The rainfall is only about the same as the Thames Valley, but we have, owing to island conditions, a very humid atmosphere, and in fine hot weather, the very heavy dews are responsible for the health and vigour of the Rhododendrons (Figs. 1 and 2).

The lie of the land is undulating, a succession of rounded eminences, thickly wooded. A master-mind carried out the planting of the estate some 200 years ago. The shelter afforded from cold and severe winds, combined with humidity, accounts, we think, for the rapid growth of most of the trees and shrubs. Apart from many magnificent specimens of the old red Himalayan *Rhododendron arboreum* planted about a hundred years ago, the modern gardens and the newer Rhododendrons only date from the early 1920's.

Encouraged by such experts as the late Sir HERBERT MAXWELL of Monreith, Wigtownshire, and the late Sir JOHN ROSS of Bladensburg, who lived at Rostrevor in Co. Down, we resolved to subscribe to the FORREST expeditions of 1924 and 1925 onwards, also some of ROCK's and KINGDON-WARD's, beginning about the same date, in Tibet and

Bhutan, and north Yunnan, etc. Kind friends also gave me some plants and seeds from former expeditions, but most of the plants here have been grown from seeds from these expeditions; considering the comparatively short space of time, they have made great growth.

The carriage drive is beneath the slope of a hill terminating in a high steep bank crowned with massive old Ilex trees and two gigantic *Erica arborea*. These are veritable trees reputed to be the largest in the British Isles.

At the foot of the slope is a planting of some 45 *R. Macabeanum* some of which are already 18 ft. high and 12 ft. through. They have come into their full beauty of leaf and flower during the last two or three years. One of the trusses which we measured on Easter Day this year in April had a depth of 9½ in. and was 9 in. wide, whilst across the mouth, a single bell was 3 in. wide and 3 in. in depth, of a really good yellow. They were only planted in their present position just before the second World War. Here also are three beautiful R. 'Polar Bear', given to me by the late Mr. J. B. STEVENSON and planted in the autumn of 1938. These shrubs are now 18 ft. in diameter and the same in height. They bloom regularly every season. Close to them an *Actinidia chinensis* has grown to the top of a large and very old Acacia tree. It is a wonderful sight every year covered with its remarkable sweet-scented apricot flowers the size of florins, with its large-leaved velvety foliage. Below the Actinidia are two large shrubs of *R. auriculatum*; the lovely waxy-white scented flowers are out at the time of writing this article.

Leaving the carriage drive and turning up towards the lake and the gardens, there is another fine large Rhododendron, *R. diaprepes*, also covered with bloom. It has almost reached tree dimensions being 19 ft. high. It is flanked by two good 'Cornish Cross' nearly as tall, and these in turn are surrounded by a planting of six very large *Cordyline indivisa vera*, some 15 ft. high, underplanted with *Lilium giganteum* which grow here up to 8 ft. or more when minded to do so.

At this season of the year we are fortunate in the scented white Rhododendrons. *R. crassum* flowers profusely in the woods and one lovely shrub is 14½ ft. in diameter and 10 ft. high. Amongst these late-flowering scented treasures, I must include *R. Maddenii* and *R. manipurense*. Earlier in the year there are *R. Lindleyi*, *R. megacalyx*, *R. Taggianum* and *R. Dalhousiae*, and there is a nice planting of twelve or more shrubs of *Johnstoneanum* in an adjoining slope of a wood facing west. Here too, further up the slope is a large group of *R. Elliottii*. There must be thirty plants in all, some 12 ft. high. Altogether we have about fifty plants of this lovely brilliant red Rhododendron from a KINGDON-WARD expedition. Scattered through this wood, which

overlooks a lake in the gardens, are some quite tall Rhododendrons the first we planted—*R. decorum* 18 ft. high and 17 ft. through, *R. Falconeri* 19 ft. × 14 ft. and a nice *R. grande*, the yellow form. The pink form, which I still prefer to call *R. argenteum*, grows nearer the house and has reached tree dimensions, being some 20 ft. high and 14 ft. through. Its really silvery leaves are quite distinct from the yellow flowered form just mentioned, both in shape and colour (Fig. 4).

To return to the wood, there is also a nice group of 30 *R. magnificum*. Another large group further on comprises some twenty plants of *R. fictolacteum*, and there are at least twenty more large plants of this species still waiting to be sorted out and grouped in more suitable positions.

There is so much to be done in the way of re-grouping that it is hard to know where to begin. These grounds and gardens, in common with so many others, had nothing done to them during the long war years, and in a sub-tropical climate such as ours, the shrubs were either choked out of existence by the weeds and undergrowth, or else they romped happily away into great tangled masses of vegetation, trees and shrubs growing in and out of one another. These suffered not at all in health, but it will require time for them to get their figures into shape again.

Near the shores of the lake there is a group of *R. eriogynum*. These are now about 14 ft. high with a diameter of 12 ft. and at the moment are in bloom. Above them on the slope is the only plant I have of *R.* 'Tyermanii', which is 10 ft. × 8 ft. It bloomed this year very well in the open, but too late for the Rhododendron Show. Next we come to a fine group of *R. magnificum*, of which we have about 200 plants, and not far off is a most pleasing evergreen tree, *Cunninghamia lanceolata*—its crest unfortunately was flattened by an unexpected and heavy fall of snow four years ago. In this wood there are also some good trees of *Eucryphia cordifolia* over 20 ft. tall. Planted throughout the wood are the *R. sinogrande*. Our best one is 17 ft. high and 20 ft. through. Their foliage in these sheltered woods is magnificent. Here also is *R. Hodgsonii*, 20 ft. high and 17½ ft. wide, *R. Hookeri*, and some splendid *R. bullatum* from seeds of one of KINGDON-WARD'S expeditions. Plants of *R. Keysii* are most attractive, as some of them are now 12 ft. high and are coming into their own. *R. arizelum* is represented by a group of ten and *R. discolor* is very pleasant, flowering at this time of year. Our best *R. campanulatum*, almost blue in colour, was nearly annihilated by the hitherto unknown heavy snowfall previously referred to, but is growing up again quickly. There is also a good yellow form of *R. campylocarpum* in various parts of the woods, which reminds me of

another yellow with its glaucous blue foliage, *R. concatenans*. *R. Griffithianum*, which I still call *R. Aucklandii*, is amongst my oldest and favourite shrubs, also *R. Thomsonii*, one of which I bought in 1939 from A. E. WINN, F.R.H.S., Tremough Garden, Penryn, which he called *Thomsonii grandiflora*. It certainly has a larger bell and it is a magnificent colour. We also have the Chinese form, *R. Meddianum*. An avenue leading down to Strangford Loch has several *R. Thomsonii* and some very good *R. barbatum*, but it is mostly composed of *R. arboreum*, pinks and blood red, which have grown very tall and are a lovely sight when in bloom in March.

R. zaleucum, *triflorum*, *bauhiniiflorum* and *stereophyllum* are all growing profusely; also a nice lot of *R. vernicosum* with really pink flowers.

Nearer the house we have *R. burmanicum*, *repens*, *Williamsianum*, *leucaspis*, and a bed of *tephropeplum* underplanted with *Primula obconica*, which we find does very well out-of-doors. Beyond this bed there is a planting of *Meconopsis grandis* and *betonicifolia* in the background, where grow also many Eucalyptus trees, the old ones all *globosa*, and beds of *Lilium giganteum*. On the walls of the terrace below the house but near enough for us to enjoy their wonderful fragrance, are several plants of R. 'Fragrantissimum' (Fig 3). 'Lady Alice Fitzwilliam' is also here, R. 'Countess of Haddington' and a nice glaucous-leaved *cinnabarinum* var. *Roylei* is near them next to a large tree of *Ceanothus arboreus*.

At the foot of another wall below the terrace we have *R.* 'Victorianum' and *R. Edgeworthii*. There used to be a lovely *sinonuttallii* which died in the war years. It flowered beautifully in the open woodland, but another is just about to take its place. The plants of *R. Delavayi* are favourites of mine and have grown into very large shrubs. Amongst other hybrids are 'Tallyho', 'Firebird ' and 'Thomas Bolas', the last hybridized here and named after my first gardener who raised all the Rhododendrons. It is a *decorum* × *Fortunei*, pinkish lilac in colour with a strong delicious scent.

Mount Stewart feels highly honoured that its Rhododendrons, which are only some 30-odd years old (as indeed are also the gardens surrounding the house), should have been considered worthy to be mentioned in this RHODODODENDRON YEAR BOOK. Had it not been such a sheltered situation, and blessed with a favourable climate, it would not have been possible to grow these large plants in such a short space of time.

THE COLLECTION OF RHODODENDRON SPECIES IN WINDSOR GREAT PARK

PROGRESS REPORT

by

E. H. Savill, C.V.O., C.B.E., M.C.

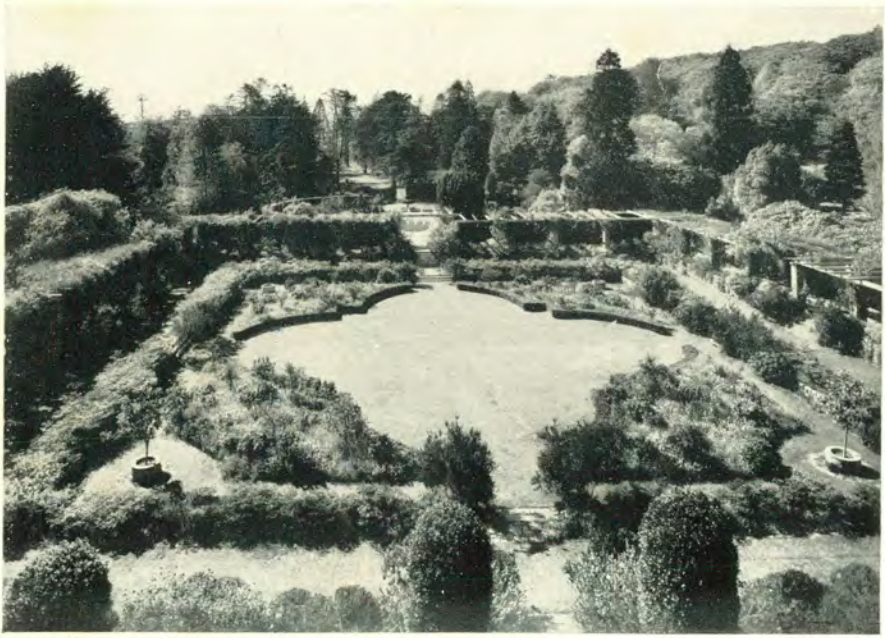
IT was very fortunate that His Majesty King George VI was a keen gardener, for when the collection of Rhododendron Species at Tower Court, Ascot, was offered for sale, after the death of Mr. J. B. STEVENSON, the King immediately took a keen interest in its acquisition and it was with his personal encouragement that negotiations were successfully carried through.

The original collection was first started by Mr. J. B. STEVENSON at Tower Court, Ascot, in 1918. I have asked Mrs. STEVENSON to give me an account of its initiation and she has kindly replied to me as follows:

> "Because of the great muddle and lack of general knowledge upon the genus Rhododendron, my husband conceived the idea of grouping the species and planting them in one piece of ground in order to solve the problems and through this grew the idea of producing a document. My husband then worked along with his living plants upon the series and for the Rhododendron Society he edited *The Species of Rhododendrons* which was produced in 1930. The Introduction by my husband explains the reasons for producing such a work. So it will be seen that this book grew out of the idea of *The Species Collection* and after *The Species of Rhododendrons* was produced, the Tower Court collection became 'the book in being'.
>
> It will be readily understood, with such a large genus, what a task and undertaking this work in general became. I can well remember, for years before the book was eventually produced, the amount of checking and cross-checking upon names, number, series, etc. we did between us at Tower Court, for my husband was determined to have the whole subject in one book in order to form a basis from which further work could be carried on in the future, as it is now proving to be, under Dr. MACQUEEN COWAN's careful guidance at Edinburgh Botanic Garden."

It is probably safe to say that there is no other collection of Rhododendron species in the world so large and so comprehensive. Its

FIG. 1.—View from the house across Strangford Loch with an almost tropical effect of Eucalyptus, Cordylines, and Rhododendrons (*see* p. 12)



Photos. Country Life]

RHODODENDRONS AT MOUNT STEWART

FIG. 2.—A formal garden and beyond a circular garden with a hunt in topiary on top of the hedge

Photo. Country Life]

FIG. 3.—Rhododendron 'Fragrantissimum' against the wall of the terrace in the South garden

(*see* p. 15)

Photo. Country Life]

FIG. 4.—View of the lake looking south and showing the mixed planting of Conifers, Rhododendrons and flowering trees and shrubs (*see* p. 14)

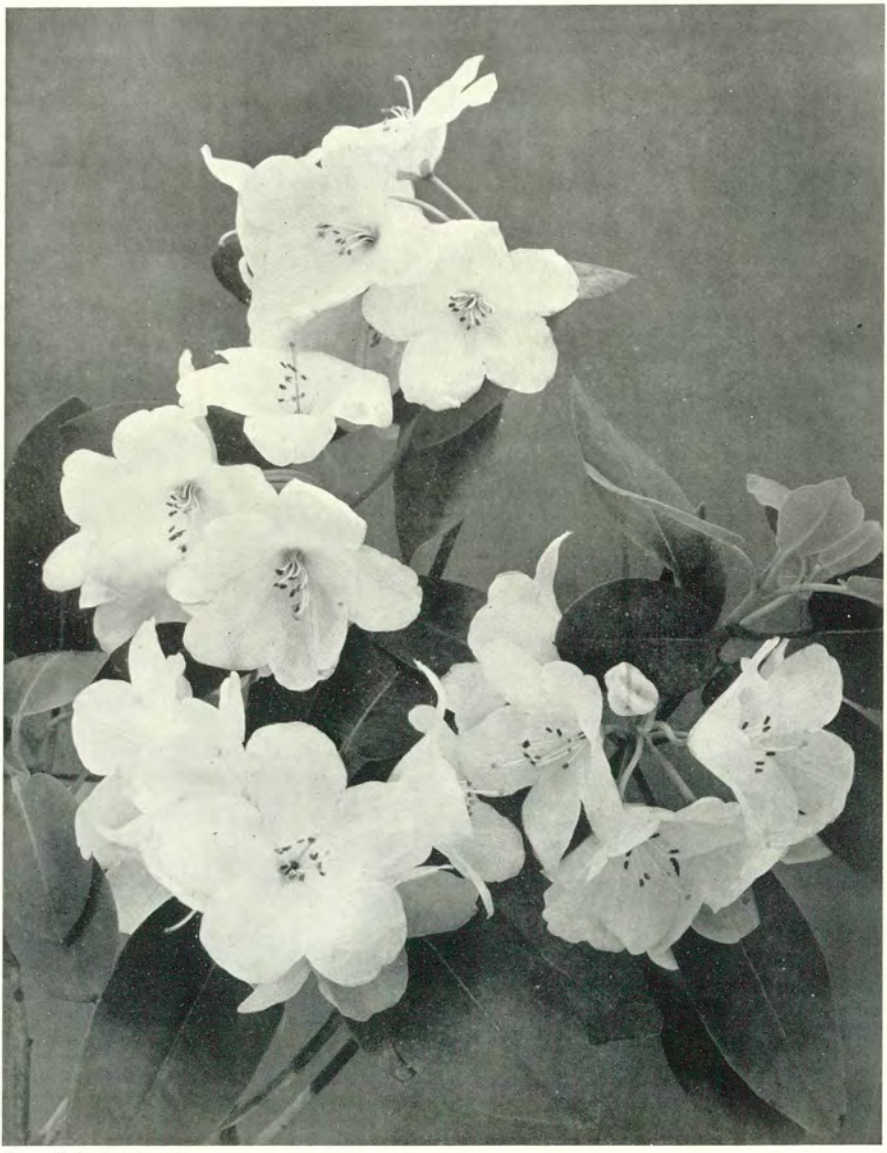


Photo. J. E. Downward]

FIG. 5.—*Rhododendron litiense*. **F.C.C.,** 19th May, 1953. Exhibited by Col. The Lord Digby, D.S.O., M.C. (*see* p. 146)

FIG. 6.—Falconeri Series at Tower Court, May 1952. *R. Falconeri* moved from centre in March 1951 (*see* p. 17)

Photos. R. W. End]

THE COLLECTION OF RHODODENDRON SPECIES IN WINDSOR GREAT PARK

FIG. 7.—A view of the site cleared at Windsor for the Arboreum Series, taken in April 1951 looking south-south-east (*see* p. 17)

FIG. 8.—Rhododendron Arboreum Series in Windsor Great Park on 3rd Dec. 1951 (*see* p. 17)

Photos. R. W. End]

FIG. 9.—*R. diaprepes* at Tower Court prepared for transport. Note good roots on the ball measuring 18 ft. in circumference (*see* p. 18)

FIG. 10.—*R. diaprepes* ready to move on 11th March 1953 (*see* p. 18)

Photos. R. W. End]

FIG. 11.—*R. diaprepes* being eased into its new home in Windsor Great Park (*see* p. 19)

Photo. R. W. End]

FIG. 12.—*R. floribundum* 'Borde Hill' form (*left*), largest plant in the Arboreum Series, 14 ft. × 12 ft., loaded on trailer with *R. argyrophyllum* (*right*) 12 ft. × 11 ft. on 17th Oct. 1951 (*see* p. 19)

creation was a very great undertaking and was pursued with the same care and enthusiasm as JACK STEVENSON gave to everything he undertook. He was assisted by Mrs. STEVENSON, the present owner of Tower Court, who gave much of her time and experience to help him and has since assisted us in many ways with advice and guidance. Visitors to Tower Court will very quickly appreciate her vast knowledge of the subject.

Represented in the collection are plants raised from seed sent back by FORTUNE, WILSON, FARRER, FORREST, KINGDON WARD, Dr. YÜ, LUDLOW and SHERRIFF and by the recent Nepal expeditions. There are just over 2,000 plants in 21 series and 460 species. Of the 21 series represented in the genus, 12 are complete. At Tower Court they occupied an area of 2½ acres. At Windsor it is expected that 30 acres will be required to house them all.

It was appreciated that, as the plants when originally set out over a period of years were comparatively young and small, a very much larger area of ground would be required so as to allow each plant room for further growth and development of its own characteristics. Photograph (Fig. 6) gives a general view of part of the collection, while still at Tower Court, taken in May, 1952, showing the somewhat crowded conditions, due, more than anything else, to the excellent growth and health the plants have always maintained at Tower Court.

Another advantage of wider spacing is that it gives more opportunity to study a plant individually: so wide spacing has been adopted at Windsor—in some people's judgement, too wide, the feeling being that Rhododendrons are companionable plants and prefer close association with one another. With this view we do not disagree but, provided plants have shelter both from sun and from wind, little harm comes to them so long as they are sufficiently fed and watered.

After very careful consideration a site was chosen on the eastern side of Breakheart Hill, a densely timbered valley leading down from the plateau named Smith's Lawn to Virginia Water. The site is protected on the north and east by the hill itself, but is rather exposed to the south-west. Its advantage is that it ultimately links up with the Valley Gardens established a few years ago.

Trees were felled and rides and paths were formed, the rides being wide enough to take lorries. Photographs Figs. 7 and 8 show a part of the valley during clearing and after planting. Photograph Fig. 7 was taken in April, 1951 and Fig. 8 on the 3rd December, 1951, after the planting of the first series to be moved, namely Arboreum, was completed.

It was thought that it would be more interesting for botanists and

Rhododendron enthusiasts generally if the plants were set out in their new home strictly according to their series and sub-series. No particular order for these was decided upon, except for giving consideration to hardiness. The more tender series were invariably planted on the highest ground. Naturally, therefore, no thought could be given to colour arrangements or to "landscaping" of the more detailed kind.

Plant moving was started in October, 1951 and by the spring of 1953 the Arboreum series of 33 plants, the Cinnabarinum series of 17 plants, the Neriiflorum series of 270 plants, the Thomsonii series of 250 plants, the Grande series of 50 plants, the Falconeri series of 140 plants, the Triflorum series of 117 plants and the Azalea series of 59 plants had been removed from Tower Court and replanted. In addition, cuttings of the Lapponicum and Saluenense series were taken and have been rooted.

Many of the plants to be moved were of considerable size, the largest in bulk, perhaps, being *Rhododendron Falconeri*, the type plant. This measured 14 ft. high by 18 ft. through and probably weighed 1½ tons and it may be of interest if a short description of our method of transplanting is now given.

Photograph Fig. 9 shows a plant of *Rhododendron diaprepes* being prepared for moving from Tower Court. Fortunately, there have been at Windsor for some years men with great experience of moving heavy plants, for the Rhododendrons in the Valley Gardens consist, almost exclusively, of mature plants acquired either by gift or by purchase from some of the best known private gardens in the country. We were therefore equipped with trained men and also with the necessary plant and machinery.

If the reader will refer to photograph Fig. 9, he will see that an incline has been prepared down to the base of the root of the plant and a trench dug round the perimeter. Subsequently the soil has been eased from the fibrous extensions to the root system so as to reduce the solid ball to manageable dimensions. Nonetheless, it will be seen that the ball of soil supporting the root system is still about 6 ft. across. For moving plants of this size we use a hand truck on caterpillar wheels, as shown in photograph Fig. 10. After the root has been sufficiently eased from the ground, the plant is tilted away from the prepared incline so that the root system is, as near as may be, perpendicular instead of horizontal. The truck is then pushed beneath the root and the plant brought back to the horizontal and eased centrally on to the truck, which is then man-handled on to firm ground. In exceptionally heavy cases, the truck with the plant on it can be extracted by means of a small tractor. It should be noted that the plant is sacked up before re-

moval so as to avoid evaporation as far as possible and to keep the ball of earth solid. The branches are tied into the plant, as far as flexibility will allow, to save room during transport. The caterpillar truck is then hauled on to a low trailer drawn by a tractor and in photograph Fig. 12 can be seen two large plants of the Arboreum series nicely balanced on the trailer.

Photograph Fig. 11 shows the same plant of *diaprepes* being lowered into position in its new home. The team of men on the right of the photograph, though they appear to be pulling against those on the left who are hauling the truck, are in fact easing the truck down the hill and keeping the plant upright. An important point, also, is that the men on the handle of the truck are keeping it low to the ground, so as to maintain the plant as long as possible in an upright position.

It will be appreciated that just moving plants from one place to another is not all the story. Three-inch water mains have been laid for the whole length of the new valley, as well as subsidiary branch pipes. We believe in trenching all the ground so as to ensure as much intake of rain into the soil as possible, and the soil to be placed around the root system of the plants is reinforced with a generous quantity of humus. Many tons of leaf soil have been used for this purpose.

As, for the most part, the ground is sloping, it is necessary to build up the lower half of the cup to receive the plant, in order to ensure that the plant is perpendicular and that the watering it receives, whether natural or artificial, does not run off the surface of the ground. This method of planting can be seen if the reader refers again to photograph Fig. 8.

It has been found that, during the first summer, some plants are inclined to premature leaf-drop, the petiole snapping at its junction with the leaf. The reason for this is not known (by us, at any rate) but it seems that the plant loses a certain amount of turgidity and severe wind is inclined to snap the stalk at its junction with the leaf. In addition, many leaves are inadvertently damaged during the process of tying up the plant. However, this leaf-drop does not appear to injure the plant permanently and even plants such as *Rhododendron Hookeri*, which lost all their leaves shortly after being moved, are now in full foliage with vigorous new growth.

With regard to results generally, some thousand plants have so far been removed and up to now the losses have been three only, namely *Rhododendron Keysii* No. K.W. 13625, *Rhododendron cinnabarinum* No. L.S. 1354 and *Rhododendron neriiflorum* No. K.W. 9561.

If any generous reader has a plant of any of these collectings spare in his garden, we should be happy to make friends with him!

SEARCH FOR THE YELLOW CAMELLIA

by

Ralph Peer

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WHETHER or not there are Camellia plants which bear yellow blossoms has been a moot point during the last two hundred years. While visiting Kyoto, the ancient capital of Japan, during the year 1949, I came across an ancient Japanese book filled with hand-painted illustrations of Camellia blossoms. Several of them were orange coloured and others were yellow. The botanist who owns this work refused to part with it, but in answer to my questions expressed the opinion that in "ancient times" yellow flowered and orange flowered Camellias were growing in Japan.

More than one hundred years ago, ROBERT FORTUNE was sent from England to obtain tea plants, and also examples of the "yellow Camellia". Presumably, the pioneers who brought the original Camellia plants to England had heard vague rumours about yellow species, and this created a legend which has not been verified up to the present day.

FORTUNE *did* find in Shanghai a Camellia having blossoms which certainly contained more yellow than any other colour. He succeeded in bringing this plant to London, a prodigious feat when one remembers that he sailed around the Cape of Good Hope, thus subjecting his plants to all kinds of weather and the undoubtedly bad effects of transportation, first from the northern hemisphere to the southern hemisphere, and then back again. When this Camellia flowered in London it was immediately placed as a *Sasanqua* and named *C. Sasanqua* 'anemonaeflora'. The blossom was reproduced in *Curtis's Botanical Magazine* (Vol. LXXXV, t. 5152, Dec. 1, 1859) and appears to have been propagated extensively both in England and on the Continent. VERSCHAFFELT added it to his collection under the name of *C. jaune* (*Nouvelle Iconographie des Camellias*, Book X, Plate II, p. 137, 1853).

An inspection of the two existing colour plates—the *Botanical Magazine* and the VERSCHAFFELT Iconography—indicates that actually this is not a true yellow Camellia because the petals are pure white. The very large centre consisting of yellow stamens and yellow petaloids

certainly entitles this blossom to the appellation "yellow". Botanically, however, the flower is "white" and we must conclude that Mr. FORTUNE failed in his search.

In 1948 I undertook a trip around the world by plane, stopping first in New York and then London. While in England, Mr. WILLIAM CAMPBELL, Curator of the Royal Botanic Gardens, Kew, called my attention to FORTUNE's yellow Camellia, and recited its curious history. He was certain that the original plant had been presented to the Royal Botanic Gardens, where it had grown and blossomed for many years. About 1870, however, the original plant died, and so far as Mr. CAMPBELL could determine there are no examples of this variety anywhere in the British Isles. He thought it a pity that this novelty should disappear, and asked me to make inquiries in the different countries which I intended to visit. I did not forget his request, and made extensive investigations in Portugal, South Africa, Australia, New Zealand, Hong Kong, Shanghai and Japan. I had with me a reproduction of the plate which originally appeared in *Curtis's Magazine*. Nobody to whom I spoke had ever seen this flower, and no one knew where I could find it. Subsequently, I made search for this item in Mexico, and corresponded with friends in Brazil, Argentina, Chile and India, hoping to obtain a clue.

During the winter of 1951–1952 I travelled by automobile through various European countries, and again took up the search. The old files of the famous Camellia nursery of GUICHARD SOEURS at Nantes, France, contained no reference to this variety, and when I continued on through northern Spain I received no encouragement. After reaching La Coruna in the extreme north-western corner of Spain we turned southward and came upon many old Camellia trees. Crossing the border into northern Portugal we stopped at Porto for two days in order to visit the nursery of ALFREDO MOREIRA DA SILVA, famous locally for its wonderful Roses and its collection of Camellias. Actually, we had rather indefinite information, which led me to believe that we might find plants of *C. reticulata flore pleno*—the double form of *reticulata* which, likewise, had been brought to England by ROBERT FORTUNE. We were successful in finding the double *reticulata*, and while preparing to obtain a colour photograph of a specimen then in blossom, Mrs. PEER noted a curious looking Camellia with very thick, small leaves. When she asked the proprietor, Shr. JOACHIM MOREIRA DA SILVA, for the name of this variety he said that it was an unimportant item which he kept in stock only because of its novelty value. He explained that the flowers were small but contained a great deal of yellow. Mrs. PEER at once remembered our long search for a yellow-

flowered Camellia, and suggested to me that this thick-leaved specimen might actually be FORTUNE'S *Sasanqua*. A small lead tag which I found attached to this plant bore the legend "Jaune" and I realized that we had finally brought our long search to a successful conclusion.

Due to our limited time, and the fact that I at once ordered plants shipped to Los Angeles, I did not photograph this plant, but subsequently we saw the mother tree at the original nursery situated some distance from Porto. The leaves are thick and fleshy, quite different from any other Camellia with which I am familiar. The tree was only about 4 ft. tall, although it must have been 100 years old. Subsequently, I learned from Shr. MOREIRA that he could reproduce this variety only by grafting, and that even then he had only a small percentage of successful takes. Up to the present time I have not succeeded in transferring this variety to the U.S.A., and it is quite obvious that it is too delicate for general commercial distribution.

Two plants were sent to the Royal Botanic Gardens, Kew, but they lasted no longer than plants sent at the same time to California. In due course, however, I presume that it will be possible to re-establish this variety in England, and to transfer it to the U.S.A. This variety is of great interest to botanists and of importance historically. It is not, however, a true *yellow* Camellia.

In 1948, Mr. SAM HJORT, owner of the Thomasville Nursery, Thomasville, Georgia, in the southern part of the United States, came across a seedling which he considered an extraordinary novelty. Under the name, *C. japonica* 'Frank Gibson', this variety has now been distributed commercially throughout the U.S.A. The flowers are of medium size—usually 4 in. in diameter—and are similar in form to the FORTUNE yellow Camellia. The blossom is formed like an anemone with white outer-guard petals and a large cushion of very yellow stamens. Amidst the stamens, however, there are frequently many petaloids. In some examples the petaloids are all of a golden colour. More frequently, however, they are a mixture of white and golden yellow. In any event, the effect is quite striking and the blossoms are very beautiful. This variety is not difficult to reproduce and seems to grow well in any climate. It is, in my opinion, the best "yellow Camellia" yet discovered.

In 1950, Dr. WALTER LAMMERTS, famous California Rose specialist and the man principally responsible for the importation of the Kunming *reticulatas*, brought to my attention a little-known book, *Flore Generale de L'Indo-Chine*, containing descriptions of *Thea* plants growing in Tonkin. Several species were described which had yellow flowers.

Subsequently, I obtained a supplement to this book which gave the names of many other interesting *Thea* plants, some with yellow flowers, others coral coloured, and a species which bears purple blossoms.

Thea, of course, is a very close relative of the Camellia, and it is reasonable to suppose that hybrids could be produced.

The true yellow Camellia presumably exists in the form of Tonkinese *Thea* plants, but I regret to report that since uncovering these facts it has not been possible to reach the interior of Tonkin in order to bring out specimens. The area where *Thea* grows wild is occupied by Communist forces and there has been no possibility to organize an expedition to bring out "yellow Camellias" for distribution to the Western world.

POPULARITY OF *CAMELLIA SASANQUA* IN THE U.S.A.

by

K. Sawada

Mobile, Alabama, U.S.A.

DURING the past decade, the popularity of the *C. Sasanqua* in the United States has grown tremendously. An annual production of this species running into the millions of plants has failed to satisfy the demand. Why has *C. Sasanqua* assumed such great commercial importance? One may attribute it to the following reasons:

1. The *Sasanqua* is an evergreen shrub. It does not grow too fast. It always maintains good form without much pruning. Truly, the *Sasanqua* is a most desirable plant for gardens, especially in mild climates.

2. The *Sasanqua* grows in very compact form with slender twigs and branches. This, combined with its delicate small foliage of lustrous dark green, brings to any garden a soft and artistic atmosphere. It is exceptionally fine for use as a hedge or screen, and has been highly recommended for these purposes by the American Association of Nurserymen. It also makes a beautiful espalier because of its long slender branches.

3. The *Sasanqua* blooms mostly in the autumn, when many summer flowers have gone and the *C. japonica* and the Azalea have not yet opened. Flowers are mostly single and vary in colour from white through all shades of pink to red. Recently, several double and semi-double flowered kinds have been introduced. While the individual *Sasanqua* flower is not as aristocratic as *C. japonica*, a group produces a most beautiful floral display. Furthermore, the *Sasanqua*, because it blooms in the autumn, is not as likely as *C. japonica* to be damaged by freezing. For this reason, it is particularly admired in regions where *japonicas* occasionally lose all flowers because of an early frost.

4. The *Sasanqua* withstands much rougher treatment and is adapted to a much wider range of soil than the *japonica*. This fact has been proved in many places where the soil is heavy or poorly drained.

5. On account of its wider adaptability as to soil, and also because

of its strong, faster growing nature, *C. Sasanqua* is a most desirable understock for grafting *C. japonica.*

This Camellia is a native of Japan, growing principally in the mountain valleys of the southern island. The wild plants have small foliage and almost always a small, single white flower. For hundreds of years, the *Sasanqua* has been a favourite with the Japanese gardeners, and many beautiful varieties have been grown and propagated throughout that country. It is said that more than 200 years ago there were at least 200 garden varieties under cultivation in Japan, many of which have since disappeared. It is not known when and how *C. Sasanqua* came to the United States. Dr. H. H. HUME'S opinion is that during the last part of the last century it was introduced from England. Probably the first variety brought over was what is known as 'Rosea.' Later, a number of varieties were imported direct from Japan and several good new varieties have been discovered amongst seedlings grown by nurserymen and Camellia fanciers in the U.S.A. There are no statistics as to the exact number of varieties in the United States to-day, but the Southern California Camellia Society will list in their 1954 Nomenclature Book approximately 200 different names.[1]

The following four *Sasanquas* are the most popular and widely cultivated in the United States:

'Mine No-Yuki' (Snow on the Mountain)—This variety came to the United States direct from Japan at the close of the last century. The flower is of semi-double to double, loose peony form and 7–8 cm. in diameter. The flowers are tinted slightly pink in bud but pure white when fully open. It is a most profuse bloomer and vigorous grower with spreading habit with long slender branches.

'Kowgyoku' (Little Gem)—This is a full double, imbricated flower about 5–7 cm. in diameter. The colour is white with some blush pink which varies according to soil condition and climate. This is usually considered the most beautiful flower of the species. The plant is a weak and slow grower and a rather shy bloomer until it is of some age.

'Cleopatra'—Usually it has semi-double, loose peony-type flowers which consist of two blooms often side by side, each about 6–7 cm. across. The colour is light rosy pink. The leaves are roundish, somewhat crenulated and extra lustrous dark green. It grows in asymmetrical shape with very compact branches. The writer believes that 'Cleopatra' produces the best shaped plant of all *Sasanquas.* About

[1] This list is reproduced at the end of this article through the kindness of Mr. Ralph Peer and the Southern California Camellia Society.

1935, 'Cleopatra' came from Japan, but without a label, and therefore received a western name. Recently, the writer found in a Japanese list the description of a variety called 'Myoto-Zaki', which greatly resembles 'Cleopatra', except that 'Cleopatra' flowers are much darker in colour.

Recently, *Sasanqua* enthusiasts have been avidly seeking double or semi-double flowers and the following varieties are becoming favourites:

'Shishi-Gashira'—Around 1940, it was imported from Japan under the name 'Beni Kantsubaki', but it was found that this variety was exactly synonymous with 'Shishi-Gashira' which came to the U.S.A. much earlier. The flower is semi-double to double, imbricated, small, 5–6 cm. in diameter and of crimson red colour. It blooms from November to December. The leaves are thick and dark green. It is a very slow grower of dwarf nature.

'Showa-No-Saka'—This also came to the U.S.A. under another name—'Usuiro Kantsubaki'. Someone shortened its long name and called it 'Usu Beni'. Then it was found to be practically identical with 'Showa-No-Sakae' which came earlier. Dr. NAKAI, famous Japanese botanist, classified the 'Kantsubaki' Camellias as a separate species but, in the U.S.A., they are considered to be *C. Sasanqua.* The flower is semi-double to double, loose peony form about 7 cm. across. The colour is soft pink with some variegation. Leaves are thick, crenulated, dark green. Its growth habit is spreading with compact branches.

'Choji-Guruma'—This variety has small but well formed anemone type flowers, 4–5 cm. across. Seven guard petals and numerous petaloids are inward curved and form a lovely globe-like centre. The colour is soft pink. 'Choji-Guruma' is an upright grower.

An extraordinarily fine Camellia named 'Dawn' ('Ginryo') having most of the characteristics of a *Sasanqua*, but which is said to be a cross between *Sasanqua* and *japonica*, has become very popular in the U.S.A. and is well known in England and Australia. This variety came to the U.S.A. around 1910 under the name of 'Akebono'. Later, the name was translated as 'Dawn' and its popularity increased. Recently, however, it has been found that this is very similar to a variety, well known in Japan as 'Ginryo', and in England and Australia as 'Vernalis'. The flower is semi-double, 9–10 cm. across, and consists of 15–17 petals which are somewhat wavy. Occasionally, a few petaloids are present. The colour of the flower is porcelain-white with some petals faintly tipped pink. It is a late bloomer, usually flowering in the U.S.A. from

October to late January. 'Dawn' is one of the hardy varieties seldom injured by cold. We have observed frequently that even when *C. japonica* blossoms and buds were destroyed by a severe freeze, 'Dawn' was not affected and produced good flowers. The leaves are rather small and narrow and of thick texture. Occasionally, they are variegated, white or yellow. The plant is an upright grower with compact branches despite it being a rather slow grower. Many years ago, Dr. HUME became convinced that 'Dawn' was not a true *Sasanqua*, having regard to the odour of the flower, form of stamens, its blooming time, etc. Dr. MAKINO of Japan classified it as a separate species—*C. vernalis*.

The production of new varieties of *C. Sasanqua* in the U.S.A. through growing seedlings or cross pollinating two varieties is far behind similar work with *C. japonica*. To date, only a few worthwhile varieties in this category have been named. The most important seem to be:

'Pink Snow'—The original plant was found under an old specimen of 'Mine-No-Yuki'. The flower is composed of 10–12 petals and 12–15 petaloids forming a loose peony type. It is light pink in colour, occasionally mottled with white, 6–7 cm. in size. 'Pink Snow' is an upright grower with compact branches.

'Jean May'—This was selected from seedlings. The flower is semi-double, 7–8 cm. across, with wavy petals of a beautiful soft pink. Leaves are large and apices tapered. It is also a vigorous and upright grower.

'Papaver'—The flower is single with 8–9 petals and somewhat bell-shaped until full open. It is 8–10 cm. in diameter. 'Papaver' blooms early and has beautiful flowers of a soft salmon pink. The plant grows upright in columnar shape with compact branches (Fig. 14).

'Splendor'—This is one of the most profuse bloomers. The flower is very large—8–10 cm. across with 10 petals of delicate soft pink, which lighten toward the centre. This is a middle to late season bloomer. The habit of growth is spreading with long, slender branches suitable for espalier (Fig. 15).

The writer believes that *C. Sasanqua* will gain rapidly in popularity in the U.S.A. and that many fine new varieties will be originated there during the next decade.

C. SASANQUA VARIETIES*

AGEHA-NO-CHO (Swallowtail Butterfly)
White shaded Pink with Pink on outside. Medium, semi-double with curved petals.
AKASHI-GATA (Akashi Bay)
White shaded and striped Pink. Large, semi-double to double with twisted and curled petals.
AKEBONO PINK (Dawn Pink)
Clear Pink. Medium, single.
AKEBONO-SHIBORI (Dawn Striped)
White to Pink at edge and Pink on outside. Cupped semi-double.
ANNETTE
White in centre shading to deep Pink at edges. Single.
APPLE BLOSSOM
White blushed Pink. Single.
ASA-GASUMI (Morning Mist)
Rose Pink. Large, single.
ASAHI-BOTAN (Peony in Rising Sun)
Scarlet. Large, double.
ASAHI-GAI
White in centre to Pink on outside. Small, single.
ASAHI-NO-SORA (Sunrise Sky)
Pink shaded Lilac darkening toward centre. Medium, single.
ASAHI-NO-UMI (Sunrise Sea)
Crimson. Very large, single.
AUTUMN BEAUTY
(Jeff's Watermelon Pink)
Watermelon Pink. Large, single.
AUTUMN SNOW
White, Single.
AZUMA-BENI (Rouge of East)
Deep Pink. Large, semi-double with curled petals.
AZUMA-NISHIKI (Brocade of East)
Rose Pink with darker border. Semi-double.

BAYOU DREAM
Roseine Purple. Large, semi-double.
BENI-SUZUME (Linnet)
Deep Pink shaded White. Small, double.
BENI-ZURN (Pink Crane)
Deep Rose Pink. Single, with twisted petals.
BENIKAN-TSUBAKI (Pink Winter Camellia)
See Shishi-Gashira
BLANCHETTE
White, single.
BLUSH PINK
Apple-blossom type. Single.
BRIAR ROSE (Pink Brier)
Soft, clear Pink. Single.
BRILLIANCY
Bright Cherry Red. Large, single with cluster of stamens in centre.
BUTTERCUP
Crimson Rose. Single.
BUTTERFLY
White. Single.

CANDY REITER
Shell Pink. Single.
CHARMER
White edged Pink. Large, single.
CHERRY BLOSSOM
White edged Pink. Single.
CHIKUBU-GOROMO (Coat of Chikubu Island)
Pale Pink with shades and stripes of Pink. Single.
CHIRI-TSUBAKI
(Pink Shishi-Gashira)
Light Pink. Double.
CHIYO-ZURU (Long Lived Crane)
White flushed Pink. Very large, single with notched and crêped petals.
CHO-ASOBI (Playing Butterfly)
Pink dotted White. Medium small, single with twisted petals.
CHOJI-GURUMA (Cloves Wheel)
Rose Pink with Pink petaloids. Anemone form.
CHUYU-SHIBORI (Royalty Var.)
White striped Red. Single.
CINDERELLA
White shading to Pink at edge. Single.
CLEOPATRA
Rose Pink. Semi-double.
CLEOPATRA WHITE
White. Semi-double.
CRIMSON BRIDE
Dark Crimson. Single.
CRIMSON VELVETTI
See Velvety

DAIMYO-NISHIKI (Daimyo's (a Feudal Lord) Brocade)
Pink marked White. Medium, semi-double.
DAINTY BESS
Salmon Pink. Single.
DATE-NISHIKI (Foppish Brocade)
Light Pink striped Pink. Medium, single.
DAYDREAM
White edged deep Rose Pink. Large, single.

ECHIGO (Echigo Province)
Yellowish White. Large, single.
EIKYU-SHIBORI (Permanence Striped)
White bordered and striped Pink. Medium, semi-double.

FLORIBUNDA
White edged Lavender. Single. (Fig. 13)
FLUTED WHITE
White tipped light Pink. Large, semi-double.
FUJI-NO-MINE (Peak of Mt. Fuji)
See Mine-No-Yuki
FUKUZUTSUMI (Bundle of Fortune)
Red and White. Very large, single.

GENJI-GURUMA (Genjis (Family in old Literature) Carriage)
Rose Pink mottled white and tipped Rose Red. Single.
GIN-NO-SAI (Silver Baton)
White. Medium, double.
GIN PO (Silver Phoenix)
White edged Pink. Medium, double.
GIN-RYO
White. Medium, double. (Possible same as GIN-RYU.)
GIN-RYU (Silver Dragon)
White edged Rose in bud and lighter when open. Medium, semi-double to double.
GODAISHU (Five Continents)
Crimson touched Purple. Large, semi-double.
GOMI-NO-KOROMO
White fading to Pink at edges. Single.
GOSHO-NISHIKI (Royal Brocade)
Rose Pink dotted and striped White. Medium, semi-double with curved petals.
GOSHO-ZAKURA (Court Cherry)
Pink with White underpetals. Small, single with twisted petals.
GRANDIFLORA ALBA
See Gulf Glory
GULF GLORY (Grandiflora Alba)
White. Very large, single.
GYOBI-GOROMO (Beautiful Coat)
White shaded Pink. Medium, single.

HAGOROMO (Feather Robe)
White flushed Rose. Medium, semi-double with slightly crêped petals.

HAKARA-MIKAWA
See Mikawa-No-Tsu
HANA-DAIJIN (Minister of Flower)
(Hana-Otodo)
Deep Rose Pink. Very large, semi-double.
HANA-JIMAN (Boastful Flower)
White edged Pink. Large, semi-double.
HANA-NO-YUKI (Snow on Flower)
Pink flushed White. Large, semi-double.
HANA-OTODO
See Hana-Daijin
HANAZONO-NISHIKI (Brocade of Garden)
Light Rose Pink striped Crimson. Medium, single.
HASHIDATE (A place noted for its view)
Rose Pink edged deep Pink. Medium, semi-double.
HATSU-NISHIKI (Brocade of Firstling)
White flushed Pink at edge. Medium, semi-double with notched petal tips.
HATSU-YUKI (First snow of season)
White tipped deep Rose Pink. Large, single.
HEBE
See Hugh Evans
HI-NO-HAKAMA (Scarlet Hakama)
Bright Pink. Medium, single.
HINODE-GUMO (Dawn cloud)
White spotted Scarlet. Large, single.
HINODE-NO-YUKI (Snow in Sunrise; Snow in Dawn)
White bordered and striped crimson. Large, semi-double.
HIODOSHI (Scarlet-threaded Suit)
Crimson splashed and marbled white. Large, single.
HIRYO (Scarlet Bird)
(Red Bird)
Deep Crimson Red. Rose form double.
HIRYO-NISHIKI (Scarlet Bird's Brocade)
Crimson splashed White. Rose form double.
HIRYU (Flying Dragon)
Rose Red with lighter centre. Small, double.
HITOMARU (Name of Famous Poet in old Literature)
Crimson shading to White. Large, cupped semi-double.
HOO-NISHIKI (Brocade of Phoenix)
White flushed Pink, darkening toward edge and striped White on lower edge. Large, semi-double.
HOMARE-NO-NISHIKI (Brocade of Honour)
Deep Scarlet and White. Single.
HOSHI-HIRYU (Star of Dragon)
Sport of Hiryu—Crimson dotted White.
HUGH EVANS (Hebe)
Pink. Medium, single.

INAZUMA (Lighting)
Pink, shaded and striped White with Pink on outside. Large, semi-double.
INU-HARIKO (Papier-Mâché Dog)
Pale Pink tinted White with shades and stripes of Pink. Large, semi-double.
IRIHI-NO-UMI (Sunset Sea)
Clear Pink. Medium to large, semi-double.

JANOME-GASA (Double Ringed Umbrella)
Deep Pink bordered Pink and striped White with White underpetals. Medium, semi-double.
JAUNE
White with large centre of yellow petaloids and a few stamens of darker yellow. Medium, anemone form. (Fortune's yellow sasanqua.)

JEAN MAY
Shell Pink. Large, double.
JEFF'S WATERMELON PINK
See Autumn Beauty
JITSUGETSU (Sun and Moon)
Pink or White. Medium, single.

KAIDO-MARU (Name of Boy Hero in old Literature)
White flushed Pink, darker toward edges. Large, semi-double with curled petals.
KAMAKURA-SHIBORI (Kamakura (Name of a Noted Place) Var.)
Red shaded White. Small, single.
KARA-KOROMO (Chinese Coat)
Deep Pink. Very small, semi-double.
KARI-GOROMO (Hunting Suit)
White shaded and striped Pink. Medium, single.
KARIGINU
See Kari-Goromo
KASUMI-NO-SODE (Mist Sleeve)
Pink edged White with deep Pink underpetals. Large, semi-double.
KEIUN (Suspicious Cloud)
Deep Scarlet margined White.
Very large, single.
KENKYO (Astonishment)
White flushed Pink, becoming White when fully open. Large, single.
KIMI-NO-BANZAI (Long Live the Emperor)
White, tinted Pink at edge. Small, semi-double.
KIN-NO-SAI (Gold Baton)
Pink with petaloid stamens shaded White. Medium, anemone form.
KINKA-ZAN (Mt. Kinka)
Soft Rose. Medium, anemone form.
KO-GYOKU (Ruby)
(Little Gem Kogyoku)
Pink bud opening Pinkish White.
Medium, rose form double.
KOGYOKU (Ruby)
See Ko-Gyoku
KOKINRAN (Gold Brocade; Ancient Gold Brocade)
White and red. Single.
KOKYO-NO-NISHIKI (Brocade of Home)
Pink with White centre and deeper Pink underpetals. Medium, semi-double.
KURENAI
Rose Pink with darker spots. Single.
KYO-NISHIKI (Brocade of Town)
White striped Pink. Single.

LAVENDER PINK
Deep Lavender Pink. Single.
LAVENDER QUEEN
Lavender Pink. Large, single.
LILLIPUTIAN
See Wabito
LITTLE GEM
See Ko-Gyoku
LITTLE PRINCESS
White shaded Blush Pink. Small, single.

MADO-NO-TSUKI (Moon at Window)
White slightly tipped Pink. Small, semi-double.
MAIDEN'S BLUSH
Delicate Pink. Medium, single.
MAI-NO-SODE (Dancing Sleeve)
Pink shaded White. Large, semi-double with curled petals.
MAIZURU (Dancing Crane)
Rose shaded Pink. Large, semi-double.
MANYO-ZAKI (Antique Style)
Pale Pink. Large, semi-double.
MATSU-NO-YUKI (Snow on Pine)
White bordered Pink. Small, single.
MAUVE STAR
Mauve Pink. Single.
MEIGETSU (Full Moon)
White shaded Pink on edges and often striped. Single.
MEOTO-ZAKI (Couple Flowered)
Pink touched and edged White. Medium semi-double with curled petals producing two flowers from each bud.
MIKAWA-NO-TSU (Harbour of Mikawa) (Sanga-No-Tsu; Harkara-Mikawa)
Crimson shaded White on petals and petaloid stamens. Medium, anemone form.
MIKUMIKO
See Mikuni-Ko
MIKUNI-KO (National Red)
(Mikumiko)
Carmine. Large, single.
MINE-NO-YUKI (Snow on Peak)
(Fugi-No-Mine; Snow; White Doves)
White. Large, peony form.
MININA
Light Pink. Large, single.
MIYUKI-NISHIKI (Imperial Visit)
Rose Red with purplish cast marbled White. Single.
MOCHI-NO-SHIO (High Tide)
White shaded Pink. Medium to large, semi-double.
MOMOZONO (Peach Garden)
Shell Pink. Single.
MOMOZONO-NISHIKI (Peach Garden Shaded)
Rose shaded White. Large, semi-double with curled petals.
MUTT'S WATERMELON PINK
See Slenderlee Pink

NAMI-RYOMEN
Pink dotted and striped White. Medium, double.
NARUMI-GATA (Narumi Bay)
(Oleifera)
White shaded Pink. Large, cupped single.

NEGISHI-KO (NEGISHI (Place name in Tokyo) PINK)
Deep Crimson. Medium, single.
NODAMI-USHIRO
Rose Pink. Large, single.
NORTH STAR
White tipped Pink. Medium, single.

OCTOBER MORN
Roseine Purple. Large, semi-double.
OH-SAKAZUKI (Large Cup)
Pink. Large, single.
OHYAMA-JIRO (Ohyama (A place and family name) White)
White tinged Pink at edge. Medium, semi-double.
OKINA-GOROMO (Immortal Coat) (Okina-Koromo)
White shaded Pink. Medium, single.
OKINA-KOROMO
See Okina-Goromo
OLEIFERA
See Narumi-Gata
ONIGOROMA (Friend's Coat)
White edged Rose Pink. Single.
ORCHID
Lavender Pink. Large, single with cluster of stamens in centre.

PAPAVER
(Rosea Papaver)
Soft Pink. Large, bell-shaped single.
PEACH BLOSSOM
Soft Pink. Medium to large, single.
PINK BRIER
See Briar Rose
PINK DAUPHIN
Pink. Single.
PINK SHISHI-GASHIRA
See Chiri-Tsubaki
PINK SNOW
Light Pink with Lavender trace. Large, semi-double.
PLANTATION PINK
Pink. Large, single.

RANNY
White edged Pink. Large, single.
RED BIRD
See Hiryo
ROSEA
Deep Rose Pink. Medium, large, single.
ROSEA GRANDIFLORA
See Splendor
ROSEA MAGNIFICA
See Rosy Mist
ROSEA PAPAVER
See Papaver
ROSY MIST (Rosea Magnifica)
Pink. Large, single.
RYOMEN (Two Sides)
Red. Medium, double.
RYOMEN-BENI (Two Sides Pink)
Dark Pink. Single.
RYOMEN-KO
Crimson slightly shaded White. Medium, cupped semi-double.

SANDAN-KA (Three Tiers Flower)
Deep Pink. Tiered double.
SANDO-ZAKI (Three Times Blooming)
Rose. Medium, semi-double with three flowers sometimes being produced from a single bud.
SANGA-NO-TSU
See Mikawa-No-Tsu
SANKO-NISHIKI (Twilight)
Pink edged White. Large to very large, semi-double with slightly cupped, crêped petals.
SARASA-SHIBORI (Dappled Chintz)
White tipped light Rose Pink. Single.
SAZANAMI (Ripples)
Deep Pink striped white. Small, single.
SETSUGEKKA (Elegant Friends)
White. Large, semi-double.
SETSUZAN (Snow Mountain)
White. Very large, single.
SHICHI-FUKUJIN (Good Fortune)
Rose Pink edged Mallow Pink. Very large, semi-double with crinkled petals.
SHICHI-HODEN (Treasury)
Rose. Large, semi-double.
SHIKISHIMA (Poetical name of Japan)
See Shiun-Dai
SHIN-AZUMA-NISHIKI (New Eastern Brocade)
White shaded Pink, striped and dotted dark Pink. Large, semi-double with curled petals.
SHINA-NO-MIYAKO (Capital of CHINA)
Pink with White at centre. Single with incurved, twisted petals.
SHINING STAR
White. Single.
SHINONOME (Dawn)
Flesh Pink. Very large, single.
SHIRO-CHIRIMEN (White Crêpe)
White. Medium small, single with crêped petals.
SHISHI-GASHIRA (Lion's Head) (Benikan-Tsubaki)
Red. Medium, semi-double to double. (Reported that Shishi-Gashira is a Pale Pink, medium, peony form and Benikan-Tsubaki is as above described.)
SHIUN-DAI (Purple Cloud) (Shikishima)
Rose Pink. Large, irregular single.
SHOJO-NO-MAI (Dancing Orangoutang)
Bright Pink. Medium, single.
SHOKKO-NISHIKI (Brocade of Chinese Red)
Deep Pink dotted White. Medium, single.

SHOKU-NO-NISHIKI (Chinese Brocade)
White striped Pink. Medium, single.
SHOWA-NO-SAKAE (Glory; Glory of Showa)
(Usubeni)
Soft Pink, occasionally marbled White. Medium large, semi-double to rose form double.
SHUCHU-KWA
White bordered Crimson. Medium, flat single.
SLENDERLEE
(Mutt's Watermelon Pink)
Watermelon Pink. Medium, single.
SNOW
See Mine-No-Yoki
SNOWFLAKE
White. Large, single.
SPLENDOR (Rosea Grandiflora)
Delicate Pink with darker Pink toward edge. Very large, semi-double.
STELLATA
Light Pink with darker centre. Single.
SUPER ROSEA
Rose Pink. Single.

TAGO-NO-TSUKI (Moon of Tago Bay)
Pink bud to white in open flower. Large, single.
TAGOTO-NO-TSUKI (Moon's Reflection in Rice Fields)
White. Very small, single.
TAIMEI-NISHIKI
Pink. Large, single.
TAISHO-NISHIKI (Taisho (Name of a Dynasty) Brocade)
Pink striped white. Large, single.
TAIZAN-HAKU (Mt. Tai)
White. Single.
TAKARA-AWASE (Treasure's Collection) Pink shaded Whiteand bordered Pink. Semi-double.
TAMA-KUJAKU (Beautiful Peacock)
White bordered and striped lightly with light Pink. Large, semi-double.
TAMATSU-JIMA (Tamatsu Island)
Pink edged white with dark Pink outside. Medium, semi-double.
TANYA (The Title of a Drama)
Deep Rose Pink. Single.
TATSUTA-GAWA (River Tatsuta)
Peach Pink. Single.
TATSUTA-HIME (Princess Tatsuta)
White shaded Pink with Pink outside. Medium, semi-double.
TEXAS STAR
Light Pink. Medium, single.
TOTENKO (Dawning)
Light Pink. Single.
TRICOLOR MAGNIFICA
See Versicolor
TSUDZURE-NISHIKI (Beautiful Tapestry)
Light flesh Pink and Red. Large, semi-double.
TSUKI-NO-HIKARI (Moonlight)
White edged Pink. Large, semi-double.
TSUKI-NO-KASA (Corona of Moon)
White with base of petals Rose. Large, single.
TSUMA-BENI
White bordered Pink. Small, single.
TSUMAORI-GASA (Dandyish Hat)
Deep Carmine. Semi-double with incurved petals.
TSURUGI-NO-MAI (Sword Dance)
White. Medium, single with waved petals.
TSUYU-NO-TAMA (Dew Drop)
Pink flushed White and bordered Pink. Large, single with waved petals.

UME-GAKI (Screen of Apricot)
Pink. Single.
UME-NO-KAZE (Breath of Apricot)
White flushed and often striped Pink. Large, single.
USUME-NO-MAI
Rose. Medium, semi-double with curved petals.
USUBENI (Pale Pink)
See Showa-No-Sakae

VELVETY (Crimson Velvetti)
Crimson Red with velvety overcast. Single.
VERSICOLOR (Tricolor Magnifica)
White centre edged lavender with soft Pink in between. Medium, single.

WABITO (Lilliputian)
Rose. Small, cupped single.
WAGO-JIN (God of Harmony)
Pink spotted White. Large, single.
WHITE BUTTERFLY
White edged Pink. Single.
WHITE DOVES
See Mine-No-Yuki
WHITE GLORY
White. Large, single with ruffled petals.
WHITE SATIN
White. Large, single.
WILLOW LEAF
White margined Pink. Medium, single.

YAE-ARARE (Hailstone Double)
White edged Pink. Large, single.
YAE-GASUMI (Double Mist)
White with margin shaded Scarlet. Large, semi-double.
YAE-SHIDE (Double Paper Hung)
Pink. Medium, double.
YAMATO-NISHIKI (Japanese Brocade)
Light Pink striped or dotted White. Very small, single.

ZANSETSU (Remaining Snow)
White. Medium, single.

FIG. 13.—*Camellia Sasanqua* 'Floribunda' (*see* p. 29)

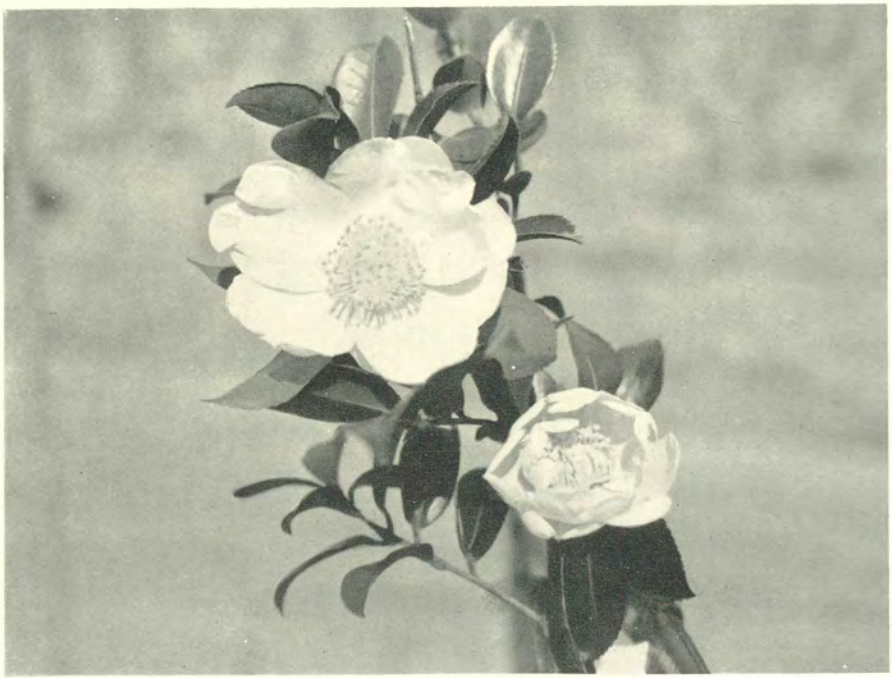


FIG. 14.—*Camellia Sasanqua* 'Papaver' (*see* p. 27)

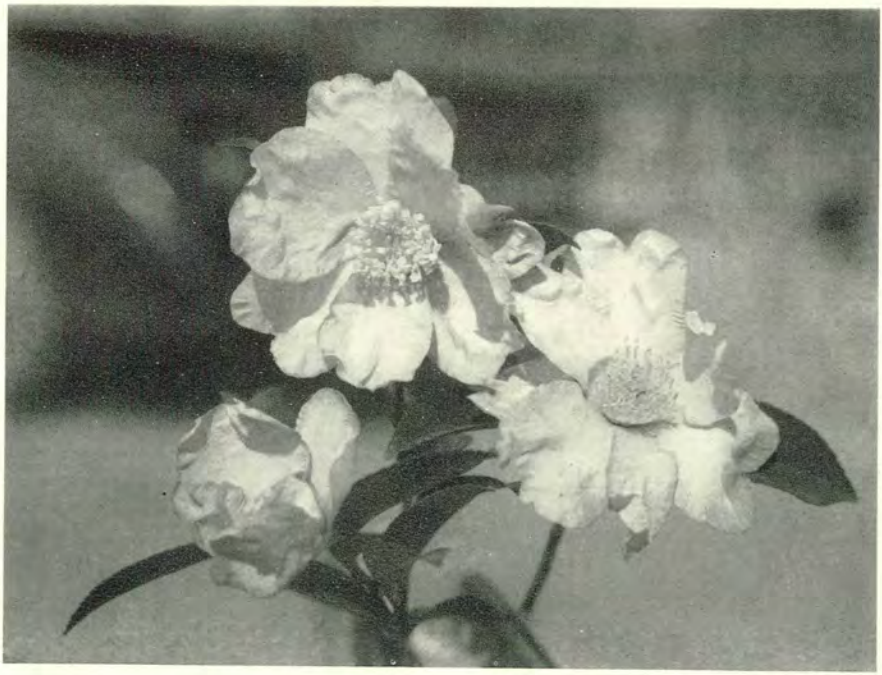


FIG. 15.—*Camellia Sasanqua* 'Splendor' (*see* p. 27)

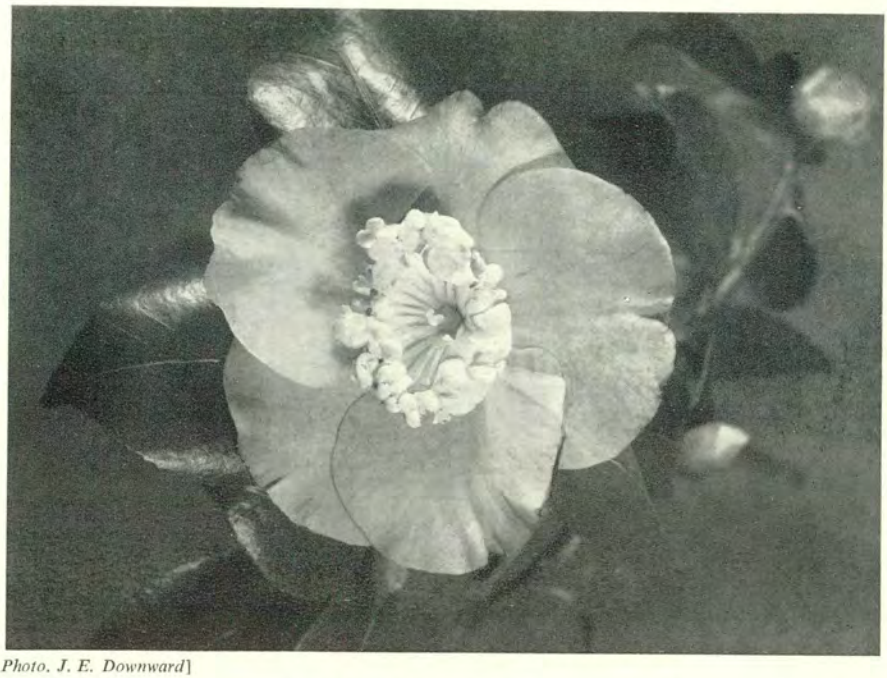


Photo. J. E. Downward]

FIG. 16.—*Camellia japonica* 'Hatsu-Sakura' **A.M.** 3rd March, 1953. Exhibited by Commissioners of Crown Lands, Windsor Great Park (*see* p. 143)

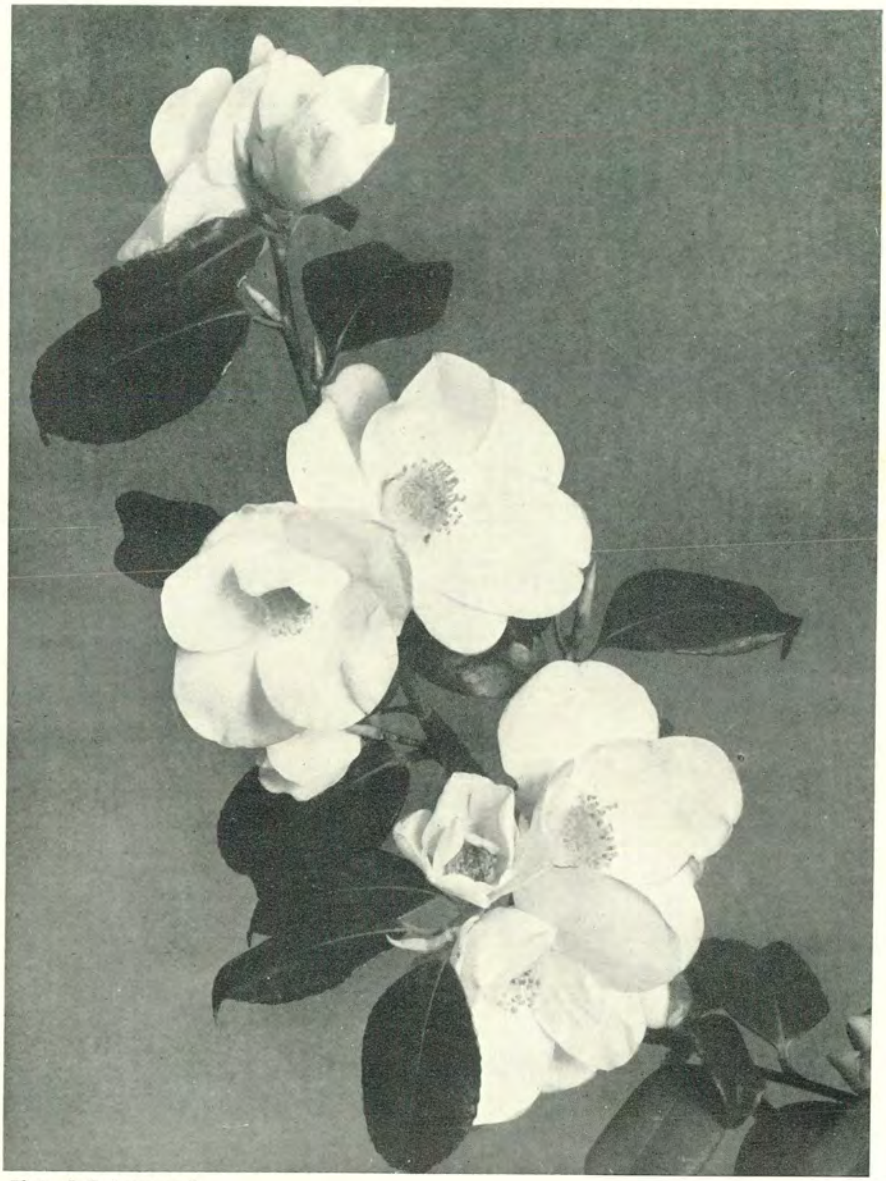


Photo. J. E. Downward]

FIG. 17.—*Camellia Williamsii* 'Francis Hanger' (*japonica* 'Alba simplex' x *saluenensis*) **A.M.** 14th April, 1953. Exhibited by The Director, R.H.S. Gardens, Wisley (*see* p. 144)

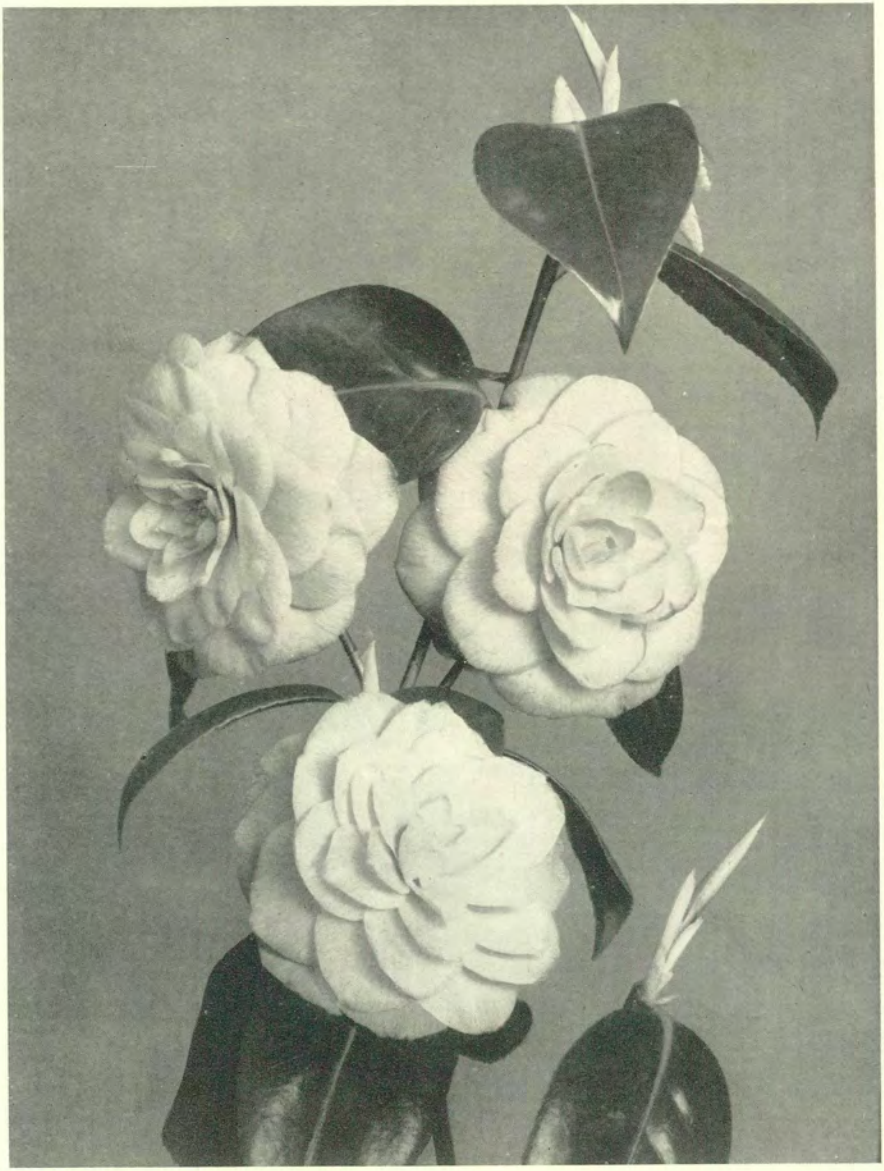


Photo. J. E. Downward]

FIG. 18.—*Camellia japonica* 'Prince Frederic William' **A.M.** 17th March, 1953. Exhibited by The Director, R.H.S. Gardens, Wisley (*see* p. 144)

SOME NOTES ON RHODODENDRON SPECIES

by the late

Lionel N. de Rothschild, V.M.H.

(A continuation of the Notes published in the R.Y.B., 1953. Printed both from unpublished notes and from *The Year Book of the Rhododendron Association*, 1938 and 1939.)

IN the Fulvum Series, *fulvum* itself makes a small tree up to 20 ft. in height, with rose flowers with a crimson blotch and shining dark green foliage with a downy orange indumentum underneath. It is a striking foliage plant and it flowers so freely that here also it is attractive, but unfortunately as these come out in March and April they are often cut by a spring frost at Exbury. *R. fulvoides*, with similar coloured flowers but much larger leaves, is a fine foliage plant, but it also flowers too early for general use. Another plant with similar flowers is *R. uvarifolium*; *R. niphargum*, however, is hardly worth a place in the garden.

GRANDE

The Grande Series, like the Falconeri Series, contains the giants in the *Rhododendron* world. *R. giganteum* itself was discovered by FORREST, who found growing in a sheltered valley three trees which were some 90 ft. in height with 70 ft. circumference of branches—the trunk at 7 ft. from the ground was 9 ft. in circumference, with large trusses of rose crimson flowers—what a magnificent sight it must have been. Unfortunately this Rhododendron is only hardy in the very south-west of England or the most sheltered gardens in Scotland. It has flowered in Scotland and I have seen one of its large bells. *R. protistum*, said to have creamy yellow flowers, is very attractive in foliage, but the seeds sent back have been collected from much smaller plants. It also is not hardy, nor, unfortunately, is *grande* itself, with which has been merged *argenteum*, the one having a shiny under leaf, the other woolly, but intermediate forms have been discovered. This again is a fine Rhododendron for Cornwall and the west, with pale yellow flowers which open in February or March and, though it has grown at Exbury for many years, it never really seems to open its buds there: they are always caught by a frost. Perhaps the hardiest of the series is *R. coryphaeum*, a large shrub or tree said to be 15 ft. in height but very slow growing,

having only reached 4–5 ft. in height at Exbury though nearly twenty years old; perfectly hardy there, it has just reached flowering size—some forms have creamy white flowers but most that I have seen are flushed with a dingy pink which does not attract me. *R. Macabeanum*, with large shining green leaves and magnificent trusses of lemon-yellow flowers, seems hardy enough at Exbury but has not yet flowered there. In Cornwall it has begun to show its beauty and I should say it will be quite one of the best of the Grande Series, rivalling *sinogrande* in the size of its truss and the colour of its flowers. *R. sinogrande* is perhaps the largest leaved of all Rhododendrons: a tree 20–30 ft. in height, with large trusses of white or soft yellow flowers, it is a magnificent foliage plant where it can be grown. It should be planted young and not moved as, unlike other Rhododendrons, it will send its roots deep into the ground. Growing as it does in dense shade in the Chinese Alps it requires similar conditions in our climate, though to have the full effect of its fine foliage rich humus and ample moisture are necessary. The finest plants in this country are in CAPTAIN JOHNSTONE'S garden at Trewithen where, growing in what was once an old rookery, it has rapidly made a small tree with fine foliage and flowers freely. It will grow at Exbury and has flowered there, and it would grow in warm gardens inland in a sheltered position, but it might easily suffer from a cold frost.

HELIOLEPIS

In the Heliolepis Series the one most commonly grown in our gardens is *R. rubiginosum*. It is a very hardy plant, forming a large shrub up to 30 ft. high in the wild but not more than 15 ft. in our gardens so far as it flowers too freely to grow much. At the end of April it is very pretty when covered with trusses of small, rosy lilac flowers spotted with brown. This Rhododendron, as long as it has plenty of leaf mould round its roots, seems to tolerate a very slight amount of alkalinity. Very many forms have been sent back and they merge into *R. desquamatum*, which Rhododendron, however, is not so hardy and many forms of which flower in March—these forms are useless for most gardens. But some forms of *desquamatum* have larger, flatter flowers of a very pleasant shade of lavender purple. FARRER sent this home and so did FORREST. These two, which flower in April, are extremely handsome plants but unfortunately are on the tender side and only flourish in warm parts of Exbury; they should do well in the south and west. Although this is the extreme range of *R. desquamatum* on one side, I feel that either three species should be formed and this latter one be given another name, or else the whole merged into one species with varietal

names. From the garden point of view the two extremes are very different, *R. rubiginosum* being an excellent garden plant if one likes the colour, whilst the latter is a most desirable plant where it can be grown.

In its best forms *R. heliolepis* itself, which gives its name to the series, is a small shrub, said to grow 10 ft. in height in the wild but at present only 4 or 5 ft. in our gardens with intensely aromatic foliage, almost unpleasantly strong if one crushes the leaves. Its chief merit is that it flowers in June with small trusses of pale rose-coloured flowers or almost white with darker spots. The paler forms are hardly worth growing and *brevistylum*, which comes very near it and which also flowers in late June with deeper rose-coloured flowers and crimson markings, seems a more desirable plant; it has not, however, been so easy growing at Exbury.

IRRORATUM

The Irroratum Series is a very large one; unfortunately most of its members are on the tender side and only fitted for gardens in the south and south-west, though some will grow in warm gardens inland. For those who can grow them a few lines on some of the species may be helpful. *R. araiophyllum*, a slender branched shrub, up to 16 ft. in the wild, has neat green foliage and pretty cupular flowers, white, or suffused rose outside, with a crimson blotch: it is only fitted for the warmest gardens. *R. eritimum* is another shrub which is only suitable for the south-west: its dark green foliage makes a pleasant shrub and some of its forms have attractive lilac flowers. The same may be said of *R. lukiangense*. *R. irroratum*, with its pale yellow flowers in March is a slightly hardier plant, but its trusses are small and on the whole it is hardly worth a place in the garden. A pale pink form, deeply spotted, gives me a good return at Exbury in most years. Perhaps the most attractive of all the Irroratum Sub-series, as far as I have seen it, is *R. laxiflorum*. It is a slender light green foliage plant and grows eventually up to 20 ft. in height and, as I saw it at Caerhays with its trusses of open, bell-shaped flowers, some pure white and some a shade of pink, it made me long to grow it at Exbury. Unfortunately, although it lives in the open, most years some of the pips are frozen in the bud, and as it flowers in April it is apt to catch a lot of spring frost.

The Sub-series Parishii consists of some of the most beautiful Rhododendrons introduced from the wild: unfortunately these also are none too hardy. *R. agapetum*, with its long leaves—introduced by WARD—and said to grow up to 20 ft. in height, has smallish trusses of crimson scarlet flowers in June. It dislikes moving intensely as it grows very late, and this peculiarity applies to most members of this sub-series; in

fact, they want planting in their permanent positions when small and never moving. *R. Elliottii*, the finest of all the sub-series, has magnificent scarlet trusses in May or the end of June, and makes a shrub at present 5 ft. high in our gardens but probably growing much taller. It unfortunately is apt to make a second growth when the rains come in the autumn if the weather is mild and these rarely harden sufficiently to withstand the winter frost. It is a curious Rhododendron as it seems to do better in some colder gardens than Exbury, though in the south-west it is perfectly hardy; wherever it can be grown it is well worth a place. *R. eriogynum* and *facetum* make tall shrubs with fine foliage, the young growth covered with a brown or grey indumentum; they have clear bright red flowers in June, but I personally cannot distinguish between them. It may be that the real *R. facetum* is not in cultivation, but I am convinced that all the plants growing in this country under these two names are but one species. They have been introduced many times; where planted and left undisturbed they will stand a good deal of frost and large plants at Exbury suffered no harm from the 1939/40 winter. They are, I believe, hardy also in warm gardens inland and are well worth a place in the woodland, but they require shelter and watering during the growing season should the rainfall be insufficient. *R. Kyawi* is probably the finest of this sub-series, a shrub or small tree 15–20 ft. in height with large dark green leaves. It opens its bright rose-scarlet trusses at the end of July or early August. It is unfortunately only hardy in the warmest of our gardens along the extreme south-west of Cornwall or a few warm gardens along the western seaboard; where it can be grown it is well worth a place—at Exbury it will not survive in the open. It has been sent back both by FARRER and by FORREST, but FARRER'S form is undoubtedly the finest. The last of the sub-series, *R. venator*—is a hardier plant; it should do in most warm gardens though occasional plants were touched by the frost at Exbury in the winter of 1939/40. A shrub up to 8 ft. in height, with small trusses of scarlet flowers towards the middle or end of May, it makes an attractive sight when covered with its flowers. It has been put into this sub-series, but in many ways seems intermediate between this and the Sanguineum Sub-series.

LACTEUM

The next series to be discussed is also difficult, namely, the Lacteum Series. Plants in this series also require to be planted early in their permanent positions as they do not like moving. *R. Beesianum*, a shrub or small tree, eventually 20 ft. in height, with large dark green leaves; I have never seen it more than 4 or 5 ft. in height in our gardens, while

once at Caerhays I caught it in full beauty with the most delightful clear pink flowers in large trusses, well worth the place it occupied. *R. lacteum*, eventually a tree up to 30 ft. in height, is probably the finest Rhododendron ever introduced: its large trusses of clear yellow flowers are extremely beautiful in April: it seems hardy enough in sheltered positions, but slow growing and difficult, as exactly the right place has to be found for it and it must then never be moved. The fine collection of this Rhododendron at Werrington was unfortunately very thickly planted and attempts made to move them have not been very successful; I rather fancy that honey fungus has got in and a great many of the plants have died out. At Exbury I have three times lost it, but two fine plants are now in full vigour and seem to enjoy the position they occupy, which, protected from the north by a *ponticum* hedge, gets shade from the south by tall trees. These two plants came from Werrington some ten years ago and never fail to flower, though the pollen is often frozen. *R. Wightii*, a small tree 10–15 ft. in height, with rather loose trusses of pale yellow flowers and leaves almost mid-way between this series and that of Falconeri, is a fine foliage plant but its loose trusses make it one of the least desirable of the series. This also seems difficult. *Traillianum*, a tree eventually 20 ft. in height with white flowers, is growing in our gardens but has nothing much to commend it.

MADDENII

The Maddenii Series consists mostly of tender species only fitted for very warm gardens or greenhouses with very few exceptions. In the Ciliicalyx Sub-series, *R. burmanicum* is a very pretty shrub for a greenhouse, with greenish yellow or yellowish white flowers, sweet-scented, 6 ft. or so in height: a greenhouse shrub except in the very warmest gardens, and even there it is none too hardy; this remark also applies to *R. carneum*, a shrub of about the same height with pretty flesh-coloured flowers: it is attractive in a cold house. *R. ciliatum*, on the other hand, one of the hardiest of the series, makes a spreading shrub up to 6 ft. in height, with white flowers tinged with rose in April. It is hardy all along the coast and in warm gardens inland, though as it flowers at the end of March and early April it cannot be grown in gardens which suffer much from spring frosts. *R. ciliicalyx* itself is perhaps the best of all for the greenhouse. A very tender shrub, it has deliciously fragrant large white or rose-coloured flowers in April and it is well worth a place in the greenhouse, especially if it can be planted out; it is, however, extremely tender. *Johnstoneanum*, which forms a large bush with pale yellow flowers, perhaps better described as

greenish-white tinged with yellow, is hardy at Exbury and nearly always displays its beauty there at the end of April: but it would be better in warmer gardens and should not be tried in cold places. *R. Scottianum* is a most attractive small shrub, with very fragrant white flowers, but is only fitted for the warmest gardens. *R. supranubium*, another white sweet-scented Rhododendron in this series, differs from the others in having solitary or only two flowers in a truss, but is only fitted for the extreme south-west. It lived for some years at Exbury but eventually succumbed. *R. taronense*, a shrub up to 10 ft. in height with fragrant white flowers and a yellow blotch, flowering in April, is another beautiful greenhouse plant: and so are many others which are not mentioned here as they are not fitted for general cultivation in this country. *R. Valentinianum* must, however, be mentioned as it seems fairly hardy, perhaps nearly as hardy as *ciliatum*; a small shrub 2–3 ft. in height, with small bright butter-yellow flowers, it is an attractive species and survives at Exbury.

In the Sub-series Maddenii *crassum* has been sent back many times in recent years by all the explorers from the Chinese Alps. In the wild it forms a tree up to 20 ft. in height, with sweet-scented white flowers, rather fleshy, in June or July. I have plants growing at Exbury which have survived the two cold winters we have had and they flowered this summer; some forms are undoubtedly hardier than others—in some places in Cornwall it has been severely crippled and some of my plants suffered in the winter of 1938/39 worse than in 1939/40, but the hardier plants are worth a place in all gardens which are as warm or warmer than Exbury, *R. Maddenii* and *R. manipurense*, very similar shrubs or trees, with white or pink flowers, coming from the Himalayas, are rather more tender but, flowering late also, they are well worth a place in gardens in the south-west, and a form at Heligan which is known as *Jenkinsii* has beautiful pink flowers scented like orange blossom. *R. polyandrum*, the last one of this series to be mentioned, particularly noticeable because of the number of stamens it possesses, a shrub of 3 ft. or more in height with white or pale yellow flowers, is not much hardier. The form with pale yellow flowers, however, which was raised at Nymans and which received an Award of Merit, is well worth growing. At Exbury in the open it succumbed to the winter of 1939/40.

The Megacalyx Sub-series is essentially for the greenhouse. *R. Dalhousiae*, a thin shrub 6–10 ft. in height with large tubular flowers, white flushed pink, fragrant: *R. Lindleyi*, also with large tubular flowers, white flushed with rose in April, are both splendid greenhouse plants. The latter has lived for some years in the open at Exbury but was killed

last winter. It should do in gardens in the extreme south-west and so should *megacalyx*, a shrub with deliciously fragrant pure white flowers, trumpet shaped—I have seen it flowering well in Cornwall. *Nutallii*, on the other hand, and *sinonuttallii*, both magnificent tall shrubs for the greenhouse with large yellow, trumpet-shaped flowers, sweet-scented, only linger on a wall in Cornwall and are best in a greenhouse. So is *R. rhabdotum*, one of the most curious Rhododendrons ever sent back, as it has crimson lines all down the corolla, and has magnificent large cream coloured flowers. *R. Taggianum*, a small shrub with trumpet-shaped white flowers, is rather hardier; it has flowered in the open at Exbury and should do all along the south-western and western seaboard.

TALIENSE*

The Taliense Series, with which we now have to deal, consists of four sub-series and a large number of species. They are mostly perfectly hardy plants, but in many cases flower very early in the year, so in cold districts are apt to have their flowers frozen. As a general rule its members are the least attractive of the Rhododendrons which have come from the Chinese and Himalayan Alps though, like many wild Rhododendrons, the first few flowers produced give little idea of what a well grown bush can be when smothered with flowers.

In the Sub-series Adenogynum, *R. adenogynum* itself, a shrub up to 9 ft. in height, with dark green leaves and brown indumentum, has white flowers shaded rose with crimson spots at the base. The truss is of a very fair size and a full grown bush should be very pretty early in April when covered with bloom. At present, however, it is not big enough in our gardens and has only shown a few odd flowers. *R. adenophorum* is very closely allied to this species, though slightly more glandular, while *R. alutaceum* lacks a large calyx though otherwise resembling them. *R. Balfourianum* is another very closely allied species, which differs only in a broader leaf and a more plastered indumentum.

R. Bureavii, a small tree or shrub 6 ft. in height, with rose coloured or reddish flowers and crimson markings according to the *Year Book*, but white as I have seen it flowering at Exbury, is worth growing if only for its foliage and, in my opinion, it is the only one of this Sub-series which should be in every garden. Its attractive dark green leaves, its thick bright rusty-red indumentum on the under surface, one of the finest indumentums on any Rhododendron, make it a most attractive evergreen at any time of the year, while when it is covered with its

* Series Taliense, Thomsonii and Trichocladum reprinted from the Year Book of The Rhododendron Association, 1938, pp. 29–45.

flowers, it should be quite a pretty sight in the spring. It is apparently perfectly hardy. *R. bureavioides* is very like it and, coming from Northern Szechuan, differs merely in a botanical manner though its flowers are said to be larger.

R. circinnatum, a small tree 20 ft. in height, with thick cinnamon coloured indumentum, we know little about from the garden point of view, while *R. codonanthum*, with yellow flowers, is not in cultivation.

R. cruentum is a close relative of *R. Bureavii*, with white or white flushed rose flowers. It may be that the plants which have flowered at Exbury as *R. Bureavii* with white flowers are really this species.

R. detersile, a shrub about three feet high with a small compact truss, though placed in this Sub-series suggests affinity with the Sub-series Roxieanum.

R. detonsum, a shrub 9–12 ft. high, is closely allied to *R. adenogynum* but has practically no indumentum.

R. dumicola, with its white flushed rose flowers and faint crimson blotch, has a very thin tawny indumentum and is closely akin to *R. mimetes*, but with rather a larger calyx. It differs from this plant also botanically.

R. elegantulum, a bush or shrub 3–5 ft. in height, is also closely allied to *R. Bureavii*, but has narrower leaves with a more velvety and less woolly indumentum.

R. Faberi, with its sub-species *R. faberioides*, differs only in botanical details from *R. Prattii*, a shrub with white spotted pink flowers, which is one of the less interesting Rhododendrons, while *R. wuense* is not in commerce.

The Sub-series Roxieanum contains a large number of closely allied species, some of which have lately been merged by Dr. HUTCHINSON, and there is little doubt that many of the slight differences, not only in this sub-series but in the whole series, are really due to isolation in the different districts where they grow and from the garden point of view some of them can very well be amalgamated. The general feature of this sub-series is the narrow leaf, the frequently marked incurving of the leaf margin and the small congested truss.

R. bathyphyllum, a low shrub 3–5 ft. in height, with equally narrow leaves and white flowers with copious crimson spots, is closely allied to *R. cucullatum*, which is now merged into *R. Roxieanum*.

R. comisteum, a shrub 2–3 ft. in height with small narrow leaves and deep rose flowers with a few crimson spots, is said to be a beautiful species running in the direction of the Sanguineum Sub-series.

R. globigerum, a shrub 3–6 ft. in height, is a rather coarser plant with larger, flatter leaves and white flowers. *R. gymnocarpum*, a shrub 2–3 ft.

in height or more, has deep claret crimson flowers and should be an attractive plant, though the number of flowers in the truss—only three to four—will not make it very showy.

R. iodes, a shrub 6–8 ft. in height with white flowers and crimson spots, is a small leaved form of *R. triplonaevium*. *R. lampropeplum*, a shrub 2–3 ft. in height with congested foliage, is an Eastern representative of *R. proteoides*, differing in the larger leaves and in the white or pale rose flowers.

R. microgynum, a shrub 4 ft. in height, with dull soft rose flowers and faint crimson spots and a buff coloured, thin felted indumentum, is an attractive shrub. At Exbury the Rhododendron identified by Edinburgh as this has deep claret coloured flowers and bears some resemblance to the Sanguineum group. It seems perfectly hardy and usually flowers at the end of April or the beginning of May.

R. perulatum, a shrub 2–4 ft. in height with pale to deep rose flowers, is distinguished in the sub-series by the comparatively large calyx. This is another of the Rhododendrons of this series which shows relationship with the Sanguineum Sub-series and it might easily be that some time in the past members of these two series have crossed together, with results which puzzle the botanist.

R. poecilodermum syn. *R. Roxieanum*. *R. pronum* is a prostrate shrub of 3–10 in., with creamy yellow flowers and deep crimson markings.

R. proteoides, a much branched shrub of 1–3 ft. in height, with flowers ranging from pale cream to canary yellow and from creamy white or yellow faintly flushed rose to deeper rose tint, is the smallest leafed species in the Taliense Series and is a perfectly hardy Rhododendron eminently suited for the rock garden for those who have the patience to wait. So far as I know it has not yet flowered in our gardens although it has been over here for many years. An extremely slow growing Rhododendron but worth growing as a curiosity.

R. recurvum (syn. *R. Roxieanum*), *R. Roxieanum* and the species which have been merged into it are shrubs 4–9 ft. in height, and are all attractive with long narrow leaves, which from the foliage point of view are quite amusing to grow, though their small trusses of white flowers spotted with crimson are not particularly impressive. A well grown plant, however, covered with flowers would be quite attractive, and any of these are quite interesting in the garden.

R. russotinctum, a shrub 6–8 ft. in height and white flushed rose flowers with a few crimson spots, is very akin to *R. triplonaevium* and *R. tritifolium*: none of them are of any particular interest.

We now come to the Taliense Sub-series. *R. agganiphum*, a shrub 2–4 ft. in height with the usual white flowers and red spots, very closely

allied to *R. flavorufum* and in some ways suggestive of a small *R. Clementinae*.

R. agglutinatum, with similar flowers, is closely related to *R. schizopeplum*. *R. Clementinae*, a shrub 4–10 ft. in height, with attractive green oval to oblong-oval leaves with a pale fawn indumentum, at first glossy and resembling a kid glove, can easily be recognized by its triangular bud. FORREST named this Rhododendron after his wife, so he must have thought highly of it, but it is a difficult plant to grow and I dare say it does not much like transplanting. The few flowers that I have seen, creamy-white flushed rose, have not been over attractive, but there are forms with bright rose flowers and deeper crimson markings and in its mature state it may be an attractive plant in our gardens.

R. doshongense, a typical shrub 2–3 ft. in height with pink flowers and dark purple spots: *R. flavorufum*, a shrub 2–6 ft. in height with white flowers and crimson spots: *R. glaucopeplum*, a shrub 6–8 ft. in height with bright rose flowers, is closely allied to *R. aganniphum*. *R. lophophorum* is a little known species, near to *R. phaeochrysum*, which is a shrub of 6–18 ft. in height with the usual white flowers and crimson markings. *R. Principis* is not in cultivation.

R. Przewalskii, a high alpine species from 10,000–14,000 ft. altitude—a bush 3–9 ft. in height, has many flowering forms, many of which have been collected by ROCK. I have not yet seen the flowers, though ROCK speaks highly of it. At Exbury it is not too easy, like many plants from these high altitudes.

R. Purdomii is not yet in cultivation.

R. schizopeplum, a shrub 3–12 ft. in height, has the usual flowers of the series, and, coming from 12,000–14,000 ft. altitude, should be quite hardy, while *R. sphaeroblastum*, with white flowers marked with crimson spots, is near *R. Przewalskii* but rather more robust. *R. syncollum* is so close to *R. phaeochrysum* that it may be merely a variety.

R. taliense, a shrub 4–8 ft. in height with a compact truss of creamy yellow or cream flowers flushed rose with deep crimson markings is in some of its forms quite attractive in our gardens; a perfectly hardy Rhododendron with deep green foliage, it makes a nice round bush, but is one of the lesser attractive of the Chinese Rhododendrons.

R. vellereum, a bush or small shrub 6–15 ft. in height with white flowers or flushed rose with purple or crimson spots is an attractive Rhododendron, sent home by KINGDON WARD, with rather longer leaves of a paler green than the majority of this series with a kid glove-like, pale yellow indumentum. It has flowered at Exbury and the flowers were quite attractive and one of the most interesting of this subsection.

Sub-series Wasonii. *R. inopinum*, with creamy white flowers and a deep crimson blotch and crimson spots is closely allied to *R. paradoxum*.

R. rufum, a shrub or small tree, has white flowers or pink spotted crimson, and is near to *R. Weldianum*.

R. Wasonii, a bush about four feet high with dark green leaves and pinkish rose or creamy white flowers spotted within, or sometimes pale yellow, is an attractive Rhododendron, especially the yellow form, which does so well at Bodnant: while *R. Wiltonii*, a bush 3–15 ft. in height, with leaves paler above and felted reddish brown below, is a handsome Rhododendron worth growing. The white flowers with a deep claret blotch or flushed pink with red spots are attractive, and while the altitude from which it comes is lower than many of the other members of the series, it is perfectly hardy at Exbury. It is pretty in leaf and flower, which can be said of but few members of this large series.

THOMSONII

Dull as are many members of the Taliense Series, the same can hardly be said of the Thomsonii Series, of which there are few which are not worth growing.

The Sub-series Campylocarpum contains certainly some of the best Rhododendrons for a small or medium sized garden. *R. callimorphum* is a shrub 4–9 ft. in height, with the small orbicular green leaves typical of the series and carries little trusses of open bell-shaped rose coloured flowers, deeper rose in bud, with a crimson blotch. It is a charming little plant, very floriferous, hardy for most gardens but flowering perhaps a little early for the coldest. As with all members of the series, open woodland seems to suit it best where it can get a little sun but not too much and be clear of the drip of trees. Also, like all other members of the series, it dislikes getting dry and in times of drought requires watering though it cannot stand stagnant water at the root.

R. caloxanthum, a shrub 3–5 ft. in height with the typical round green leaves of the series, has trusses of pale yellow flowers the same colour as *R. campylocarpum* and with a similar red blotch. It, however, flowers a week to a fortnight earlier, thus extending the flowering season of those delightful coloured Rhododendrons. Although the *Species of Rhododendron* says that in nature it is a small bush as compared with *R. campylocarpum*, it shows signs in some of its forms of growing to a considerable size: nevertheless it is eminently suitable for a small garden where flowers in the middle or at the end of April have a chance of showing their beauty. Among some of the forms which have been raised from wild seed, several plants have appeared in various gardens with orange coloured flowers and rather a looser truss. These may be

natural hybrids, but all the same they are worth securing and at least one nursery gardener has been propagating some of these forms. In all it is a delightful Rhododendron, and so is *R. campylocarpum*, which is described as a small bush of 4–8 ft. in height, but which in some cases might almost be described as a small tree. It has a slightly longer leaf than several members of this sub-series and of course is well known in our gardens, having been introduced for a number of years. It still remains one of the prettiest yellow flowered Rhododendrons that we have and although its trusses are not as large as those of *R. lacteum*, it is certainly less fastidious, more easily grown and much more floriferous than that grand species. Two forms are in existence, the old dwarf form of Hooker, which makes more of a bush and which has perhaps slightly more intense yellow flowers, and another form to which the varietal name of *elatum* has been given, which is a big, laxer growing shrub, taller and with its buds—like *R. caloxanthum*—tipped with orange, though eventually they fade. This latter form is far the most valuable for hybridizing, as it throws when crossed with whites, not only pale yellows, but also ivories and delightful shades of pink tinged with yellow, whilst the type when crossed with a white Rhododendron throws many pale yellows.

R. cyclium, a shrub 4–6 ft. in height, which is very near to *R. caloxanthum* and has a more orbicular leaf with a more leathery texture, differs also in flowering later—it is very often the middle of May before its flowers expand to their full beauty. It seems also to be a bigger growing shrub and to take longer to develop to maturity before it covers itself with flowers. It is, however, an equally attractive member of the sub-series.

R. hedythamnum, a species with pale rose coloured flowers, from the Tali Range, forming a shrub 4–5 ft. in height, I have not yet seen in flower. *R. myiagrum*, a shrub 3–5 ft. in height, has such sticky pedicels that in Yunnan and also in our English gardens they catch any small fly that settles upon them, which has given rise to its name. It is rather like a smaller leaved *R. cyclium* but has white flowers, sometimes spotted, and while pretty in its quiet way, is the least attractive of this section.

R. telopeum, a shrub 3 ft. in height with yellow flowers, is again allied to *R. caloxanthum*, from which it differs in its smaller foliage, and its form known as *R. telopeoides* has rather less orbicular leaves. Both are charming small plants, and as they appear to flower after *R. campylocarpum* has lost its beauty, are valuable in prolonging the season of yellow flowering Rhododendrons.

The Sub-series Martinianum consists of but two species. *R. eury-*

siphon, a link between *R. Martinianum* itself and the Sub-series Thomsonii, is a shrub 3–5 ft. in height, with flowers broadly bell-shaped, creamy white or from pale rose more or less heavily flushed and copiously spotted crimson, to deep magenta. It is a pretty plant but nothing like as pretty as *R. Martinianum* itself, which is a charming little species, well suited for any garden however small. It makes a shrub 3–6 ft. in height with much slenderer flowering shoots than are usually found in this series and with little trusses of 2–3 flowers each of long bell-shaped flowers, pale rose in colour. FORREST sent this Rhododendron home a good many years ago and those who have seen bushes of it in full flower at Werrington will search the nursery gardens to acquire it for their own.

The Sub-series Selense, consisting of quite a number of species and sub-species, appeals to me least of the Thomsonii Series and, in fact, so small at present do I consider their garden value that I consulted Mr. STEVENSON about it; he confirms my views on the matter and I cannot do better than quote what he has written.

"The Sub-series Selense consists of a considerable number of species and sub-species. Generally they are shrubs eventually reaching 6–8 ft. in height and diameter. They have a very attractive compact habit of growth and neat small foliage.

"Unfortunately, like some other Rhododendrons, many years are required before they are sufficiently mature to flower really well. Single trusses are not effective and they seem to have little flowering merit until they have passed possibly their 21st birthday.

"Even then they will have to be planted in considerable quantity to give anything like the effects that have been seen in China and Tibet by their introducers.

"There are many botanical differences amongst the various species, but so far, from a garden point of view, they are very like each other.

"Colour does not appear to be any reliable guide, as most of them seem to be capable of producing many shades from rose through light yellow to white.

"It is too early to make a critical comparison of their flowering merits, but at the moment possibly *erythrocalyx* sub-species *docimum* and *jucundum* seem to be the best."

At Exbury two or three plants growing there as *R. selense* have flowered and borne pale yellow trusses, occasionally flushed with rose and seem to me very attractive indeed. *R. calvescens* has pale rose flowers: *R. cymbomorphum* is said in the *Species of Rhododendron* to be the only one with yellow flowers in the sub-series, but I believe, since the book was published, others have flowered: *R. dasycladum*, a rather

larger shrub of 6–10 ft. with bristles on the shoots, has white or rose coloured flowers: *R. erythrocalyx*, also with rather larger leaves than the average has creamy white flowers with a pale crimson blotch and spots; whilst its sub-species *R. beimaense*, *R. docimum*, *R. eucallum* and *R. truncatulum*, all of which have minor botanical differences, have more or less white or pinkish white flowers.

R. esetulosum has creamy white, flushed rose, crimson spotted flowers: *R. jucundum*, altogether a bigger plant, 6–20 ft. in height has rather flat, fleshy flowers, either rose or pale rose, or almost white: *R. manopeplum*, has creamy white flowers: *R. rhaibocarpum*, a shrub of 4–7 ft., near *R. dasycladum*, has white flowers occasionally flushed rose—this has flowered many times in our gardens but is not of great garden value: *R. selense* has white, flushed rose or rose coloured flowers, but I believe many different coloured forms occur, probably as many as in *R. Stewartianum*; its sub-species are *axium*, *chalarocladum*, *dolerum*, *duseimatum*, *metrium*, *nanothamnum*, *pagophilum* and *probum*. *R. setiferum* has creamy white flowers, crimson at the base and is allied to *R. jucundum*: *R. vestitum* has smaller flowers and is allied to *R. dasycladum* and *R. rhaibocarpum* but has smaller leaves with a distinct tawny indumentum.

The next Sub-series, Souliei, contains some of the most charming members of the Rhododendron family. With the exception of one they all have small, flat, saucer-shaped flowers, and when covered with these are quite delightful.

The first member of the sub-series, *R. astrocalyx*, is, from the garden point of view, best grouped together with *R. croceum* and *R. Wardii* as forms of one species, and there is no doubt that these three will eventually be merged, the plants being practically indistinguishable from the garden point of view, though *R. Wardii* perhaps is bigger growing and is more apt to make a small tree, while the others remain as bushes. They all have heart-shaped round leaves and pale yellow flowers, crimson in bud, and with a flash of crimson at the base. They all take some years before they flower freely and when young the new growth often comes at the same time as the flowers, thus hiding their beauty; later on, when they set bud freely on many shoots, the young growth does not come till after the flower and then, in the middle of May, their many trusses of wide open flowers make a pretty sight. By then *R. campylocarpum* has left its beauty behind till the next year. No collection of Rhododendrons should be without one of them, and in gardens where *R. chasmanthum* can be grown, a mixture of the two in the open woodland makes a very pretty picture.

R. astrocalyx grows from 3–5 ft. in height; and *R. croceum* and *R. Wardii* from 15–20 ft. high.

R. puralbum, a shrub 12–15 ft. in height, seems to be a white form of *R. croceum* and is a charming and desirable species.

All these rhododendrons seem to take kindly to our woodland and although some forms may be more tender than others, on the whole they thrive in the sheltered Rhododendron gardens provided semi-shade and a reasonable amount of moisture in dry periods is available.

R. Bonvalotii is an imperfectly known species, not in cultivation.

R. litiense is slightly smaller in leaf, in flower and in size, but equally attractive.

R. Souliei, a shrub 6–12 ft. in height, with open cup-shaped flowers, pure white or a beautiful shade of shell pink, is a perfectly delightful Rhododendron. It seems, however, to be more at home in the eastern counties than in the south and west and will stand a considerable amount more cold than the previously mentioned members of this series. In western Szechuan it grows in woodlands and thickets and woodland is where it thrives best in this country. In Cornwall and at Exbury it is not really at home but where it can be grown it is one of the most charming of all Rhododendrons.

The last Rhododendron to be included in this sub-series, *R. Williamsianum*, is a small shrub 3–5 ft. in height and as much through, with small trusses of 3–5 flowers, sometimes only two and usually not more than three or four, of pale pink bell-shaped flowers, which are perfectly delightful, especially when some of the young shoots, which are a lovely shade of reddish brown, are just beginning to appear. It is apt to grow rather early and the new shoots are frequently frosted in cold gardens so that the following year no flower is seen, or only a few, and this mars its beauty. But when seen at its best in Cornish gardens in robust health covered with its pink flowers, it is one of the best Rhododendrons introduced into this country and well worthy of the name it bears. Semi-shade in the woodland and a warm position is required, leaf mould and water during drought, but any coddling that this Rhododendron may receive is amply repaid in the gardens where it flourishes.

The Sub-series Thomsonii, the last section of this series, consists also of a number of species nearly all of which are well worth growing.

R. cerasinum, a medium-sized thick-set bush of 10–12 ft. in height, has the smallest leaves of this sub-series of Rhododendrons, three times as long as they are broad and of a dull green. The flowers are said to be creamy white with a broad cherry band or cherry red or brilliant scarlet with five deep purple pouches at the base. So far I have only seen flowers of the cherry red one and of a rather dull white with a pale pink band, though I am told that some with better colours have flowered in

other gardens. From the description given by KINGDON WARD, who discovered it in south-eastern Tibet, it appears to be a most desirable Rhododendron, though it is one of those where selected forms will no doubt appeal more to those who like effects in their gardens. As with so many of its relations, when young the flowers are low down and hidden by the foliage, but at maturity it makes a pretty little bush and when covered with its bells will no doubt take its proper place in our gardens.

R. cyanocarpum, a shrub or small tree 5–20 ft. in height with roundish leaves of pale blue-green, has flowers white or flushed rose, or even a rich soft rose. With pure white flowers it is a most attractive Rhododendron and can be compared with a white *R. Thomsonii*, but most of the varieties I have seen have flowers stained with rather a purplish rose, when it is not attractive. It is very early flowering—at the beginning of April—so it is only for the warmer gardens.

R. eclecteum, with more triangular leaves and usually deep brown buds, is a shrub up to 7 ft. or, I fancy, more in height, with every variety of colour—from flushed white to deep rose, rose magenta, shell pink, pale yellow, sometimes spotted, sometimes unspotted. It has been sent home time after time by different collectors in the Chinese and Burmese Alps. In its best forms in a warm garden free from spring frosts, it is quite one of the most attractive early flowering Rhododendrons, but it must be grown where it can be protected from spring frosts, for it is at its best about March, though sometimes a little earlier and sometimes later, and like so many Rhododendrons with fleshy flowers, a couple of degrees of frost will turn them into a brown pulp. A vase filled with flowers picked from different plants makes a very pretty picture, and although some forms are better than others, none are really bad. Here again better varieties will no doubt vegetatively be produced in time.

R. brachyandrum is a variety with dark spotted flowers and *R. bellatulum* has smaller leaves and bright rose flowers. Like all the series it dislikes drought and like other members of this sub-series it will stand a little more shade than the Souliei sub-series.

R. Hookeri, a tall erect shrub of 12–14 ft., has pale green leaves and the veins on the under-surface of the leaves studded with isolated hair tufts, which feel like small hooks to the fingers when run along them. This magnificent Rhododendron with large trusses of brilliant scarlet-crimson flowers, is quite one of the finest of the older Himalayan Rhododendrons but unfortunately is none too hardy and only fitted for the very warmest gardens or a cool greenhouse. At Exbury it lives in the open but has not yet flowered there and its chief beauty is in the

Rhododendron house, where every year it makes a magnificent display. It grows extremely early and the slightest frost affects the young growth, so that the secondary shoots that come away later are not strong enough to make flower bud. It was the only Rhododendron to have these big hooks on the under-surface of the leaves, but KINGDON WARD has lately sent back one which from the leaves has been identified as *R. Hookeri* but which he states to have amethyst purple flowers. This Rhododendron is growing at Exbury and the leaves have the characteristic veins but are not quite the same in shape as those of *R. Hookeri* and it certainly does not grow so early. It may be a closely allied but different species.

R. hylaeum, a round-headed tree 20–40 ft. in height has the usual fleshy flowers of the series, of a pale rose colour more or less dappled a deeper tint, but is so far only little known in cultivation. I have seen a few odd flowers at Exbury on a young seedling about five feet high, and judging by them I should imagine it to be the least interesting of the sub-series.

R. Meddianum, a shrub about six feet in height, has rather longer leaves less rounded than those of *R. Thomsonii* and even brighter scarlet crimson flowers, almost the colour of *R. Hookeri*, and though on the tender side it grows later and has flowered for the last two years at Exbury. In a sheltered garden it is quite one of the most desirable Rhododendrons and a group at Werrington or at Caerhays when covered with their flowers makes a dazzling sight and one not readily forgotten. Its variety *atrokermesinum* has still darker and larger flowers. No one who has a garden suitable for growing this Rhododendron should be without it.

R. Stewartianum, a small graceful bush 3–7 ft. in height with rather smaller pale green elliptic leaves, is another very valuable Rhododendron in the colour of its flowers: they range from pure white or clear soft yellow through white flushed rose to deep rose margined deep crimson with or without markings, and I have some growing at Exbury with apple-blossom flowers. These and the pale yellow ones are in my opinion the most attractive and I should rate it very high indeed were it not for its early flowering habit—the end of February will sometimes see a few flowers and March is its usual period, a month too full of cold winds and frost to make it a really popular Rhododendron, though it is well worth a gamble and one may enjoy its beauty for a week before the weather turns unkindly, even in a cold garden.

And the last not only of the sub-series but of the series is *R. Thomsonii* itself, that grand old Himalayan species, with its deep blood red flowers at the end of April or beginning of May, which in the past has

brought so much pleasure and delight to so many of our gardens. A bush or small tree 6–14 ft. in height or more, it is a fine stand-by, though it must never be allowed to set seed pods for it flowers so freely when it reaches adult size and so much strength is taken out of the plant by its effort to reproduce itself that it will go back very quickly if it is not attended to as soon as the flowers have begun to fall.

TRICHOCLADUM

The next series and the last one to be dealt with this year is the Trichocladum Series. Its members all consist of little deciduous bushes 2–5 ft. in height with small, pale yellow, flat flowers. When fully grown a bush covered with these is quite attractive in a refined way. Some have more greeny-yellow flowers but generally differences are more botanic than from a garden point of view and require but little mention.

R. chloranthum has yellow flowers tinged with green. *R. lepidostylum*, a shrub only 1 ft. in height with pale yellow flowers, is worth growing for the delightful glaucous green young leaves alone, and it should be in any collection of Rhododendrons.

R. lithophilum has pale yellow flowers, *R. lophogynum* the same, *R. mekongense* yellow tinged with green.

R. melinanthum, a shrub 6–8 ft. in height with yellow flowers, is probably one of the best of the series. It was introduced by KINGDON WARD and is certainly one which should be selected.

R. oulotrichum has precocious yellow flowers. *R. rubrolineatum*, a shrub 5 ft. in height, is closely connected with the Triflorum Series and has yellow flowers lined and flushed with rose on the outside. Its leaves also are sub-persistent and it is rather a distinct member of the series.

R. semilunatum has rather deeper yellow flowers while *R. trichocladum*, with greenish-yellow flowers spotted with dark green, is probably the one that is most common in our gardens but, though quite pretty, it would never take a front place.

R. viridescens has pale yellow flowers.

TRIFLORUM*

The Triflorum Series is quite one of the most attractive and useful in the whole range of this genus. The lightness of the foliage and the bushy effect of the plant is a relief to the heavy dark green foliage of most Rhododendrons; their floriferousness and general effect of the

*Series Triflorum and Virgatum reprinted from the Year Book of The Rhododendron Association, 1939, pp. 29–36.

flowers make them very attractive, not only as Rhododendrons but for general planting in shrubberies, added to which a great many of them are hardy, easily grown shrubs.

In the Sub-series Augustinii, *R. Augustinii* itself is too well-known now to require any description. Of the two forms originally sent back by WILSON the deep blue one is slightly on the tender side, while the pale lilac is very much hardier. The two crossed together have given at Exbury a fine pale blue Rhododendron, perfectly hardy there. Mr. STEVENSON has been crossing the best forms of the green-eyed *Augustiniis* together, with striking results. There is no doubt that by selection and further crossing in this species a hardy race of good coloured forms will be evolved. These, however, will have to be propagated by cuttings and it is plants grown from cuttings rather than seedlings that the purchaser should seek.

R. chasmanthoides and *R. chasmanthum* should really be merged together, both forms being found in batches of plants raised from the same packet of seed from the wild. It is unfortunately not so hardy as *R. Augustinii* and will not grow at Tower Court. At Exbury it flourishes and is now some 5–10 ft. in height, where it flowers a fortnight after *R. Augustinii* with beautiful blue lavender flowers and rather more of a truss than *R. Augustinii* itself.

R. villosum, a similar shrub, has the young shoots much more hairy than either of the previous two and flowers of bright magenta, attractive, but care in planting is necessary. These three are the only members of the Augustinii Sub-series in general cultivation, *R. bivelatum*, with small rose coloured flowers, and *R. hirsuticostatum*, with whitish rose flowers, so far as I know are not available.

In the Hanceanum Sub-series *R. afghanicum* is a poisonous shrub and should not be grown. *R. Hanceanum*, a dwarf shrub up to 3 ft. in height, with flowers whitish or pale yellow, is attractive in a minor way. Some forms are much better than others. It seems perfectly hardy at Exbury.

The Sub-series Oreotrephes consists of a number of shrubs with grey-green, almost round leaves and lilac flowers. They bear a close resemblance to one another and it is really difficult to distinguish between most of them except for minor botanical differences. The flowers, however, vary somewhat as they do in the previous sub-series and here again plants propagated from cuttings are advisable. HARRY WHITE crossed together two of his best *R. oreotrephes* and produced a very fine race of seedlings, one of which at Exbury nearly always takes a prize when shown at the Rhododendron Show.

R. oreotrephes itself, 7 ft. or more in height, with mauve or mauvy-

pink flowers, is an attractive shrub perhaps, like other members of this series, a little more fastidious about position. They dislike moving more than most members of the Rhododendron family and I fancy prefer semi-shade. The better form is very beautiful in flower.

Very near it but a little later and a rather dwarfer bush is *R. timeteum.*

I think the most beautiful of the family is *R. exquisitum,* which was named from two plants at Exbury bought from HARRY WHITE and raised by him as Sub-series Oreotrephes, F.20489. About six or seven feet high at present at Exbury, this plant has very lovely pale grey-mauve flowers with hardly any spots: and of all this sub-series I put it the highest. *R. artosquameum* is another Rhododendron very similar to *R. oreotrephes,* with beautiful rose coloured flowers without markings, but it is probably a slightly variable species as *R. cardioeides, R. pubigerum* and *R. trichopodum* have been merged into it by Dr. HUTCHINSON. Since doing this a number which was sent back as *R. artosquameum,* F. 20481, was provisionally called *R. siderophylloides* by Dr. HUTCHINSON when shown by Mr. CROSFIELD. This was a particularly fine form, but it is doubtful if it is worthy of specific rank and it should probably be changed to *R. artosquameum,* to which Rhododendron the award should be transferred.

R. apiculatum, with dark purple flowers, *R. bracteatum* with white flowers spotted with red, and *R. sycnanthum,* with deep rose lavender flowers, are other members of the sub-series of no particular merit for the ordinary gardener.

In the Sub-series Polylepis *R. Amesiae* with purple flowers and *R. concinnoides* with pinkish-purple flowers are not of special note. In general the Polylepis Sub-series is not particularly attractive.

In *R. concinnum,* with which has been merged *yanthinum, Benthamianum, coombense, ioanthum* and *laetevirens,* there is again a distinction between the botanist and the gardener. From the botanical point of view these names may all belong to the same species: from the garden point of view they are different. The poor forms of *R. concinnum* are only worth the bonfire, but some of its varieties are extremely attractive. *R. Benthamianum,* with deep violet flowers, always gives me great pleasure. It is not perhaps as attractive a blue as *R. Augustinii,* but when I see it in flower I always mean to propagate it and then somehow always seem to forget—it is well worth a place in any collection of Rhododendrons.

R. yanthinum, with rather more magenta coloured flowers, is sometimes confused with *R. pseudo-yanthinum,* which is a more showy garden plant, with deep magenta flowers. It is this latter plant which should be bought for the garden.

R. polylepis itself is, in my opinion, the worst of the whole group, in fact, the whole series.

The Sub-series Triflorum contains some fine Rhododendrons. *R. ambiguum*, a shrub 5 ft. or more in height with rather darker green leaves than most of the series, has pale yellow flowers spotted with green. There are better forms of this Rhododendron in cultivation and it is best to buy plants raised from cuttings from the best varieties. If this is done when the plants are mature they are very pretty in a sober way in the woodland and I always admire my group of this Rhododendron when in flower.

R. bauhiniiflorum, said to have been sent back by KINGDON WARD from one of his recent expeditions, I have not yet seen in flower. It is very close to *R. triflorum*.

R. flavantherum, a shrub 6–10 ft. in height with bright clear yellow flowers, is also one of KINGDON WARD'S plants. So is *R. kasoense*, a shrub with yellow flowers and red anthers. Neither of these two, however, have I seen in flower.

R. Keiskei, a low compact shrub with lemon yellow flowers comes from Japan. In many ways it might be called a dwarf *R. lutescens* and is very attractive in the rock garden when covered with its crowded blooms in the early spring.

R. lutescens itself is a fine shrub for a warm garden. Not only is its light green foliage always graceful and pleasing but its bronzy young shoots are attractive in the spring, and in some forms its yellow flowers are very fine. It unfortunately begins to open its flowers at Exbury in February and these are often frosted, but so numerous are the buds that there is always a succession to come on and I rarely miss a year without seeing its beauty at some time or another. Should there be a period free from frost during its flowering time it is as beautiful a Rhododendron as one could wish to see, but people in cold gardens would be disappointed with it. It is perfectly at home in our climate as it seeds itself freely at Exbury.

R. triflorum, a shrub 8 ft. or more in height, with light yellow flowers spotted with green, has been introduced for many years. Quite at home in Cornwall, it is a little too tender for northern gardens, though it flourishes at Exbury. Its great beauty is in its bark, which it seems to shed every year—the cinnamon colour of this is very beautiful when it is held up to the sky.

R. Wongii, with cream coloured flowers, I have not seen. *R. xanthocodon*, sent home by KINGDON WARD, is one of the connecting links between the Triflorum and the Cinnabarinum Series. Its flowers are more bell-shaped than any other of the whole series and a well grown

plant with light green foliage and yellow bells is very pretty in May. It seems, however, to be slightly on the tender side and requires a sheltered situation at Exbury.

The Sub-series Yunnanense, the last sub-series of this series, is also the largest. Of *R. aechmophyllum* and *R. Bodinieri* I know little. *R. caeruleum* used to be known as *R. eriandrum* and while, strictly speaking, it was necessary to alter the name, this is another instance where botanical nomenclature is contrary to garden interests. I suppose the type must be a dark colour, but all those growing in my garden are white and raised from seed sent back by ROCK. I consider it the best of all the white Triflorums and am propagating it freely as it seems a good doer and perfectly hardy. It is a bushy shrub, at present about five feet high and it does not look as if it is going to grow much taller. It is a good plant to have in the garden in May as whites are always useful to avoid colour clashes. *R. charianthum*, a shrub with rose coloured flowers densely spotted with red on the upper part of the corolla within, is very near *R. yunnanense*.

R. chartophyllum is also very close to *R. yunnanense* but the leaves are more deciduous and it also flowers considerably earlier in the season. When completely deciduous it is known as *R. chartophyllum praecox*. In the latter form the flowers come before the leaves and it always looks to me a little naked. It is a pleasant enough little shrub, very free flowering and apparently hardy but not, in my opinion, as good as many other of the same sub-series.

R. Davidsonianum, a bushy shrub 6–10 ft. in height with pink flowers with red spots, is very variable in colour and mostly inclined to mauve. By selection, however, real clear pinks can be secured and BODNANT received an Award of Merit for a very fine form a year or so ago. It is a hardy Rhododendron and very pleasing in its best forms.

R. erileucum, which I have not seen, is very closely allied to *R. zaleucum*, nor do I know *R. hesperium*, with smoky rose-lavender flowers, nor *R. hormophorum*, a shrub up to 3 ft. in height with rose flowers.

R. hypophaeum, with flowers white tinged with rose, and *R. leilungense*, with pale rose coloured flowers, are not in general cultivation.

R. lochmium, with pink-lilac flowers is very closely allied to *R. Davidsonianum*, very pretty in full bloom it is no better than that plant.

R. longistylum, a shrub up to 7 ft. in height, with small pink or white flowers, is a pretty little bush but nothing like so showy as other members of the family. It is really only worth a place in the collector's garden.

R. pallescens appeared as a stray at Exbury, but since then it seems

identical with Rock No. 59578. It is a very free flowering little bush with white or pinky-white flowers and red spots and is perfectly hardy there. It is very attractive when in flower and so well worthy of the Award of Merit it received some years ago.

R. pleistanthum is very nearly allied to *R. Davidsonianum*. *R. rigidum* is a loose growing shrub with very pale rose coloured flowers of no particular merit although quite pretty, like all the other members of the family.

R. Searsiae, with white or mauve coloured flowers, a small shrub or bush, is another plant which makes a great show every spring, completely covering itself with flowers and apparently quite hardy. Its colour is perhaps not so good as some other members of the family but none the less attractive.

R. siderophyllum, a shrub 4–9 ft. in height with whitish to violet flowers, and *R. stereophyllum*, a shrub 6 ft. in height, with very small flowers, need no particular description.

R. suberosum, a shrub 5–7 ft. in height with white or white flushed rose flowers, is an attractive member of the family but it makes rather an untidy bush, though the white forms are quite pleasing.

R. tatsienense is only a name. *R. Vilmorinianum*, a weak growing shrub with yellowish white flowers then white with ochre coloured spots, does not appeal to me particularly, but when we come to *R. yunnanense* we have quite the finest member of this sub-series. The flowers are pinkish or nearly white spotted with red, sometimes a very fine pale lavender, perfectly hardy and forming a large shrub eventually; it covers itself with flowers every year and as these come rather later than the majority of the series, it is suitable for nearly every garden. A bush of this in full vigour and flower in the open is a great joy in the garden.

Would that *R. zaleucum* was hardier! Its leaves, silvery-white beneath and grey-green above, make it an attractive foliage plant, while the fine lilac coloured flowers are large and pretty at the end of April or early in May, when it is in bloom. It is only just hardy at Exbury where it does not flower every year.

VACCINIOIDES

The Vaccinioides Series consists entirely of small epiphytic shrubs of no garden value or interest, so I do not propose to describe them.

VIRGATUM

The last series in these articles—Virgatum—consists of three species, only two of which are well worth growing. *R. oleifolium*, sent back by

both FORREST and WARD, is unfortunately none too hardy, only just surviving at Exbury, where, however, the pale pink form sent back by WARD and the white form by FORREST, delight me with their delicate flowers in the early spring; they are both worth growing in a cool greenhouse so pretty are they. They are small shrubs, requiring a front place in a warm sheltered situation where they are as free from frost as possible.

R. racemosum is so well-known that it is hardly worth describing. All its forms are good. The one I like least is the one that has been sent back as *R. racemosum var. oleifolium*, not to be confused with *R. oleifolium* itself. This one always opens its flowers precociously in February or March and usually gets frozen at Exbury. But the late forms, either the dwarf form introduced by FORREST or the taller form of ROCK, are all beautiful front row plants in the woodland and flower freely every year. They are perfectly hardy in this country and suitable for any garden, although the fact that they flower at the beginning of May may make them not too suitable for gardens where late spring frosts occur.

R. virgatum, the least attractive of the series, is the Himalayan form of *R. oleifolium* and was sent back by HOOKER many years ago. It is a pretty plant in Cornwall with its pinkish flowers, but it is no hardier than *R. oleifolium* itself and nothing like so good or attractive a Rhododendron.

DECIDUOUS SPECIES OF AZALEAS

by

James P. C. Russell

PERHAPS of all the great Rhododendron family, the deciduous Azalea hybrids are the best known and the most commonly grown. In the wonderful brilliance of their effect, one is apt to forget altogether the species from which they were bred, and although it may be that in some cases the species will look rather pale and insignificant if placed beside their offspring, they have a delicate balance, a proportion of flower to leaf which the hybrids cannot equal, and in many cases a superb scent. There are very many species which have not been used for hybridizing at all, which differ considerably in appearance from the more ordinary Azaleas, and these are some of the most beautiful plants that we have.

As this is simply a description of some of the best wild Azaleas for the garden, I think it is easier to consider them as they flower, rather than to take them in their botanical series.

Many oriental plants seem to grow with an elegance and distinction of habit quite unlike those from any other part of the world. This perhaps applies in particular to some Japanese Azaleas. Not only is their habit of growth particularly charming, but the arrangement of their leaves in regularly spaced groups of five or three gives them a particular distinction. These are mostly plants for the open woodland. They are extremely hardy and of the easiest possible culture, except that a certain amount of patience is needed before they begin to flower with any great freedom.

R. Albrechtii is outstanding. The thick waxy-petalled flowers vary from a bright pink through rose madder to an extraordinary shade of rose magenta. Once this plant has attained a certain size, it is exceptionally free flowering. The colour, however, is rather a difficult one to place and it is best planted on its own.

R. Schlippenbachii is a widely spreading bush some 4–5 ft. in height and perhaps rather more across. The flowers are very large, somewhat thick and fleshy in the petal and vary in colour from white through pale rose to a particularly lovely deep rose form. The beauty of the flowers in spring is equalled by the brilliant colour of the leaves in the autumn.

A rather curious plant closely related to the above is *R. nipponicum*. It is certainly not remarkable as a flowering plant, as the flowers are small and hidden below the foliage. However, the foliage is very large and handsome and colours brilliantly in autumn.

Two very charming species nearly related to the above are *quinquefolium* and *pentaphyllum*. These are as bafflingly similar in the garden as they are in name. *R. pentaphyllum*, however, has rose-pink flowers, whereas those of *quinquefolium* are pure white. These are both plants of great elegance forming rather pyramidal bushes, all the twigs of which seem to grow in a completely symmetrical manner and each carrying five perfectly placed green leaves tinged with red at the edge. They are not free-flowering when young and in early youth the flowers are somewhat hidden by the foliage. Once the bush has reached a certain size the effect is very beautiful and the hundreds of beautifully shaped bell-like flowers become visible dangling amongst the twigs. Both species should be grown for their superb autumn colour.

R. reticulatum is a well-known plant, not always very popular on account of its lilac or purple colour. The flowers are produced with the greatest freedom. They are large and well shaped, and all winter the brown twigs with rich brown buds look exciting. If properly placed, few plants are more brilliant than this. Owing to the variation in colour, it is wise to select your plants in flower.

R. Weyrichii is an interesting plant flowering rather later than the above group. It is a tall-growing Japanese species, again with handsome leaves. The flowers are medium sized and a rather curious colour—a rich salmon-pink flushed and marked in mauve. There seem to be a number of forms of this Azalea in cultivation, and there is one here which came originally from Japan as *dilatatum*. However, this is a synonym of *reticulatum* and the plant obviously belongs to the *Weyrichii* group. The flowers, although smaller, are a bright crimson.

The American Azalea species begin to flower rather later than the Japanese, with the exception of *canadense*. These vary in size from low-growing mound-like shrubs to large bushes capable of attaining 12–15 ft. Most of them appreciate moist peaty conditions and they are particularly excellent for providing bold splashes of colour in the bog garden before the great mass of Astilbes, Spiraeas and other bog plants come into bloom.

The small-growing late-flowering forms of *viscosum* are particularly charming with their large heads of tiny white, very sweetly scented flowers. These look at home almost anywhere in the garden and can even be used with great effect amongst the old-fashioned Roses.

R. canadense, for so long known as Rhodora, is one of the earliest. This is an attractive little plant suckering freely in wet, peaty ground. The foliage is a greyish-blue and the small flowers are bright magenta pink.

Flowering in late April, *Vaseyi* is one of the most beautiful species we

have. It is a tall shrub with rather willow-like leaves which colour to a brilliant scarlet in autumn. The flowers are produced in trusses and are beautifully shaped. The petals vary in colour from almost white to a deep shell-pink. The corolla is slightly spotted with greeny-brown: the stamens are white and protrude with a very graceful effect.

R. luteum is undoubtedly the best known of all the wild Azaleas in this country. While it has never had the colonizing powers of *Rhododendron ponticum*, it has established itself in many parts of the country in large thickets. It is a very variable plant, but always attractive, its scent being amongst the best, and the autumn colour as fine as any. It was introduced to this country at much the same time as *R. ponticum*, towards the end of the eighteenth century, and has of course had a great influence on the hybridizing of Azaleas.

R. molle has been introduced on many occasions over a long period. It is, however, a very tender plant and is only doubtfully in cultivation at the moment, whereas *R. japonicum*, its Japanese counterpart, is a vigorous and hardy shrub and quite equal in beauty to most of its hybrids. In fact, many named varieties would appear to be merely colour forms of this species. The type plant varies in colour from orange to scarlet, but there is also a very handsome pure yellow form. At much the same time to flower, there are three plants which form a confusing, but beautiful, group of American Azaleas. These consist of *canescens nudiflorum* and *roseum*, and to the gardener's eye they appear very similar indeed. All are vigorous shrubs quickly making bushes 4–5 ft. in height and very free-flowering. The flowers of all vary from pale-pink to a charming shade of deep coral rose, and in the case of *roseum* with a faint, but very delightful, scent.

The *occidentale* hybrids are amongst the most popular of all hybrid Azaleas, but the type plant itself is seldom seen. This is a great pity as it is one of the most attractive as well as being exceptionally strongly scented. This would appear to be a very variable plant as there are many slightly different forms in cultivation. The leaf is rather long and pointed and the flowers, usually in a compact truss, are white, flushed with rose or pale-yellow. This has a really wonderful scent and is amongst the most brilliant for autumn colour.

R. atlanticum is a particularly charming woodland plant and one which is far too little known. It delights in a sunny spot in any open glade. It is a low-growing, spreading shrub, reaching some 3–4 ft. in height and suckering freely. As the sprays grow, they arch down to the ground and form a large mound of soft green foliage, very glaucous beneath. The flowers are produced with the utmost freedom, very long-tubed, slightly pink in bud, but when open are pure white. The

scent is as strong or stronger than *viscosum* (the Swamp Honeysuckle). Various colour forms of this are mentioned as being known in America, including a pale yellow one and a rose-pink form. These do not appear to be in cultivation, but they would be very well worth introducing.

R. calendulaceum is a very distinct June-flowering plant. It has a stiffly upright habit of growth and the large trusses of flowers are very unusual in that the edge of the corolla would appear to have been trimmed round regularly with a pair of scissors. The stamens stand up well above the flower. It is an extremely variable plant in colour, ranging from a bright orange to clear yellow and dark crimson. Some forms of this were probably in cultivation here in the eighteenth century, and there is no doubt that it has had a tremendous influence on the Ghent Azaleas.

Also flowering in June and through to July, there is a somewhat confusing group of American Azaleas centring round *viscosum* and *arborescens*. *R. oblongifolium* somewhat resembles *atlanticum* in appearance, but makes a rather larger bush and the flowers are not so fine. *R. alabamense* is a tall, slender shrub, again with very small white flowers, fragile in appearance, but sweetly scented while *arborescens* is a very variable plant in size of flower and one of the most beautiful. In its best form it flowers in July. The individual flowers are large and in fine trusses, pure white with a singledark line down each petal. The scent is particularly fine. A variety of this called *Richardsonii* is a mountain form and is rather more compact in growth than the type. As it is grown here, the flowers are a very pale pink with a deeper pink line, and it is a particularly attractive plant.

A vast number of forms centre around *R. viscosum*. This is a most variable plant with a long flowering period. Some forms bloom in early June; some are still not out in mid-July. This is the Swamp Honeysuckle, and its scent is amongst the most delicious in the garden. The typical plant is a rather straggly bush when young, with glossy, dark green leaves and long-tubed white flowers. With age, the bush becomes rounded and symmetrical and anything up to 6 or 8 ft. in height. An old bush of this variety will be completely smothered in flower and will scent the garden for a hundred yards around. There is an attractive pale pink variety known as *rhodanthum*, but perhaps the most charming forms are the dwarf varieties. Variety *glaucum* is a neat little bush with very blue-green foliage, glaucous beneath. The long-tubed flowers are produced in symmetrical trusses, rather flat, and the corolla opens out at the end into five star-like petals. Variety *nitidum* is a much later plant altogether. A very old bush here has reached no more than 3 ft. in height, with a width of some 6–7 ft. The leaves are greener

than in the *glaucum* variety, narrower, and the flowers are in a looser truss.

R. amagianum is a little-known and extremely handsome Japanese species which by appearance would seem to be a very late, large-flowered form of *Weyrichii*. In rich woodland soil this is a fast-growing plant with large well-shaped dark green leaves in threes and very large, bright orange-pink flowers, spotted with brown, in July.

Perhaps the last Azalea to flower is *R. prunifolium*. This rather rare American species is slow to begin to flower, but once the bush has reached maturity, it flowers with great freedom. The flowers, produced in a handsome truss, are large with slightly recurving petals and protruding stamens. The colour varies from a very deep orange to the darkest Indian red. It is a curious characteristic of this plant, often transferred to its hybrids, that the colour will vary from season to season. In a dry and rather cold year the flowers will be bright orange; in very hot weather they will be an extremely dark red. The colour is also apt to deepen a day or two after the flower has opened as opposed to most varieties which are far more inclined to fade.

R. cumberlandense is a recently introduced variety said to be closely allied to the above. It has not yet been in cultivation long enough to flower properly out of doors.

RHODODENDRONS IN WESTERN NEPAL

by

W. R. Sykes

THE 1952 Botanical Expedition to Western Nepal was organized jointly by the Council of The Royal Horticultural Society and the Trustees of the British Museum (Natural History) both of which are interested in the flora of this unknown part of the Himalaya, lying between the Kumaon district of India to the West and the massive Dhaulagiri Range about 200 miles to the east. My companions were Mr. L. H. J. WILLIAMS of the Botany Department of the British Museum and Mr. O. POLUNIN, a science master at Charterhouse School, Godalming. The main part of our collecting area lay from the Lesser Himalaya Range which in this area has a crest of ridges 14,000 to 16,000 ft. in height, to the Main or Great Himalaya Range running parallel to the north and with peaks above 22,000 ft. high. This latter range was penetrated several times and in two places crossed, each time revealing drier conditions with greater extremes of heat and cold as one went further north towards the frontier of Tibet.

It is a country of steep river gorges, often with thickly forested slopes in the lower altitudes, while higher up wide U-shaped glacial valleys with grassy and scrub-covered slopes become much more common. High up, just below the permanent snow line, there are immense loose screes and boulder strewn earthy slopes upon which thrive a few very hardy prostrate plants often of a cushion habit. Although so little known to Europeans, much of this part of Nepal, especially the middle Temperate region, has quite a high population, which means that a huge number of grazing cloven hoofed animals exercise a profound effect upon the vegetation in such areas, as do the depredations occasioned by what we could only describe as "indiscriminate" burning and felling of forest trees by the local inhabitants. Much terrace cultivation is carried on wherever the mountain sides become sufficiently gently sloping to enable a few square yards to be levelled off and sown, usually with a crop of rice, cereals or buckwheat.

The expedition did not result in the discovery of any new species of Rhododendron, the number collected only totalling eight. It had been anticipated, however, that few species would be encountered due to the rapid lessening of the amount of the monsoon rains as one proceeds

westward along the Himalaya. Thus considerably fewer species were encountered than in even the eastern part of Nepal. The ones we met with tended to confine themselves largely to distinct altitudinal regions and climatological zones, and were often the dominant plant in their particular area and as such occurred in great abundance. The flowering periods roughly coincided with the "spring" and "summer" months before the monsoon broke which in some areas was not until the beginning of July. It was practically always noticeable that the strongest and most vigorous plants occurred on the north-facing slopes since they were less directly exposed to the sun's rays. The foothills of the Himalaya were very dry and arid in many places and several xerophytes grew abundantly, but higher up the melting snows provided enough moisture to prevent complete drying out of the soil before the monsoon. The Expedition journeyed up from the foothills near the Indian border to the small town of Jumla situated just north of the Lesser Himalaya and here we made our main base. This journey was accomplished in late March and early April when the low sub-tropical valleys were rapidly warming up and the snows in the Alpine regions were beginning to melt.

The first Rhododendron observed was *Rhododendron arboreum* which was first encountered just below 5,000 ft. In late March it was in full bloom and its blood-red trusses of flowers were a most memorable sight with whole hillsides between 5,000 and 7,500 ft. covered with blossom. Unfortunately in some areas indiscriminate burning, felling and grazing have ruined what would be thick *Rh. arboreum* and *Quercus incana* forest—the latter nearly always being associated with the Rhododendron. *Rh. arboreum* also flowered abundantly on the south-facing slopes but was much more stunted because of the arid conditions it was often growing in on the steep well-drained mountainsides. It was noticed that the local people often used the blossoms for decorations in their hair and also on shrines and in their temples. On ceremonial occasions the cattle would sometimes be decorated. Higher up between 7,500 ft. and about 10,500 ft. the *Rh. arboreum* encountered was nearly always of a pinkish shade, which varied from pale pink to a rich rosy pink. In addition the buds were much stickier (presumably because of the much cooler winter conditions encountered) while the leaves were whiter beneath, and a greyish green above. The pink forms of *Rh. arboreum* never occurred in such abundance as the blood red type, and also did not usually grow as tall as the latter which attained a height of 30 and 40 ft. in favourable positions. It was noticeable how the birds were attracted to the blossoms and many species were observed on the trees including sunbirds, tits, flycatchers and

laughing thrushes. The trunks and main branches of the trees were often thickly covered with moss and festooned with ferns and orchids. A particularly lovely sight was a blood red *Rh. arboreum* in full bloom with its branches covered with masses of the white orange-centred flowers of an epiphytic *Coelogyne*. Near the village of Dhaulakot in the foothills at 7,500 ft. where *Rh. arboreum* grew abundantly with *Quercus incana* and another common Ericaceous shrub *Lyonia ovalifolia*, a little of the destructive "bud blast" disease was observed on the Rhododendron when returning during the monsoon.

The next Rhododendron encountered was *Rhododendron barbatum* which occurred rather sparsely in thick coniferous and deciduous broad leaved forest on southern slopes of the Lesser Himalaya at altitudes of 9,000 to 10,500 ft. *Rh. barbatum* occurred as a bush about 7 or 8 ft. high and often it grew where it received partial shade from tall *Tsuga dumosa* which in this area attains a height of over 150 ft. The flowers were of a brighter scarlet than those of *Rh. arboreum* and the inflorescence was more compact. Another striking feature of this plant was the attractive coloured bark, which peeled extensively to reveal an "Indian Red" colour beneath and rather resembled that of *Rh. triflorum*. Although we descended later to altitudes of around 7,000 ft. north of the Lesser Himalaya *Rh. barbatum* was only once again observed, and then in the north-west of our area near the great river Karnali which cuts a huge gorge right through the Himalaya and eventually flows down to India and the Ganges.

On the northern slopes of the Lesser Himalaya at heights of 11,000 to 13,000 ft. *Rhododendron campanulatum* was abundant, receiving heavy monsoon rains here. It occurs rather less abundantly further north in the main Himalaya where the monsoon precipitation is less. A typical example of the range and habit of this species was noted on the northern slopes of the Barbaria Lekh. *Rh. campanulatum* began to occur in the *Abies spectabilis, Betula utilis* forest at 11,000 ft. At first plants were sparse in numbers and grew in the shade bearing flowers of whitish or very pale mauve colour. A rapid increase in numbers was observed as one climbed upwards until in open birch woods *Rh. campanulatum* grew abundantly and occurred in pure stands above the birch zone to a little above 13,000 ft. These slopes were a very beautiful sight in late May for in addition to the *Rh. campanulatum*, the birches were most attractive with their young green leaves and in the grassy clearings thousands of white and blue anemones were in flower, and golden sheets of Caltha covered more open boggy areas. The colour of *Rh. campanulatum* appeared to vary considerably higher up and often very pale mauve and deeper mauve shades were growing mixed together. The whitish

flowers often had more reddish spots on the corolla than the deeper coloured forms while even the palest bore a crimson blotch at the base of the corolla. The leaves were also attractive with their rich brown felty covering of indumentum beneath. In the area of the Karnali River, Mr. WILLIAMS found a form of *Rh. campanulatum* (P.S. & W, 4142) with pale coloured flowers, relatively few spots and with leaves having only a sparse covering of indumentum. This form closely resembles *Rhododendron Wallichii*, a related species of the same series found in the Sikkim Himalaya.

The other Rhododendrons seen were all dwarf species and occurred at greater altitudes, and *Rhododendron lepidotum* and *Rh. hypenanthum* particularly often covered large areas of open "moorland" slopes with a dense scrub 12 in. to 18 in. high. *Rhododendron lepidotum* with small scaly green leaves was found at lower altitudes than the other dwarf Rhododendron and also tolerated drier conditions. It grew at altitudes of 11,000 to 14,000 ft. becoming increasingly common towards the upper limit. Flowering occurred rather late in June and early July. *Rh. lepidotum* often grew among *Rh. campanulatum* and beneath *Betula utilis* as well as on steep exposed mountain slopes and ravines of jumbled earth and rocks where glaciers had receded. The flower colour was mainly constantly a magenta purple and only once in the Dojam Khola running back into the Main Himalaya did I notice a variation with the discovery of a form with considerably brighter coloured flowers. Always a noticeable feature of the flowers were the purple filaments supporting the brown anthers. Below the Jangla Bhanjyang just west of the Dhaulagiri Himal *Rh. lepidotum* was in full flower in the early part of the monsoon period and the young leaves which were unfolding at that time were often a bright red. This combination of bright red and magenta purple did seem to be one of the few cases in nature where two colours really clash. This feature of the young red leaves was not constant by any means. In one area towards the lower limits of its range *Rh. lepidotum* was observed growing in rather dry conditions and the undersides of the leaves especially were often seen to be infected by a rust fungus.

Rhododendron hypenanthum (a close ally of *Rh. anthopogon*) was the other dwarf Rhododendron to occur abundantly in west Nepal and flowered in late May and June. It was usually a similar height to the previous species i.e. just over 12 in. and often grew intermingled with it in its lower altitudinal range, but although it was often common around 13,000 ft. it went up to about 17,000 ft. The small flowers were usually pale lemon with a pinkish tinge to the base of the corolla. The dark green leaves were covered with deep brown indumentum

beneath and it was this Rhododendron which evolved the typical pungent "Alpine Rhododendron scent" which is so difficult to describe but can permeate one's clothes as a result of climbing and bivouacking among it. *Rh. hypenanthum* in the lower part of its range nearly always occurred on north-facing slopes and on one particular occasion a sharp demarcation line was noticed where this Rhododendron suddenly ceased on the summit of a pass running from east to west. Near the summit of the Jangla Bhanjyang Pass at about 15,500 ft. a dwarfer form of this Rhododendron was found with the shrublets under 6 in. high. This region was very moist and the dwarf form of *Rh. hypenanthum* had stems of blackened appearance and flowers which were paler in colour and probably due to the altitude were later flowering. This Rhododendron was often recorded as growing in association with *Potentilla fruticosa* and as one reached the more arid country towards the Tibetan border it was gradually replaced by Lonicera and Caragana scrub.

While trekking through difficult high mountainous country of the Main Himalaya in the middle of June I came across a less common Rhododendron of the Lapponicum series, which proved to be *Rhododendron nivale*. This plant was only found back in the Main Himalaya and consequently was seen more by Mr. POLUNIN, who made a long journey through the main range to reach the Tibetan border. I saw *Rh. nivale* growing on short grassy mountain sides around 15,500 ft. where it occurred in colonies above *Rh. hypenanthum*. Superficially the plant resembled a miniature *Rh. lepidotum* with scaly leaves and purplish flowers. These flowers, however, were always darker and more truly purple in colour than the other plant and the open corollas revealed the purple filaments and reddish styles. The dwarf bushes were only 8 to 12 in. high and bore very small, densely scaly leaves.

Rhododendron nivale is one of the hardiest Alpine Rhododendrons and has been reported from much greater heights in south-east Tibet, whilst Mr. POLUNIN has recorded it from 18,000 ft. in Nepal. In the Chharkhabhotgaon area north of the Dhaulagiri Himal, Mr. POLUNIN discovered a form of *Rh. nivale* (P.S. & W. 1344) with a similar habit to the type but distinguishing itself by having pink flowers. It was found in the upper altitudinal range for the species and was recorded from heights of around 18,000 ft.

The same form was also found in one other isolated spot north of the main Himalaya, on the Mohala Bhanjyang Pass. In both localities it did not grow as a closed community such as *Rh. nivale* itself often does, and mainly occurred in rather sheltered hollows with a north-facing aspect where there was also an accumulation of peaty material.

Rh. nivale (P.S. & W. 1344) was commencing to flower about the middle of June.

The last Rhododendron found by the Expedition was the species recently discovered by Col. D. G. LOWNDES in the Marsiandi valley of Central Nepal in 1950 and named in his honour *Rhododendron Lowndesii* Davidian. This species, which is not yet definitely assigned to a particular series, occurred very sparingly in western Nepal in the Barbung and Lulo Kholas, both areas missing the full brunt of the monsoon rains. *Rh. Lowndesii* grew in steep sheltered ravines at altitudes of 14,000 ft.–15,000 ft. and inhabited peaty ledges where the deciduous branchlets were observed to hang over the face of the rock. The species has a very dwarf habit being only 4–6 in. in height. It made quite an attractive plant in flower with the wide open pale yellow corollas set among the bright green scaly ciliate leaves. *Rh. Lowndesii* flowers rather late, the main flowering period being July, while a few flowers were found to be still lingering in early September by Mr. WILLIAMS when he visited the area in search of seed. The latter was very difficult to obtain, however, because of the consequent lateness in ripening but a sample was obtained and brought back to this country, a sowing being made at Wisley in the early spring.

Thus it will be apparent that although the flora of west Nepal proved to be very sparse in numbers of Rhododendron species our knowledge of several species has been extended, especially with regard to distribution. It seems certain that a new extension to the west has been made in the previously known range of such species as *Rh. nivale*. *Rh. Lowndesii* only found, as previously stated, in the Marsiandi valley near the Annapurna Himal has now been proved to grow in areas over 100 miles further west, but the frequency of its occurrence throughout the intervening territory must remain a matter of conjecture until the botanically unexplored country around the southern flank of the massive Dhaulagiri Range has been visited and botanized.

SOME RHODODENDRON ANOMALIES

by

J. Macqueen Cowan and H. H. Davidian

THE Rhododendrons discussed in the following paper have no connection with each other, but have been sent from time to time to Edinburgh for review. It was thought that an attempt should be made to clear up the anomalies these plants present, because most of them are plants well-established in cultivation.

* * * * *

R. DECORUM—AN UNUSUAL FORM

Some time ago, when we visited Glendoick, our attention was drawn, by Mr. E. H. M. Cox, to a Rhododendron said to have been raised from WARD's seed which was thought might be a new species. A subsequent close examination of the plant showed that, except for the unusual colour of the flowers, it agrees very closely with *R. decorum* and is in fact a form of this species. The flowers, however, instead of being white or white tinged with pink are, in fact, a distinctive pleasant greenish-yellow (Uranium Green H.C.C. 63-3).

The origin of this plant is unknown since the label is lost, but there is reason to presume that it may have been raised from seed collected by WARD in the course of his 1921 expedition. No corresponding herbarium material, however, can be found. From the horticultural point of view this is a plant which undoubtedly merits a distinguishing name. In the absence of concrete evidence as to its origin, we suggest that it shall be known as *R. decorum* 'Cox's Uranium Green'.

* * * * *

R. XANTHOCODON

It is time that *R. xanthocodon*, now well known in cultivation, should be assigned to its rightful series. The very close affinity between the two species, *R. xanthocodon* and *R. concatenans* is obvious, yet they have been placed in different series—*R. xanthocodon* in the Triflorum Series and *R. concatenans* in the Cinnabarinum Series. To regard species so much alike as those in question as belonging to separate series is obviously misleading. The proper place for *R. xanthocodon* is with *R. cinnabarinum* in the Cinnabarinum Series.

The original mistake is easily understood because of the similarity between some species of the Triflorum Series and of the Cinnabarinum Series. Species of the Oreotrephes Sub-series in the Triflorum Series do not have the typical open zygomorphic flower of *R. Augustinii* or *R. yunnanense*, but have a more or less bell-shaped flower, more fleshy and less open, and approximating closely to the shape of the corolla of some forms of *R. cinnabarinum*. The species *R. oreotrephes*, with its allies, can in fact be regarded as forming a link between the two series.

In a case such as this, two closely allied species may inadvertently become widely separated, especially when material is scanty at the time when they are described.

For some years now *R. xanthocodon* has flowered freely in gardens; the name was first given to a plant grown at Bodnant, which was associated with a herbarium specimen collected by WARD in Tibet (K.W. 6026), found on Nam La at an altitude of 12,000 ft. The flowers are creamy-yellow, the corolla campanulate, with slightly spreading lobes, in texture rather fleshy. The length and width of the tube is variable. In a single group of plants at the Royal Botanic Garden, Edinburgh, all raised under the same number, (as far as is known all plants of *R. xanthocodon* are under WARD 6026) this variation is strikingly demonstrated. The flowers of some of these plants are long with a broad tube, those of others are short with a narrow tube, and again some can scarcely be distinguished from the flowers of another plant at Edinburgh, of uncertain origin, grown as a yellow-flowered form of *R. cinnabarinum*. This plant has no number but probably it may have been collected by COOPER at Champa Pumthang, Bhutan. A herbarium specimen collected in this locality at 12,000 ft. and named *R. cinnabarinum* (R. E. COOPER No. 3998) is recorded as having yellow flowers, and is, in fact, closely similar to *R. xanthocodon*.

Thus we must conclude that *R. xanthocodon* is so closely related to *R. cinnabarinum*, that not only should the two species be in the same series, but also that *R. xanthocodon* might even be regarded as a variety of *R. cinnabarinum*.

The flowers of *R. cinnabarinum*, as it occurs in the Eastern Himalayas, are typically cinnabar-red, but this is a variable species and they range from salmon-pink to purple and apparently are sometimes yellow. Various coloured forms have been described as distinct species but are now usually regarded as varieties. The flowers of var. *pallidum* are dull purplish pink; those of var. *Blandfordiiflorum* are red outside and yellow or greenish-yellow within; those of var. *aestivale* cinnabar-red with pale yellow lobes, more or less suffused with red; those of var. *Roylei* a deep plum-crimson or purple and those of var. *purpurellum* a rich

plum-purple. *R. xanthocodon* with yellow flowers is scarcely more distinctive than some of these varieties.

R. concatenans though closely allied to *R. cinnabarinum* differs in that the corolla is broadly campanulate, by no means tubular-campanulate or tubular, and apricot or apricot tinged pink in colour. It differs from *R. xanthocodon* not only in flower colour but also in that the young foliage has always a glaucous sheen, a character which seems variable in *R. cinnabarinum*.

* * * * *

"R. SINOGRANDE." K.W. 6261

Another plant of interest which has been a source of misconception and misunderstanding is to be found in gardens under the name and number *R. sinogrande* K.W. 6261. Our attention was first drawn to this plant at Brodick Castle where there is a fine specimen, now about 15 ft. high, which we have seen in full flower, and we have seen it at Muncaster and elsewhere. At Brodick K.W. 6261 is growing in close and convenient proximity to typical specimens of *R. sinogrande* and of *R. grande* and though closely allied to both these species, it obviously differs from both of them. It has distinctive foliage intermediate between that of the two species, and its flowers are pink with a crimson blotch.

The seed from which this plant was raised was collected in the Tsangpo Gorge, Tibet, under the tentative name *R. sinogrande*. Although the leaves of WARD's plants are smaller than those of *R. sinogrande*, they are not dissimilar and geographical distribution would suggest affinity with the Chinese species. WARD's field notes are as follows:

"K.W. 6261. Rhod. sp. (§ Grande)

Pemako. 8,000–9,000 ft. 24.10.24. A fine tree, up to 40–50 ft. high with immense leaves, 2 ft. long and 8–9 in. wide. Forms at least 50 per cent of the middle rain forest, with Abies, etc. Hundreds of trees seen, but no fruit. In December I found it abundant in the Tsangpo Gorge, several trees above Gompo Ne fruiting well. Young plants abundant. (Like R. sino-grande.)"

It is clear, however, now that ample material is available, that although WARD's plant occurs far east of the Himalayas, it is even more closely related to the Himalayan species *R. grande* than to the Chinese species *R. sinogrande*. The leaves of K.W. 6261, larger than those of *R. grande* and smaller than those of *R. sinogrande*, approach more closely to those of *R. grande*.

WARD's plant undoubtedly merits a new name. Normally the name would be correlated with the original field specimen but the original herbarium specimen under K.W. 6261 is quite different from the cultivated plants. Moreover, WARD's field-note description applies to the cultivated plants, not to his herbarium specimen K.W. 6261 which he says is not "his real K.W. 6261". It would appear that in some manner, which cannot be explained, the number has come to be attached to the wrong specimen. In the herbarium (British Museum) K.W. 6261 is *R. exasperatum*. The type of *R. exasperatum* Tagg is a later collecting from the Delei Valley (K.W. 8250), but the numbers K.W. 6302 from the Tsangpo Gorge and K.W. 6855 from Seinghku Wang, North Burma, are also quoted in the original description. Curiously the number K.W. 6302 has been omitted from WARD's field notes.

At Edinburgh we have incomplete herbarium material of this expedition, but we have searched in the British Museum and at Kew and can find no original gathering under this (K.W. 6261) or any other number which corresponds to the description of WARD's field notes and to plants in cultivation. Since no specimen agreeing with the Brodick plant can be found, specimens of this cultivated plant (which agree with WARD's description) have been placed in the Edinburgh herbarium under K.W. 6261A.

The Brodick plant was sent as a seedling to THE DUCHESS OF MONTROSE by Sir JOHN RAMSDEN from Muncaster who wrote to us about it as follows:

> "I have planted a lot of it in many places at Muncaster and it seems very hardy—Colonel HORLICK has had it flowering at Sunninghill, and no doubt J. B. STEVENSON also. It flowers much earlier than the ordinary *sinogrande*. Its only companion in date at Muncaster (big leaved) is a *grande* sold me by GILL as 'Bolitho's variety'.
>
> I have always felt sure it ought to have a name of its own. I do not think I ever gave THE DUCHESS OF MONTROSE any seed but quite a lot of Rhododendrons from our nurseries at Muncaster—mostly big leaved.
>
> When I was at Mr. CHRISTIE's garden, Blackhills, near Forres, last September I saw a large flowering plant of 6261.
>
> I think Lord STAIR must have some too."

As we have remarked, K.W. 6261A is in leaf intermediate between *R. grande* and *R. sinogrande*. It will cause less confusion to regard it as a distinct species rather than as a variety of one or other of those species, and it is distinct enough to merit this rank. It differs from both in the colour of its flowers, which are pink with a crimson basal blotch. The

flowers are ventricose-campanulate. From *R. grande* it differs in its larger, more coriaceous, less tapering leaves, and from *R. sinogrande* in its smaller narrower leaves and in having sixteen stamens (as in *R. grande*) instead of eighteen to twenty. We propose the name *R. Mollyanum* as a tribute to HER GRACE THE DUCHESS of MONTROSE, known to her family as "Molly", who first brought this plant in flower to our notice and who was probably the first to flower it in cultivation.

Its characteristics are:

Habit: a small tree up to about 4.50 m. high; branchlets covered with a thin grey tomentum, those below the inflorescences 0.8–1 cm. in diameter.

Leaves: lamina coriaceous, oblong or oblanceolate, 2–3 dm. long, 5.5–10 cm. broad; apex rounded, mucronate, base obtuse or narrowed; upper surface slightly rugulose, midrib grooved, primary veins 17–20 on each side, impressed; under surface silvery-white with a thin skin-like indumentum, midrib prominently raised, primary veins raised; petiole 2–4 cm. long, cylindric or slightly winged on each side, grooved above, with a thin grey tomentum.

Inflorescence: a racemose umbel of about 15 flowers; rachis 2.5–3 cm. long, floccose; pedicels 3–5 cm. long, densely fawn-tomentose.

Calyx: short, 1 mm. long, with 8 triangular teeth, tomentose.

Corolla: ventricose-campanulate, 5 cm. long, pink with crimson blotch at base; lobes 8, 1–1.5 cm. long, 1.4–1.7 cm. broad.

Stamens: 15–16, unequal, 2–2.6 cm. long, glabrous.

Gynoecium: 3.2–3.8 cm. long; ovary conoid, 5 mm. long, densely fawn-tomentose, 10-celled; style glabrous, slender.

Rhododendron Mollyanum Cowan et Davidian sp. nov.

Species affinis *R. grandi* Wall. a quo floribus roseis, foliis majoribus magis coriaceis, apice subrotundatis differt; socius alter est *R. sinogrande* Balf.f. et W.W. Sm. sed ab hoc corolla rosea, staminibus paucioribus, foliis valde angustioribus et brevioribus facile distinguenda.

Arbor parva ad 4.50 m. alta grandiflora. Rami juvenales crassi circ. 1 cm. diam. tenuiter argenteo-grisei. Folia longe petiolata ad 3.4 dm. longa; lamina crasse coriacea oblonga vel oblanceolata 2–3 dm. longa, 5.5–10 cm. lata, apice rotundata rigide mucronata, basi obtusa vel cuneata, supra viridis glabra, subrugulosa, costa media et venis primariis utrinsecus circ. 17–20 sulcatis, subtus argentea nitens, costa media venisque primariis elevatis; petiolus crassus 2–4 cm. longus, nonnunquam angustissime alatus, sulcatus, tenuiter griseo-tomentosus.

Flores circ. 15, in racemoso-umbellam dispositi, rhachi brevi ad 3 cm. longa floccosa; pedicelli 3–5 cm. longi indumento fulvo-tomentoso vestiti. Calyx brevis tomentosus 8-lobus, dentibus minutis. Corolla rosea basi varo magno atro-rubra notata, oblique campanulata, circ. 5 cm. longa, lobis 8, 1–1.5 cm. longis 1.4–1.7 cm. latis. Stamina 15–16, inaequalia, 2–2.6 cm. longa, glabra. Ovarium crassum, pilis rufis dense tomentosum, 10-loculare; stylus corollam subaequans, glaber, apice dilatatus; stigma magnum discoideum lobulatum.
Habitat: *S.E. Tibet: Pemako.* Type 6261A in Edinburgh herbarium.

* * * * *

R. ARIZELUM. ROCK 59550

In March of this year Mr. R. W. RYE wrote from the gardens, Castle Kennedy, Stranraer: "I am sending you a truss of *R. arizelum* Rock 59550. I thought this might interest you. What a striking colour for *R. arizelum*—rather attractive I think". The flowers were bright crimson.

Mr. RYE remarked further, and in this our experience agrees, "I have seen *R. arizelum* with cream tinted rose or mauve and sometimes with more mauve or a bit dirty but never quite like this". We had noticed, however, that several of ROCK's herbarium specimens of *R. arizelum* were annotated "flowers red", but there are degrees of red and the dried flowers gave no real clue to the colour; they might have been merely an intensive pink. It was, therefore, of great interest to see a *R. arizelum* with crimson flowers as bright as those of *R. chaetomallum* or *R. haematodes.*

ROCK's herbarium sheets corresponding with his seed No. 59550 are numbered 10119 and 11207, and were collected in south-east Tibet, on Mount Kenyichumpo and the region of Champutong, latitude 28° 20′, longitude 98° 27′, in 1923; they are marked "flowers said to be red". Other ROCK sheets also all from the same locality viz. Nos. 10221 and 11187=59544, 22024, 22106, 22110, 22601, 22602, and 22472 are said to have red flowers. But others again are different—Nos. 10128 and 11159=59534 have flowers said to be yellowish-red; No. 22597 orange-red, and 22025 and 22600 pink.

Forrest collected *R. arizelum* from almost the same locality about a year earlier, in June, 1922. Curiously he does not seem to have come across the crimson-flowered form. His No. 21863 from the Salwin-Kiu-Chiang divide, west of Chamatong, latitude 28° 18′, longitude 98° 27′ is annotated "flowers deep soft rose with crimson blotch at base". Other plants from the same region are said to have pale rose-pink flowers (Nos. 21867, 21869), or they may be white with a

crimson blotch (No. 21871). In some gatherings from elsewhere the flowers are recorded as pure white (Nos. F29626, 29785).

FARRER who collected *R. arizelum* on the Chawchi Pass, Upper Burma, in May 1920 (No. 1549) notes that the "flowers vary to lovely tones of salmon-rose with intermediate shades sometimes being as yellow in tone as a pallid Campylocarpum and once of a warm apricot".

In *The Species of Rhododendron* the colour of the corolla is given as "white, creamy-yellow, yellow tinged rose with crimson blotch at base", and as Mr. RYE remarks, it is sometimes tinged with mauve or "a bit dirty". ROCK's crimson-flowered form is so striking that it deserves a distinctive varietal name. We propose to call it *R. arizelum* var. *rubricosum*.

Rhododendron arizelum Balf. f. et Forrest var. **rubicosum** var. nov.

A typo floribus valde rubricosis recedit.

Habitat: S.E. Tibet. Rock 11207—type,=10119 (seed No. 59550), 10221=11187, 22024, 22106, 22110, 22601, 22602, 22472.

★ ★ ★ ★ ★

R. DIAPREPES 'GARGANTUA'

Finally mention may be made of a fine form of *R. diaprepes* which was grown at Tower Court and recently given a provisional Award of Merit by The Royal Horticultural Society. It was raised from the seed of a plant of *R. diaprepes* collected by FORREST on the Shweli-Salwin divide, Yunnan, in June 1913 under number F. 11958. This plant, which was sickly, had been selfed.

Impressed by the exceptional growth of this plant and its unusually large flowers and leaves, the late Mr. J. B. STEVENSON sent material to WISLEY where a chromosome count was made, and it was reported to be a triploid; he called it *R. diaprepes* var. Gargantua.

Except with regard to the size of its various parts this Tower Court plant has all the characteristics of *R. diaprepes*. Since it is known only in cultivation, although raised from FORREST's seed, it is preferable, in accordance with the recently published *International Code of Nomenclature for Cultivated Plants*, to regard it as a horticultural variety or "cultivar" rather than as a botanical variety, and the name should therefore be written *Rhododendron diaprepes* 'Gargantua'. (Fig. 26)

A REVIEW OF RHODODENDRONS IN THEIR SERIES

V. *The Campylogynum and Saluenense Series*

by

H. H. Davidian, B.Sc.

THIS paper, which is the fifth in the series of reviews, pertains to the Campylogynum and Saluenense Series which are homogeneous groups with well-defined characters, but they exhibit some considerable variability of the species.

The series are readily distinguished from others by easily recognizable characters. Taking a general view, we notice that in both these series the species are dwarf shrubs with small leaves, the under surfaces of which are scaly with widely spaced entire scales in the Campylogynum Series, densely overlapping with crenulate scales in the Saluenense Series; the inflorescence is usually 1–3-flowered; the calyx is small or medium sized, purple to crimson; the corolla is campanulate, glabrous outside in the Campylogynum Series, widely funnel-shaped or rotate and puberulous outside in the Saluenense Series; the capsule is short, ovoid. But within the Saluenense Series *R. fragariflorum* Ward conforms only in part to the characters of the group, agreeing with the species of the Lapponicum Series in other characters, so that it may be regarded as forming a link between these two series.

When the species are examined in detail, it is observed, however, that the criteria which have been taken as diagnostic are sometimes inconstant and unreliable. Moreover, certain closely related species, easily distinguished when only the type specimen of each was available, are linked by numerous intergrading forms. This will be discussed in more detail in the notes on the species.

Already in *The Species of Rhododendron* several names appear as synonyms in both the Campylogynum and Saluenense Series. With the large amount of material now available, and the further evidence of plants in cultivation, it is clear that further "reductions" are necessary.

In the Campylogynum Series, there is essentially only one species. In cultivation, however, the extreme forms, though linked by intermediates, are so distinct, that it is advantageous to distinguish a number of varieties.

As to the Saluenense Series, after detailed examination of the speci-

mens, it becomes evident that the species fall into the following three groups:

1. Branchlets and petioles bristly.
   R. saluenense Franch.
   R. chameunum Balf. f. et Forrest
   R. prostratum W.W. Sm.
2. Branchlets and petioles not bristly.
   (*a*) Erect shrubs
      R. calostrotum Balf. f. et Ward
      R. calostrotum Balf. f. et Ward var. *calciphilum* (Hutch. et Ward) comb. nov.
      R. nitens Hutch.
   (*b*) Prostrate or semi-prostrate spreading shrubs.
      R. keleticum Balf. f. et Forrest
      R. radicans Balf. f. et Forrest
3. Anomalous. Scales on the under surface of the leaves entire, widely spaced; corolla small, glabrous outside; pedicels short.
   R. fragariflorum Ward

The names of species that are not included in the above list will appear in synonymy.

Some further comments may be given upon the main characteristics of the species in each series.

As regards the Campylogynum Series, the main feature here is the extreme variability of the species. Even when the group is regarded as a single species it is still difficult to correlate characters which can be used to distinguish the varieties with consistency. But the more important characteristics, though variable, by which the variant forms can be recognized include the habit, the flower size and the leaf size. Further notes are given following the description of *R. campylogynum.*

As regards the Saluenense Series, the varying characteristics must be considered separately and in greater detail.

HABIT. The species are usually dwarf shrubs. *R. calostrotum* varies from 8 cm. to 1 m. high and *R. saluenense* 60 cm.–1.20 m. high. *R. prostratum* and *R. radicans* are prostrate spreading shrublets and are readily distinguished from their allies. *R. keleticum* can be recognized by its semi-prostrate habit.

BRANCHLETS. The presence of bristles on the branchlets and petioles is a marked diagnostic character of *R. saluenense, R. chameunum* and *R. prostratum.* In all other species, the branchlets and petioles are glabrous, except *R. fragariflorum* in which they are rather densely puberulous. The branchlets are invariably scaly throughout the series.

LEAVES. Leaf shape is very variable in the series. For diagnostic purposes, the linear, lanceolate or oblanceolate leaves—3–5 times as long as broad—is a character of importance in distinguishing *R. radicans* from the closely allied *R. keleticum*, as well as from all the other members in the series. Leaf size is an aid in separating *R. chameunum*, with small leaves, from *R. saluenense* where the leaves are larger, and similarly *R. calciphilum* from *R. calostrotum*.

The mat upper leaf surface densely covered with overlapping scales is a noteworthy feature of *R. calostrotum*, *R. riparium* and *R. calciphilum*. In all other species, the upper surface of the leaves is shining, not scaly, or when scaly the scales are 1–6 times their own diameter apart. The under surface of the leaves densely scaly with overlapping scales is common to all species, excepting *R. fragariflorum* where the scales are 1½–6 times their own diameter apart. The scales of all species are crenulate, except in *R. fragariflorum* where they are of the general Entire Type.

INFLORESCENCE. The inflorescence is usually 1–3-flowered, but occasionally it is up to 7-flowered in *R. saluenense*.

PEDICELS. The pedicels vary in length from 0.8–3.2 cm., they are 5–7 mm. long in *R. fragariflorum*. As regards the degree of bristliness, in *R. calostrotum*, *R. riparium* and *R. calciphilum*, the pedicels are not bristly; in *R. prostratum* bristly; variable in other species; and in *R. fragariflorum* not bristly, but minutely puberulous. The pedicels are invariably scaly.

CALYX. The size of the calyx which is somewhat variable is unimportant as a diagnostic character. With regard to the presence or absence of scales on the calyx, there is wide variation in the species from slightly to densely scaly along the middle of the lobes or not scaly. As a diagnostic feature, this character is unreliable. No more dependable, as a mark of distinction, is the puberulous or glabrous outer surface of the calyx. The margins of the lobes are long- or short-ciliate. The colour of the calyx is usually pinkish-purple or crimson.

COROLLA. The shape of the corolla is constant in the series, widely funnel-shaped or rotate. The size is variable, but *R. fragariflorum* can be distinguished by its smaller corolla. The flower colour varies from pinkish-purple to crimson. In all species, excepting *R. fragariflorum* which is glabrous, the corolla is puberulous outside. Usually the corolla is more or less scaly outside, a feature which is of little importance diagnostically.

STAMENS. The number of stamens is 10, long-exserted, and villous towards the base.

OVARY. The ovary is conoid, 5-celled, densely scaly; the style is long.

CAPSULE. The capsule is short, densely scaly; the calyx lobes are persistent.

In summing up the foregoing remarks, it may be stated that as this review is a contribution to the revision of *The Species of Rhododendron*, the descriptions of the species are amplified and emended and the sequence follows the arrangement in the standard work. The relationships of the species are discussed later in the notes.

CAMPYLOGYNUM SERIES

GENERAL CHARACTERS: dwarf or small shrubs, 5cm.–1.22 m. high. Leaves obovate or oblanceolate, small, 0.7–3.7 cm. long. Inflorescence 1–3-(rarely up to 5-) flowered; pedicels 1.8–5 cm. long. Corolla campanulate, 0.8–2.4 cm. long. Style thick, bent.

A single distinct species allied to the Glaucum Series with a general tendency towards the Lepidotum and Uniflorum Series.

DESCRIPTION OF SPECIES (AMP. ET EM.)

R. campylogynum Franch. in Bull. Soc. Bot. Fr., XXXII, 10 (1885); ibid. XXXIII, 233 (1886); Millais, Rhododendrons, 136 (1917); ibid., Ser. 2, 101 (1924); Rhod. Soc. Notes, III, 84 (1925–31); New Flora & Silva, I, 164 (1928–29); Rhod. Year Book, 29 (1929); Gard. Chron., LXXXVI, 9 (1929); Ward, Plant Hunting, 142, 259 (1930); Hutch. in The Sp. of Rhod., 183 (1930); Bean, Trees & Shrubs, III, 40 (1933); Bot. Mag., CLVIII, t. 9407A (1935); Journ. Roy. Hort. Soc., LXV, 131 (1940); ibid., LXVIII, xxxv (1943); ibid. LXIX, xlii (1944); ibid., LXXII, 142 (1947); ibid., LXXV, 153 (1950); Merrill in Brittonia, IV, No. 1, 140 (1943). *R. glauco-aureum* Balf. f. et Forrest in Notes R.B.G. Edin., XIII, 46 (1920); Millais, Rhododendrons, Ser. 2, 148 (1924); Rhod. Soc. Notes, III, 85 (1925–31); Hutch in The Sp. of Rhod., 183 (1930); Rhod. Year Book, 128 (1932); Bean, Trees & Shrubs, III, 40 (1933); Merrill in Brittonia, IV, No. 1, 141 (1941). *R. damascenum* Balf. f. et Forrest in Notes R.B.G. Edin., XIII, 254 (1922); Millais, Rhododendrons, Ser. 2, 123 (1924); Rhod. Soc. Notes, III, 85 (1925–31); Ward, Riddle of Tsangpo Gorge, 102 (1926); Hutch. in The Sp. of Rhod., 183 (1930); Rhod. Year Book, 127 (1932); Bean, Trees & Shrubs, III, 40 (1933); Merrill in Brittonia, IV, No. 1, 141 (1941). *R. cerasiflorum* Ward, nomen; Gard. Chron., Ser. 3, XCIII, 277 (1933); Rhod. Assoc. Year Book Supp., 237 (1934); Merrill in Brittonia, IV, No. 1, 140, 141, 149 (1941) *R. rubriflorum* Ward nomen; Rhod. Assoc. Year Book Supp., 240 (1934); Merrill in Brittonia, IV, No. 1, 140, 141 (1941).

HABIT: dwarf, somewhat spreading shrub, 5 cm.–45 cm. high; branchlets short, scaly with short thick stalked scales, glabrous or minutely puberulous, leaf-bud scales persistent or subpersistent, rarely deciduous.

LEAVES: lamina obovate or oblanceolate, 0.7–2.5 cm. long, 0.3–1.8 cm. broad, apex rounded, mucronate, base narrowed or obtuse; upper surface not scaly, rarely scaly; under surface not scaly (scales soon fall off) or scaly, the scales 1–6 times their own diameter apart, usually glaucous; margin crenulate, recurved, scaly; petiole 1–4 mm. long, scaly or not scaly.

INFLORESCENCE: terminal, 1–3- (rarely up to 5-) flowered, flower-bud scales deciduous or persistent; pedicels 1.8–5 cm. long, scaly.

CALYX: 5-lobed to base, 1–6 mm. long, lobes rounded or ovate, outside and margin not scaly, sometimes scaly, glaucous or not glaucous, pinkish-purple, plum-purple or yellowish-green.

COROLLA: campanulate, 1.4–1.8 cm. long, 5-lobed, fleshy, not scaly outside, nodding, thinly glaucous outside, variable in colour from pale rose-purple or salmon-pink to almost black-purple.

STAMENS: 10, rarely 8, unequal, alternately long and short, 0.6–1.4 cm. long, shorter than the corolla, filaments puberulous at the base or to their whole length.

OVARY: conoid, 2–4 mm. long, moderately or densely scaly, 5-celled; style thick, bent, slightly longer or shorter than the corolla, not scaly, glabrous, rarely puberulous at the base, crimson or purple.

CAPSULE: ovoid, short, 5–9 mm. long, 4–6 mm. broad, sparsely or moderately scaly, calyx persistent.

HABITAT:

Yunnan. DELAVAY 122 (4th Aug., 1884), 271 (4th June, 1883), 27th June, 1887, 29th April, 1889, 29th Aug., 1889. CHEN 2720. FORREST 6760, 13303, 13518, 13709, 14865, 15908, 17544, 19481, 20781, 22300, 23288, 25706, 28254, 29937, 30416, 30967. HAND-MAZZ. 9058. MCLAREN 'A' 193, 'C' 193, 'D' 230, 'L' 110a, 'L' 135a, 'Misc. Coll.', 135. ROCK 6354, 9081, 10073, 11305, 25035, 25132, 25459. SOULIE 16th July. TSAI 58168. WARD 793. YÜ 19340, 19779, 22354.

Yunnan/Tibet Border. ROCK 105, 132, 23560.

Tibet. FORREST 475, 504. LUDLOW & SHERRIFF 1882. ROCK 10176, 11160, 22962, 23198, 23648.

Burma. FORREST 24570, 27118, 27569. WARD 1789, 3391, 3610.

R. campylogynum, described by FRANCHET in 1885, was founded on DELAVAY's specimens, collected on Tsang chan, Tali range, western Yunnan, in 1883–84. It was subsequently found by other collectors in Yunnan, north-east Burma and Tibet.

R. campylogynum is very variable in habit, it may be a dwarf or small shrub, the height ranging from 5 cm.–1.22 m. (2 in.–4 ft.) high, or even up to 6 ft. high (FORREST No. 4151); in leaf size, from 0.7–2.5 cm. long, 0.3–1.8 cm. broad; in the distribution of scales on the under sur-

face of the leaves, the scales soon fall off or if present they are 2–10 times their own diameter apart; in flower size, from 1.4–2.4 cm. long; and in flower colour, it may be rose-pink, salmon-pink, carmine, deep plum-purple or blackish-purple (Fig. 20).

In September, 1914, FORREST collected a plant in the Mekong-Salwin divide at 11,000 ft., which was described as a new species under the name *R. cremastum* Balf. f. et Forrest. It was said to be "a near ally of *R. campylogynum*, from which its leaves green on the under surface and prominently lepidote on both and its purple-rose coloured flowers with other characters separate it". On close investigation, it becomes apparent that *R. cremastum* is inseparable from *R. campylogynum* by the recorded diagnostic criteria, and no constant characters can be found to distinguish between them. Nonetheless, on the average, the leaves of *R. cremastum* are markedly longer than those of *R. campylogynum*; in the former they are large 2–3.7 cm. long, in the latter they are 0.7–2.5 cm. long, and although the species merge into each other, the large-leaved form merits a varietal name.

The name *R. charopoeum* Balf. f. et Farrer was given to a plant (No. 1670) collected by FARRER in July, 1920, in the Chawchi Pass, Upper Burma, at 11,900–13,000 ft. In the original diagnosis, the almost elepidote leaves and the very minute glabrous calyx are stated to be marks to note, and in *The Species of Rhododendron*, *R. charopoeum* is distinguished from *R. campylogynum* by the very poorly developed calyx, one lobe being larger than the others. But these are very variable characters, in *R. campylogynum* the leaves are scaly or not scaly, and the calyx varies in size from 1–6 mm. in length. It should be noted, however, as to flower size (also a variable character) that the type specimen of *R. charopoeum* is a large-flowered form, while the name *R. campylogynum* was originally applied by FRANCHET to a medium-flowered form. From a horticultural point of view, the size of the flower is an important character, and the name *charopoeum* as a variety can be applied to the large-flowered form (*See* text Fig. 1).

A number of closely similar plants were, at first, given distinctive specific names, but it will be noted that when *The Species of Rhododendron* was published they were regarded merely as variant forms of *R. campylogynum*, and in the same work the following names appear in synonymy: *R. caeruleo-glaucum* Balf. f. et Forrest, *R. glauco-aureum* Balf. f. et Forrest, *R. damascenum* Balf. f. et Forrest.

R. cerasiflorum Ward and *R. rubriflorum* Ward are mere names with no published descriptions.

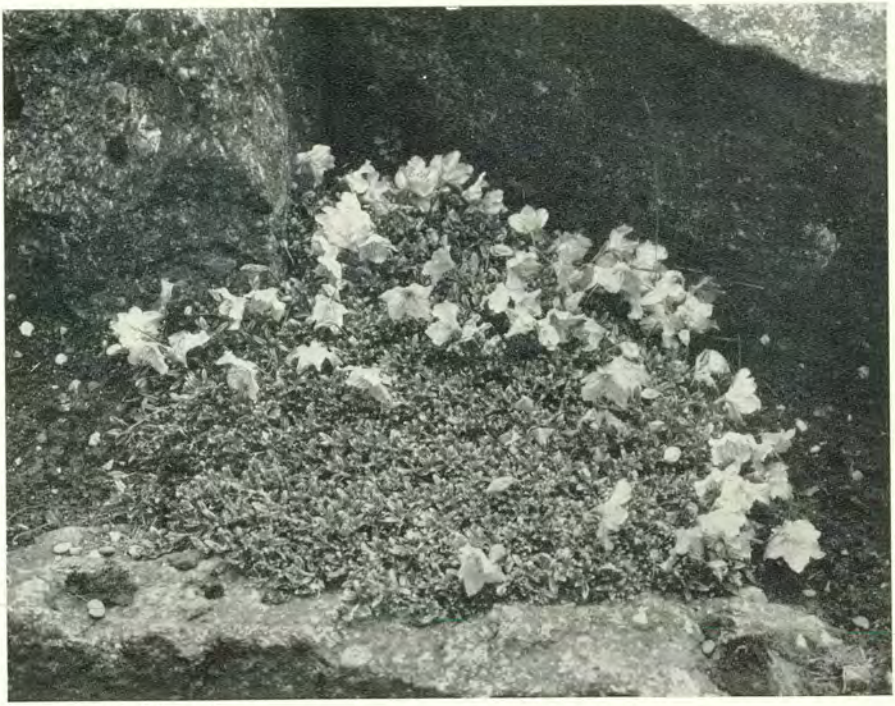
In 1914, WARD found a plant in north-east Burma which was described as *R. myrtilloides* Balf. f. et Ward. It was said to be "a form

FIG. 19.—*Rhododendron calostrotum* in the Royal Botanic Garden, Edinburgh (*see* p. 87)

Photos. R. B. G. Edinburgh]

FIG. 20.—*Rhododendron campylogynum* (*see* p. 80)

FIG. 21.—*Rhododendron prostratum* (*see* p. 94)



Photos. R. B. G. Edinburgh]

FIG. 22.—*Rhododendron radicans* on the Rock Garden (*see* p. 95)

Photo. J. E. Downward]

FIG. 23.—*R. seinghkuense* **A.M.,** 3rd February, 1953. Exhibited by The Commissioners of Crown Lands (*see* p. 147)

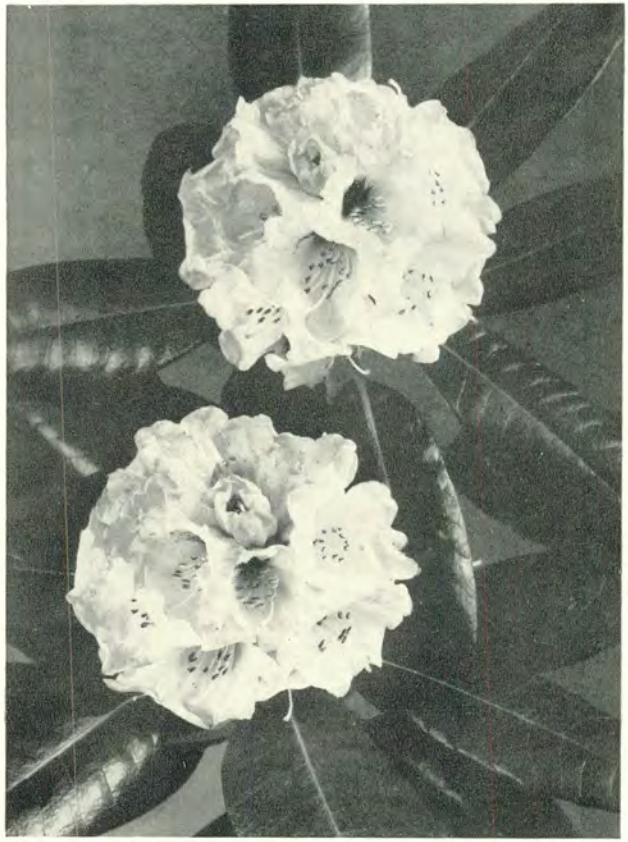


Photo. J. E. Downward]

FIG. 24.—*R. fictolacteum* 'Cherry Tip' **A.M.,** 14th April, 1953. Exhibited by Col. The Lord Digby, D.S.O., M.C. (*see* p. 145)

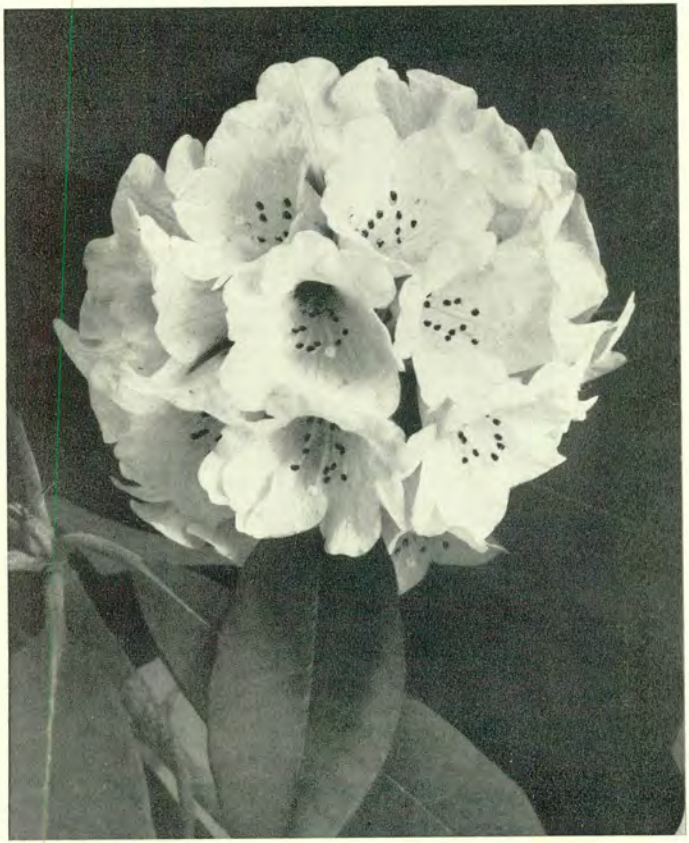


Photo. J. E. Downward]

FIG. 25.—*R. coriaceum* **A.M.,** 14th April, 1953. Exhibited by Commissioners of Crown Lands, Windsor Great Park (*see* p. 145)

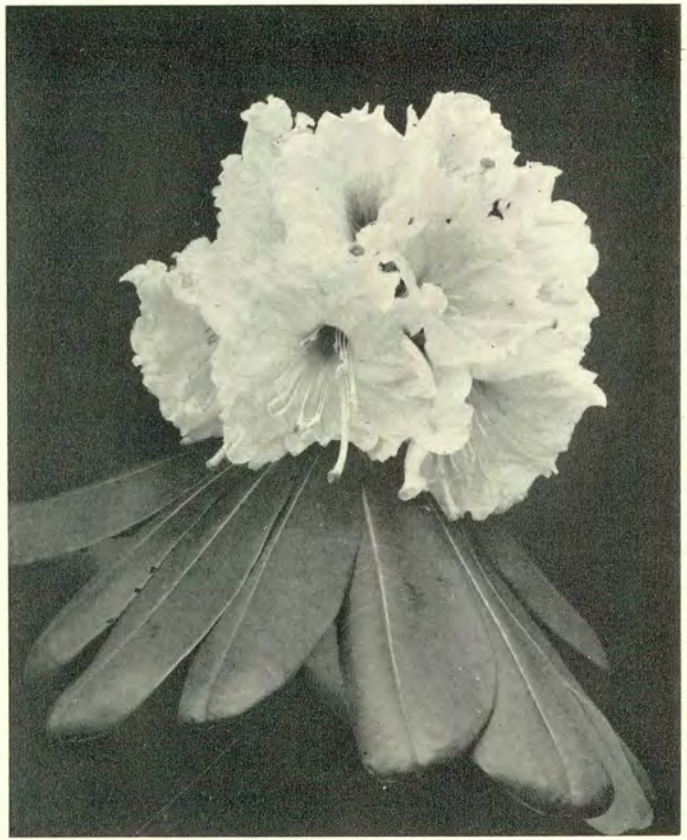
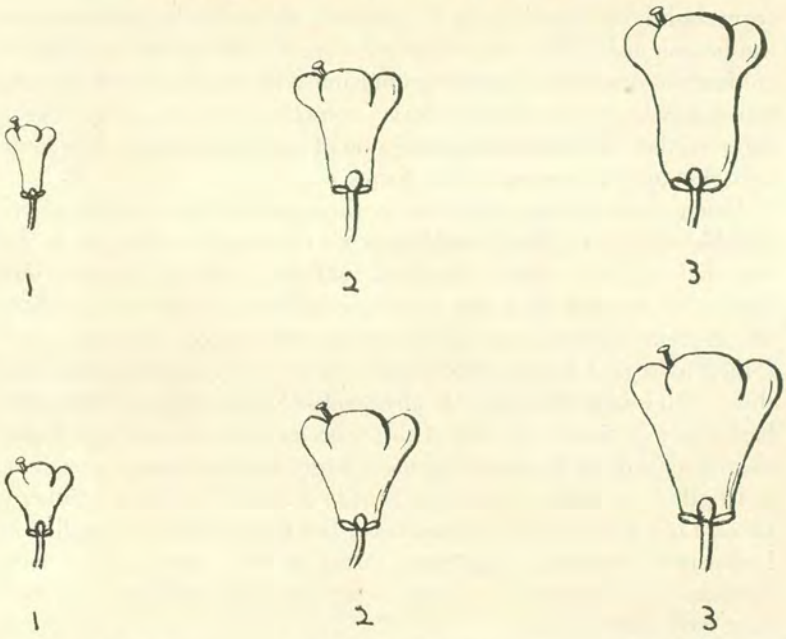


Photo. N. K. Gould]

FIG. 26.—*R. diaprepes* 'Gargantua' **A.M.,** 23rd June, 1953. Exhibited by Mrs. Roza M. Stevenson (*see* pp. 74 and 145)



var. *myrtilloides* *R. campylogynum* var. *charopoeum*

Text Fig. 1.

showing very grey-white underleaf surface due to the wax-secreting epidermal papillae and the surface is punctulated by discontiguous scales in a manner different from that of other forms in the series. The leaves are narrower than in most species and then separating it from its near allies is its long exserted style". Further gatherings show that these distinguishing characters are not constant. The under surface of the leaves is glaucous-white or pale green, the scales are 1–10 times their own diameter apart or they soon fall off; the leaves are 0.7–2.1 cm. long, 0.3–1 cm. broad; the style is slightly longer or shorter than the corolla. Moreover, *R. myrtilloides* varies in habit from 5–30 cm. high, and in flower colour from pale rose-purple to black-purple. With regard to all these characters it should be emphasized that there is absolutely no significant difference between *R. myrtilloides* and *R. campylogynum*.

There is, in fact, utter confusion between these two reputed species due to the fact that in the key in *The Species of Rhododendron*, the emphasis has been laid on the distribution of the scales on the under surface of the leaves. This character is so variable that the gradation

from slightly to densely scaly is complete, and a number of specimens can be assigned to the one or the other species. Moreover, we find in cultivation forms which are dwarf in habit with medium-sized flowers, sometimes known as *R. myrtilloides*, sometimes known as *R. campylogynum*, the only distinction being one of scale distribution. The same remarks apply to various colour forms.

Although the two species cannot be distinguished by any of the above variable characters, there would appear to be a useful character in the size of the corolla which, correlated with the habit of the plant, will serve to distinguish the many various forms now in cultivation, where the extremes of flower size and habit are well marked. We are accustomed to regard forms with larger flowers as *R. campylogynum* and those with smaller flowers as *R. myrtilloides* (*See* text Fig. 1). When the herbarium specimens of each of these species are compared it is found that the corolla in *R. campylogynum* is large, varying from 1.4–2.4 cm. in length often with a wide tube, but in *R. myrtilloides* it is relatively small, 0.9–1.4 cm. with a narrow tube. But in cultivation, as well as in herbarium specimens, however, forms of *R. campylogynum* with medium-sized flowers, 1.4–1.8 cm. long, appear so different, that they may well merit a name.

In the original diagnosis published in *Bull. Soc. Bot. Fr.* 1884, the size of the corolla of *R. campylogynum* is not given. Only one specimen is recorded, DELAVAY'S plant collected on 14th June, 1884, the number is not cited. In the same Journal in 1886, the number is given as 271. There would appear to be a mistake in the date, for the actual sheet which was received on loan from Paris bears the date 4th June, 1884.

When DELAVAY'S plants are carefully examined, it is obvious that the original description is based on his specimens under the numbers 122, 271, and the flower size in these specimens varies from 1.3–1.8 cm. long.

But in the type specimen of *R. myrtilloides*, the flowers are smaller than those of DELAVAY'S specimens, varying from 0.9–1.4 cm. long.It may, therefore, be suggested that the name *R. campylogynum* be retained for forms with medium-sized flowers, and forms with smaller-sized flowers be regarded as var. *myrtilloides*.

In cultivation the extreme forms can be readily recognized. Although they are linked by intermediates, they appear so different that it seems desirable from a horticultural point of view to give them distinguishing names.

The more distinctive forms are as follows:

Form 1. Dwarf somewhat spreading shrub up to 45 cm. high; leaves small to medium, 0.7–2.5 cm. long; flowers medium size, 1.4–1.8 cm. long (*R. campylogynum*).

Form. 2. Dwarf, compact or somewhat spreading shrub up to 30 cm. high; leaves similar to Form 1; flowers small 0.8–1.4 cm. long (*var. myrtilloides*).

Form 3. Dwarf somewhat spreading shrub up to 45 cm. high; leaves similar to Form 1; flowers large 1.9–2.4 cm. long (*var. charopoeum*).

Form 4. Erect shrub up to 80–90 cm. high; leaves similar to Form 1; flowers medium size 1.4–1.8 cm. long (*var. celsum*).

Form 5. Erect shrub 60–70 cm. high; leaves large 2–3.7 cm. long, pale green on both surfaces; flowers medium size 1.4–1.8 cm. long (*var. cremastum*).

Thus the name *R. campylogynum* is retained for Form 1, and the varieties (Forms 2–5) are described below.

R. campylogynum Franch. var. **celsum** var. nov.

Varietas nova a typo statura elatiore recedit.

HABITAT:

West Yunnan. FORREST 4151—holotype, 4152.

This variety (Form 4) is readily distinguished by its erect habit, 45 cm.–1.22 m. high. The leaves are small to medium, 0.7–2.5 cm. long, and the flowers are of medium size, 1.4–1.8 cm. long.

R. campylogynum Franch. var. **charopoeum** (Balf. f. et Farrer) comb. nov. *R. charopoeum* Balf. f. et Farrer in Notes R.B.G. Edin., XIII, 245 (1922); Millais, Rhododendrons, Ser. 2, 108 (1924); Rhod. Soc. Notes, 111, 84 (1925–31); Rhod. Year Book, 33 (1929); Hutch. in The Sp. of Rhod., 184 (1930); Merrill in Brittonia, IV, No. 1, 141 (1941). *R. caeruleo-glaucum* Balf. f. et Forrest in Notes R.B.G. Edin., XIII, 34 (1920); Millais, Rhododendrons, Ser. 2, 97 (1924); Rhod. Soc. Notes, III, 84 (1925–31); Hutch. in The Sp. of Rhod., 183 (1930); Rhod. Assoc. Year Book, 126 (1932); Bean, Trees & Shrubs, III, 40 (1933); Merrill in Brittonia, IV, No. 1, 141 (1941).

HABITAT:

Burma. FARRER 1670—holotype.
Tibet. FORREST 19181, 19871. ROCK 22089. SOULIÉ 1026. WARD 6091.
Yunnan. FORREST 20954, 23289, 30883. ROCK 9482, 16959. YÜ 8630.

The variety (Form 3) differs from the type in its larger flowers which are 1.9–2.4 cm. long.

R. campylogynum Franch. var. **cremastum** (Balf. f. et Forrest) comb. nov. *R. cremastum* Balf. f. et Forrest in Notes R.B.G. Edin., XIII, 39 (1920); Millais, Rhododendrons, Ser. 2, 118 (1924); Rhod. Soc. Notes, III, 84 (1925–31); Rhod. Year Book, 37 (1929); Hutch. in The Sp. of Rhod., 185 (1930).

HABITAT:

Yunnan. FORREST 14266—holotype.
Tibet. FORREST 18665.

The varietal name is applied for Form 5 with erect habit, 60–70 cm. high, and with large leaves which are 2–3.7 cm. long, pale green on both surfaces. The flowers are of medium size, 1.4–1.8 cm. long.

R. campylogynum Franch. var. **myrtilloides** (Balf. f. et Ward) comb. nov. *R. myrtilloides* Balf. f. et Ward in Notes R.B.G. Edin., XIII, 276 (1922); Millais, Rhododendrons, Ser. 2, 192 (1924); Rhod. Soc. Notes, III, 85 (1925–31); Hutch. in The Sp. of Rhod., 186 (1930); New Flora & Silva, II, 164 (1928–29); ibid. III, 179 (1929–30); Rhod. Year Book, 73 (1929); Bean, Trees & Shrubs, III, 102, Pl. 12 (1933); Gard. Chron., Ser. 3, CXIII, 247 (1943); ibid. CXIX, 268 (1946); ibid. CXXIII, 68 (1948); Journ. Roy. Hort. Soc., LXVIII, 352 (1943); ibid., LXIX, 42, 45 (1944); ibid. LXX, 361 (1945); ibid. LXXI, 318, 325 (1946); ibid. LXXV, 153 (1950); Merrill in Brittonia, IV, No. 1, 10, 19, 145 (1941).

HABITAT:

N.E. Burma. WARD 1785—holotype. FARRER 1046. FORREST 18007, 24955 25430, 26988, 26991, 27503, 27656. WARD 3303, 6985.
Yunnan. FORREST 14004, 18030, 18754, 24321, 24587, 26765, 27357.
S. E. Tibet. ROCK 22289, 22629. WARD 5842.
Assam. WARD 8414.

In this variety (Form 2) the flowers are small, 0.8–1.4 cm. long. It is a dwarf compact or somewhat spreading shrub up to 30 cm. high.

R. myrtilloides received an Award of Merit in 1925 and a First Class Certificate in 1943 when exhibited by Mr. L. DE ROTHSCHILD and Major E. DE ROTHSCHILD respectively.

SALUENENSE SERIES

GENERAL CHARACTERS: Dwarf (rarely medium-sized) erect or prostrate shrubs, 3 cm.–1.20 m. high, branchlets scaly, bristly or glabrous. Leaves evergreen, lamina ovate-elliptic to linear, 0.4–3.6 cm. long, 0.2–2.4 cm. broad; under surface densely scaly with overlapping crenulate scales (in *R. fragariflorum* scales entire, wide apart); petiole scaly, bristly or glabrous. Inflorescence terminal, usually 1–3-(sometimes up to 7-) flowered; pedicels 0.8–3.2 cm. long (in *R. fragariflorum* 5–7 mm. long), scaly, bristly, or glabrous. Calyx 5-lobed to base, 0.3–1 cm. long, usually pinkish-purple or crimson, scaly or not scaly outside, margin ciliate. Corolla widely funnel-shaped or rotate, usually 1.5–3 cm. long, pinkish-purple to crimson, puberulous outside (glabrous in *R. fragariflorum*) and often scaly. Stamens 10, long-exserted, filaments villous towards the base. Ovary conoid, 2–3 mm. long, 5-celled, densely scaly, puberulous or glabrous, style long, glabrous or puberulous at the base. Capsule ovoid or conoid, 4–8 mm. long, densely scaly, calyx persistent.

A well-defined series of closely allied species, related to the Lapponicum series to which it is linked by *R. fragariflorum*.

KEY TO THE SPECIES

A. Scales on the under surface of the leaves overlapping, crenulate; pedicels 0.8–3.2 cm. long; corolla 1.5–3 cm. long, puberulous outside.
  B. Branchlets and petioles moderately to densely bristly.
    C. Erect shrubs up to 1.20 m. high; leaves up to 3.6 cm. long; upper surface of leaves densely scaly or not scaly.
      D. Shrub usually 60 cm.–1.20 m. high; leaves large usually 2–3.6 cm. long; upper surface of leaves moderately or rather densely scaly . . . *saluenense*
      D. Shrub, 12–60 cm. high; leaves small usually 0.5–2 cm. long; upper surface of the leaves often not scaly or with a few scales . . . *chameunum*
    C. Prostrate spreading shrub, up to 45 cm. high; leaves 0.4–1.5 cm. long (rarely longer); upper surface of leaves not scaly . . . . . *prostratum*
  B. Branchlets and petioles not bristly.
    C. Upper surface of the leaves mat, densely scaly, the scales overlapping (rarely up to three-fourths their own diameter apart). . . . . *calostrotum*
    C. Upper surface of the leaves shining, not scaly or if scaly the scales 2–6 times their own diameter apart
      D. Erect shrub, 30–45 cm. high or more; flowers appearing late, in June-July . . . . *nitens*
      D. Semi-prostrate or completely prostrate matted, spreading shrubs, flowers appearing early, in May-June.
        E. Semi-prostrate spreading shrub; leaves up to twice as long as broad, oblong, elliptic, or ovate-elliptic (rarely lanceolate) . *keleticum*
        E. Completely prostrate matted shrub; leaves 3–5 times as long as broad, linear, lanceolate, or narrowly oblanceolate. . . *radicans*
A. Scales on the under surface of the leaves widely spaced, 1½–6 times their own diameter apart, entire; pedicels 5–7 mm. long; corolla 1.1–1.5 cm. long, glabrous outside . . . . *fragariflorum*

DESCRIPTION OF SPECIES (AMP. ET EM.)

R. calostrotum Balf. f. et Ward in Notes R.B.G. Edin., XIII, 35 (1920); Rhod. Soc. Notes, II, 272 (1920–24); Millais, Rhododendrons, Ser. 2, 98 (1924); Bot. Mag., CXLIX, t. 9001 (1924); Ward, Romance Plant Hunting, 61 (1924); New Flora & Silva, I, 160 (1928–9); Hutch. in The Sp. of Rhod., 590 (1930); Gard. Chron., Ser. 3, LXXXVII, 511 (1930); ibid. CXI, 56 (1942); Bean, Trees & Shrubs, III, 358 (1933); ibid. III, ed. 7, 37 (1951); Rhod. Handb., 14, 124 (1952); Chittenden, Roy. Hort. Soc., Dict. Gard., 1768 (1951); Rhod. Year Book, 59, 111 (1951–2). *R. riparium* Ward in Notes R.B.G. Edin., XVI, 180 (1931), and in Gard. Chron., Ser. 3, LXXXVII, 21 (1930); Hutch. in The Sp. of Rhod., 598 (1930); Ward, Plant Hunting, 106, 125 (1930); New Flora & Silva, V, 10 (1932–3); Rhod. Year Book, 111 (1951–2); Rhod. Handb., 77, 124 (1952).

R. rivulare Ward in Gard. Chron., Ser. 3, LXXXVI, 503 (1929); Hutch. in The Sp. of Rhod., 598 (1930).

HABIT: erect or cushion shrub, 8 cm.–1 m. high, branchlets densely scaly with dry flaky stalked scales, not bristly; leaf-bud scales deciduous or subpersistent.

LEAVES: elliptic, oblong-elliptic, ovate-elliptic or nearly orbicular, lamina 1.4–3 cm. long, 0.5–1.5 cm. broad, apex rounded or obtuse with a reflexed mucro, base rounded or obtuse; upper surface mat densely scaly, the scales overlapping, rarely one-half their own diameter apart, margin bristly or glabrous; under surface brown or cinnamon-coloured, densely scaly with overlapping scales; petiole 2–5 mm. long, densely scaly, not bristly.

INFLORESCENCE: terminal, 1–3- (rarely up to 5–) flowered, flower-bud scales persistent or deciduous; pedicels 0.9–2.6 cm. long, rather densely scaly, not bristly.

CALYX: 5-lobed to base, 3–8 mm. long, lobes pinkish-purple or crimson, elliptic, ovate or nearly orbicular, puberulous or glabrous outside and sparsely to densely scaly along the middle, margin long- or short- ciliate.

COROLLA: widely funnel-shaped or rotate, 1.3–2.5 cm. long, 5-lobed, purple, bright rosy-purple or rich purple-crimson with crimson spots at the base of the upper three lobes, puberulous outside and slightly to densely scaly or not scaly along the middle of the lobes.

STAMENS: 10, slightly unequal, long-exserted, 0.6–1.7 cm. long; filaments villous towards the base.

OVARY: conoid, 2–3 mm. long, 5-celled, densely scaly, sometimes puberulous; style red, longer than the stamens, glabrous or puberulous at the base.

CAPSULE: ovoid, 4–8 mm. long, densely scaly, calyx persistent.

HABITAT:

N.E. Upper Burma. WARD 1790—isotype, 6903. FARRER 1045, 1171. FORREST 24523, 24572, 25011, 27065, 27121, 27497, 27658, 27812, 29666.

Yunnan. FORREST 25503, 25506, 25542, 25683, 25817, 25921, 25922, 28253, 28263, 28277, 29928, 29988, 30540. MCLAREN 'D' 80, 82. ROCK 178, 6353, 16963, 17025, 17108, 18380, 18381, 18453, 18454, 22715, 23296. TSAI 58164.

Tibet. FORREST 20896. WARD 5828—isotype of *R. riparium*, 6087.

Assam. WARD 8229.

R. calostrotum was discovered by KINGDON WARD in July, 1914, on the ridge of the Naung-Chaung Divide, north-east Burma, growing on the summits of granite mountains above the bamboo and tree limit, at

an elevation of 13,000 ft. It was later found by FARRER and FORREST in Burma and again by FORREST in Yunnan.

In 1924 WARD collected a plant at Doshong La, southern Tibet, at 10,000–11,000 ft., which was described in 1929 as *R. rivulare* Ward. In 1931 the name was altered to *R. riparium* in the *Notes from the Royal Botanic Garden, Edinburgh*, as the name *R. rivulare* had already been given to an Azalea in 1921 by HANDEL-MAZZETTI. Its affinity was stated to be with *R. calostrotum* from which it was said to differ in the calyx lobes being minutely ciliate and in the length of the pedicels, 1.3 cm. long. These characters seemed reliable when only the type specimen was available for diagnosis, but further gatherings and plants in cultivation show that the species have common characteristics. While the margin of the calyx in *R. riparium* is shortly ciliate, in *R. calostrotum* every gradation from long to shortly ciliate is found; and as to the pedicels, those of *R. riparium* are 0.9–1.9 cm. long, while those of *R. calostrotum* are 0.6–2.6 cm. long. Obviously, it is not possible to separate the two species on these characters, and in other respects they are identical. (Fig. 19)

In cultivation the colour of the young leaves of *R. calostrotum* varies from bluish-green with a sheen to pale green without a sheen.

The name *R. calciphilum* was given in 1931 to a plant (No. 6984) collected by WARD in June 1926 at Seingku Wang, Upper Burma, on limestone rubble slopes and rocks at 13,000 ft. In 1938 YÜ found it in Yunnan among thickets on rocky slopes.

It differs from *R. calostrotum* only in its smaller leaves. The species agree in all other morphological details.

R. calostrotum Balf. f. et Ward var. **calciphilum** (Hutch. et Ward) comb. nov. *R. calciphilum* Hutch. *et* Ward in Notes R.B.G. Edin., XVI, 179 (1931); Hutch. in The Sp. of Rhod., 589 (1930); Ward, Plant Hunting, 125(1930); Rhod. Soc. Notes, III, 147 (1925–31); Journ. Roy. Hort. Soc., LXIX, 42 (1944); Rhod. Handb., 13, 124 (1952).

HABITAT:

Upper Burma. WARD 6984—isotype.
Yunnan. YÜ 19754.

The variety differs from the species in its smaller leaves which are 0.5–1.2 cm. long.

R. chameunum Balf. f. et Forrest in Notes R.B.G. Edin., XIII, 37 (1920); Millais, Rhododendrons, Ser. 2, 107 (1924); Rhod. Soc. Notes, II, 272 (1920–24); New Flora & Silva, II, 179 (1929–30); Hutch. in The Sp. of Rhod., 591 (1930); Journ. Roy. Hort. Soc., LXIX, 43 (1944); Cowan, The Rhododendron Leaf, 62 (1950); Bean, Trees & Shrubs, III, ed. 7, 117 (1951); Chittenden, Roy. Hort. Soc., Dict. Gard., 1769 (1951); Rhod. Handb., 18, 124 (1952). *R. cosmetum* Balf. f. et Forrest in Notes R.B.G. Edin., XIII, 38 (1920); Millais, Rhododendrons, Ser. 2, 117 (1924); Bot.

Mag., CLI, t. 9095 (1925–6); New Flora & Silva, I, 161 (1928–9); Hutch. in The Sp. of Rhod., 593 (1930); Cowan, The Rhododendron Leaf, 81 (1950); Rhod. Year Book, 111 (1951–2); Rhod. Handb., 23, 124 (1952). *R. charidotes* Balf. f. et Farrer in Notes R.G.B. Edin., XIII, 242 (1922); Millais, Rhododendrons, Ser. 2, 107 (1924); Hutch. in The Sp. of Rhod., 592 (1930); Cowan, The Rhododendron Leaf, 62(1950); Rhod. Handb., 19, 124 (1952). *R. colobodes* Balf. f. nomen.; Bot. Mag., CLI, t. 9095 (1925–6); Hutch. in The Sp. of Rhod. 591 (1930); Bean, Trees & Shrubs, III, 7th ed. 117 (1951); Rhod. Handb., 102 (1952). *R. sericocalyx* Balf. f. nomen; Notes R.G.B. Edin., XVII, 200 (1930); Bot; Mag., CLI, t. 9095 (1925–6); Hutch. in The Sp. of Rhod., 591 (1930); Bean, Trees & Shrubs, III, ed. 7, 117 (1951); Rhod. Handb., 107 (1952). *R. pamprotum* Balf. f. et Forrest, nomen; Bot. Mag., CLI, t. 9095 (1925–6); Hutch. in The Sp. of Rhod., 593 (1930); Rhod. Handb., 106 (1952). *R. humifusum* Balf. f. nomen; Hutch in The Sp. of Rhod., 593 (1930); Rhod. Handb., 104 1952).

HABIT: erect shrub, 12–60 cm. high; branchlets scaly with dry flaky stalked scales, moderately or densely bristly; leaf-bud scales subpersistent or deciduous.

LEAVES: elliptic, oblong-elliptic or ovate-elliptic, lamina 0.5–2 cm. long, 0.4–1.1 cm. broad, apex rounded with a reflexed or straight mucro, base rounded or obtuse; upper surface shining, not scaly, sometimes scaly, the scales ½–6 times their own diameter apart, not bristly or sometimes bristly, margin bristly or glabrous; under surface fawn, yellowish or brown, densely scaly with overlapping scales; petiole 1–5 mm. long, scaly, bristly, rarely glabrous.

INFLORESCENCE: terminal, 1–6-flowered, flower-bud scales persistent or deciduous; pedicels 0.7–2.2 cm. long, scaly, moderately or rather densely bristly, rarely glabrous.

CALYX: 5-lobed to base, 3–9 mm. long, lobes pinkish-purple or crimson, lanceolate, ovate-elliptic or ovate, rather densely puberulous, sometimes bristly or glabrous outside and slightly to moderately scaly along the middle or not scaly, margin fringed with long hairs.

COROLLA: widely funnel-shaped, 1.7–2.9 cm. long, 5-lobed, deep purple-rose or purple-crimson with crimson spots at the base of the upper three lobes, puberulous outside and sparsely or moderately scaly along the middle of the lobes.

STAMENS: 10, slightly unequal, long-exserted, 0.9–1.8 cm. long; filaments villous towards the base.

OVARY: conoid, 2–3 mm. long, 5-celled, densely scaly, puberulous, sometimes bristly or glabrous; style red, longer than the stamens, glabrous or puberulous at the base.

CAPSULE: conoid or ovoid, 4–8 mm. long, densely scaly, calyx persistent.

HABITAT:

Yunnan. FORREST 13904—holotype, 12537, 12968, 13258, 13383, 13443, 13873, 13985—holotype of *R. cosmetum*, 14043, 16143, 19437, 20172, 20975, 25504, 25508, 25560, 25835, 25895, 25911, 25923, 29286. ROCK 8822, 8935, 9176, 9251, 11005, 11320, 18450, 22823, 23330. YÜ 8645.
Yunnan-Tibet Border. ROCK 5, 56, 175, 23546. WARD 576.
Yunnan-Tibet-Burma Border. WARD 5318, 5358.
Burma. FARRER 1690—holotype of *R. charidotes.*
Tibet. FORREST 18671, 19994, SOULIÉ 1028.
Szechuan. FORREST 16449, 20422.

The name *R. chameunum* was given in 1920 to a plant collected by FORREST in June, 1917, in stony pasture at an elevation of 11,500 ft., on the Li-ti-ping, western Yunnan.

In the same month a similar plant was found by FORREST at Bei-ma-shan, north-west Yunnan, and this also was described as a new species under the name *R. cosmetum.* In the original description, its affinity is not indicated, and in the Key in *The Species of Rhododendron* it is distinguished from *R. chameunum* by its scaly but not bristly flower stalks.

Other plants were given new names which were not, however, validly published. These include *R. colobodes* (FORREST Nos. 13258, 13383, 13443, SOULIÉ 1028) from Yunnan and Tibet, *R. sericocalyx* (FORREST No. 16449) from south-west Szechuan, *R. pamprotum* (FORREST Nos. 12537, 13873, 14043) from Yunnan, and *R. humifusum* (FORREST Nos. 14336, 16740, 18671, WARD Nos. 576, 5318, 5358) from south-east Tibet and Yunnan-Tibet Border. In *The Species of Rhododendron,* these names appear in synonymy, the first two under *R. chameunum,* the latter two under *R. cosmetum.*

Further gatherings show that the distinguishing characters are inconstant and unreliable. In *R. chameunum* the pedicels are densely or moderately bristly, and in *R. cosmetum* they are moderately bristly or glabrous. In both species leaf size, shape and size of the calyx, size and colour and scaliness of the corolla are variable, and any two of these characters vary so much as to be incapable of correlation.

Moreover, in July, 1920, FARRER collected a plant (No. 1690) at Chawchi Pass, north-east Burma, at 12,000 ft., which was described in 1922 as *R. charidotes.* It was also collected by FORREST in Yunnan in 1924 and 1930. In the note following the original description it is said to be "allied to *R. radicans* and *R. keleticum.* It is however quite singular in the phylum through the intensity of the bristliness. Stems, leaves, pedicels, calyx, ovary are all bristly". But on comparing specimens of *R. charidotes* and *R. chameunum* it is found that the two species agree in

every character, except that the ovary and the outer surface of the calyx are bristly in the former, glabrous in the latter. Moreover, the bristly calyx cannot be correlated with the bristly ovary. In FORREST's No. 25560 with a bristly calyx, the ovary is bristly at the apex or completely glabrous, and in cultivation plants raised at the Royal Botanic Garden, Edinburgh, from the same number, have glabrous calyx and ovary. Again, a bristly calyx is found in cultivated specimens of *R. chameunum*, so it is apparent that the two species cannot be distinguished by this character.

Whether the bristly ovary, with bristles scattered all over, is a sufficient distinction on which alone to justify a separate specific or varietal status, is a matter of opinion. But *R. chameunum* is a very variable species in the degree of bristliness of the branchlets, leaves, petioles, pedicels, calyx, and the various forms represent merely different aspects of a single variable species. No doubt, *R. charidotes* is one of the variants.

R. chameunum is closely related to *R. prostratum*, but differs markedly in its habit. Its relationship with *R. saluenense* will be discussed in the notes on the latter species.

R. fragariflorum Ward in Gard. Chron., Ser. 3, LXXXVI, 504 (1929); Hutch. in The Sp. of Rhod., 594 (1930); Notes R.B.G. Edin., XVI, 179 (1931); Journ. Roy Hort. Soc., LXIX, 42 (1944); Rhod. Handb., 37, 124 (1952).

HABIT: dwarf erect shrublet, 15–20 cm. high; branchlets sparsely or moderately scaly, rather densely puberulous; leaf-bud scales deciduous.

LEAVES: obovate, obovate-elliptic or elliptic, lamina 0.5–1 cm. long, 3–6 mm. broad, apex rounded with a reflexed mucro, base rounded or obtuse; upper surface shining, scaly with yellowish or brown shining scales, margin bristly or glabrous; under surface scaly with dark brown and yellow entire scales, 1½–6 times their own diameter apart; petiole 1–2 mm. long, scaly, not bristly.

INFLORESCENCE: terminal, 2–6 flowered, flower-bud scales deciduous; pedicels 5–7 mm. long, scaly, minutely puberulous.

CALYX: 5-lobed to base, 3–5 mm. long, lobes pink or crimson, ovate, elliptic or oblong, scaly outside, margin sparsely ciliate or glabrous.

COROLLA: widely funnel-shaped or almost rotate, 1.1–1.5 cm. long, 5-lobed, pinkish-purple or purplish-crimson, sparsely scaly or not scaly along the middle of the lobes outside, glabrous.

STAMENS: 10, unequal, long-exserted, 0.8–1.2 cm. long; filaments villous towards the base.

OVARY: conoid, 2 mm. long, 5-celled, densely scaly; style red, longer than the stamens, glabrous.

CAPSULE: conoid, 5–6 mm. long, scaly, calyx persistent.

HABITAT:

Tibet. WARD 5810—isotype, 11590.

This attractive plant was found by KINGDON WARD in June, 1924, at Nyima and Temo La, southern Tibet, forming hassocks and continuous carpets at elevations of 14,000–15,000 ft. He collected it again at Se La in 1935.

R. fragariflorum has been included in the Saluenense series, but it deviates markedly from all other members of this series in the distribution of the scales on the under leaf surface. The scales are widely spaced, being 1½–6 times their own diameter apart and not overlapping as in that series, and instead of being of the crenulate type with a scalloped margin, they are of the usual entire type. It differs also in the corolla being glabrous outside, and in having short pedicels. In cultivation, the flower shape is not dissimilar to that of the Lapponicum Series.

Undoubtedly, *R. fragariflorum* forms a link between the Saluenense and the Lapponicum Series, and it may be said to have no less a claim to a place in the latter series. It may, however, be allowed to remain in its present series until more material is available for examination.

R. keleticum Balf. f. et Forrest in Notes R.B.G. Edin., XIII, 50 (1920); Millais, Rhododendrons, Ser. 2, 167 (1924); New Flora & Silva, I, 161 (1928–9); Hutch. in The Sp. of Rhod., 595 (1930); Journ. Roy. Hort. Soc., LXIX, 42 (1944); Chittenden, Roy. Hort. Soc., Dict. Gard., 1775 (1951); Bean, Trees and Shrubs, III, ed. 7, 121 (1951); Rhod. Year Book, 111 (1951–2); Rhod. Handb., 48, 124 (1952).

HABIT: semi-prostrate spreading shrub, 3–38 cm. high; branchlets densely scaly with dry flaky stalked scales, not bristly (rarely with a few bristles); leaf-bud scales subpersistent.

LEAVES: oblong, oblong-elliptic, elliptic, ovate-elliptic or lanceolate, lamina 0.7–2.1 cm. long, 0.3–1 cm. broad, apex rounded, obtuse or acute with a long straight or reflexed mucro, rounded, obtuse or narrowed to the base; upper surface shining, not scaly or scaly, the scales ½–6 times their own diameter apart, margin bristly or glabrous; under surface brown or fawn, densely scaly with overlaping scales; petiole 1–4 mm. long, scaly, not bristly (rarely with a few bristles).

INFLORESCENCE: terminal, 1–3-flowered, flower-bud scales persistent or subpersistent; pedicels 1.5–3.2 cm. long, moderately or rather densely scaly, bristly or not bristly.

CALYX: 5-lobed to base, 5–8 mm. long, lobes pinkish or crimson, ovate, ovate-oblong or ovate-lanceolate, puberulous (rarely bristly) or glabrous outside and moderately or densely scaly along the middle, rarely not scaly, margin fringed with long hairs.

COROLLA: widely funnel-shaped or rotate, 1.6–3 cm. long, 5-lobed, deep purplish-crimson with crimson spots at the base of the upper three lobes.

STAMENS: 10, slightly unequal, long-exserted, 0.9–2 cm. long; filaments villous towards the base.

OVARY: conoid, 2–3 mm. long, 5-celled, densely scaly; style red, longer than the stamens, glabrous.

CAPSULE: conoid, 5–8 mm. long, densely scaly, calyx persistent.

HABITAT:

Tibet. FORREST 18918—holotype, 19915, 20255, 20833, 20864, 21756, 21757, 22659, 22749, 22750, 22935. ROCK 10100, 22348, 22431.
Yunnan. Yü 19314, 20066, 20266.
Yunnan/Tibet Border. ROCK 58.
Yunnan/Tibet/Burma Border. WARD 5430.
Upper Burma. WARD 3189, 3390.

R. keleticum was first found by FORREST in August, 1919 in the Salwin-Kiuchiang Divide, south-east Tibet, in open stony pasture and on cliffs and screes.

It is allied to *R. radicans*, but distinguished by its habit, by the broader leaves and usually by leaf shape. From the closely related *R. chameunum* it differs in its habit, in the glabrous branchlets and petioles and often in leaf shape.

R. nitens Hutch. in Gard. Chron., Ser. 3, XCIX, 10 (1936); Ward, ibid. Ser. 3, XCIX, 135 (1936); Rhod. Handb., 62, 124 (1952).

HABIT: erect shrub, 30–45 cm. high; branchlets densely scaly with dry flaky stalked scales, not bristly; leaf-bud scales subpersistent or deciduous.

LEAVES: oblong-obovate or oblong-elliptic, lamina 0.7–2.4 cm. long, 0.4–1.1 cm. broad, apex rounded with a reflexed mucro, narrowed or rounded at the base; upper surface shining, scaly, the scales 1–8 times their own diameter apart, margin bristly or glabrous; under surface brown or fawn, densely scaly with overlapping scales; petiole 2–3 mm. long, scaly, not bristly (rarely with a few bristles).

INFLORESCENCE: terminal, 1–3-flowered, flower-bud scales persistent or subpersistent; pedicels 1.4–2.5 cm. long, rather densely scaly, not bristly.

CALYX: 5-lobed to base, 6–8 mm. long, lobes pinkish-purple, ovate-

oblong or lanceolate, glabrous or puberulous outside and rather densely scaly along the middle or not scaly, margin fringed with long or short hairs.

COROLLA: widely funnel-shaped or rotate, 1.8–2.8 cm. long, 5-lobed, deep pinkish-purple or deep pink-magenta with crimson spots at the base of the upper three lobes, moderately or rather densely puberulous and scaly outside.

STAMENS: 10, unequal, long-exserted, 0.7–1.7 cm. long; filaments villous towards the base.

OVARY: conoid, 2–3 mm. long, 5-celled, densely scaly; style red, longer than the stamens, glabrous.

CAPSULE: ovoid, about 6 mm. long, densely scaly, calyx persistent.

HABITAT:

Burma. WARD 5482. (Described from cultivated plant raised from this number.)

This species was described in 1936 from living specimens growing at Tower Court, raised from WARD seed number 5842. The specimen, in fruit, was collected at Tara Tru, north-east Burma, growing on sloping slabs and under bamboos along the edge of thickets at an elevation of 12,000 ft.

From all other members of its series it differs in its time of flowering, in June–July, being the latest to flower of all species in the group. From *R. calciphilum* it differs in the shining upper surface of the leaves which have widely spaced scales and by the larger calyx. From *R. keleticum* it is distinguished mainly by its erect habit.

R. prostratum W. W. Sm., in Notes R.G.B. Edin., VIII ,202 (1914); Millais, Rhododendrons, 230 (1917); ibid. Ser. 2, 215 (1924); Bot. Mag., CXLIV, t. 8747, (1918); Rhod. Soc. Notes, II, 13, 272 (1920–24); New Flora & Silva, I, 162, 164 (1928–29); Hutch. in The Sp. of Rhod., 596 (1930); Bean, Trees & Shrubs, III, 409 (1933); ibid. III, ed. 7, 117 (1951); Rhod. Year Book, 34 (1950); ibid. 111 (1951–52); Chittenden, Roy. Hort. Soc., Dict. Gard., 1780 (1951); Rhod. Handb., 73, 124 (1952).

HABIT: prostrate spreading shrub, 3–45 cm. (rarely 60 cm.) high; branchlets moderately or rather densely scaly with dry flaky stalked scales, bristly; leaf-bud scales subpersistent or persistent.

LEAVES: elliptic, oblong-elliptic or ovate-elliptic, lamina 0.4–1.5 cm. (rarely up to 2.3 cm) long, usually 3–9 mm. broad, apex rounded with a reflexed or straight mucro, base rounded or obtuse; upper surface shining, not scaly, rarely with a few scales, margin moderately or slightly bristly; under surface brown, densely scaly

with overlapping scales; petiole 1–3 mm. long, scaly, moderately or slightly bristly.

INFLORESCENCE: terminal, 1–3-flowered, flower-bud scales deciduous or persistent; pedicels 0.8–2.3 cm. long, scaly, moderately or rather densely bristly.

CALYX: 5-lobed to base, 5–7 mm. long, lobes crimson or pinkish-purple, ovate or ovate-oblong, puberulous or glabrous outside and sparsely or moderately scaly along the middle or not scaly, margin bristly.

COROLLA: widely funnel-shaped, 1.6–2 cm. long, 5-lobed, crimson or deep purple-rose with crimson spots at the base of the upper three lobes, moderately or rather densely puberulous outside and sometimes scaly.

STAMENS: 10, slightly unequal, long-exserted, 1–1.5 cm. long; filaments villous towards the base.

OVARY: conoid, 2–3 mm. long, 5-celled, densely scaly, sometimes minutely puberulous; style red, longer than the stamens, glabrous or rarely puberulous at the base.

CAPSULE: ovoid, 5–6 mm. long, densely scaly, puberulous or glabrous, calyx persistent.

HABITAT:

Yunnan. FORREST 5862—holotype, 10285, 15241, 28339, 29287, 30543, 30891, HAND.-MAZZ 6920. MCLAREN 'D' 210. ROCK 4947, 5246, 9028, 9080, 9427, 9662, 9693, 17028, 17109, 17112, 22859, 24776, 25303.

Yunnan/Tibet Border. ROCK 22957. MCLAREN 'P' 91, 94.

Tibet. FORREST 14336, 16740.

Szechuan. FORREST 21265, 22965. ROCK 16369.

This plant was discovered by FORREST on the eastern flank of the Lichiang Range, Yunnan, in June, 1910, growing on rocks and in peaty moist soil, almost at the limit of vegetation, at 15,000–16,000 ft.

R. prostratum can be readily recognized by its prostrate spreading habit. It agrees with the closely allied species *R. saluenense* and *R. chameunum* in having bristly branchlets and petioles, but differs from the former in its habit, in the smaller leaves, in the absence of scales from the upper surface of the leaves, and from the latter in its habit and often in leaf size. (Fig. 21)

R. radicans Balf. f. et Forrest in Notes R.B.G. Edin., XIII, 290 (1922); Rhod. Soc. Notes, II, 272 (1920–24); Millais, Rhododendrons, Ser. 2, 218 (1924); New Flora & Silva, I, 161, 221 (1928–29); ibid. III, 215 (1930–31); Hutch. in The Sp. of Rhod., 597 (1930); Gard. Chron., Ser. 3, XCII, 482 (1932); Bean, Trees & Shrubs, III, 411 (1933); ibid III, 120 (1951); Journ. Roy. Hort. Soc., LXIX, 42 (1944); Rhod. Year Book, 34

(1950); ibid. 59 (1951–52); Chittenden, Roy. Hort. Soc., Dict. Gard., 780 (1951); Rhod. Handb., 75, 124 (1952).

HABIT: completely prostrate matted shrublet, 3–20 cm. high; branchlets moderately or rather densely scaly with dry flaky stalked scales, not bristly; leaf-bud scales subpersistent.

LEAVES: linear, lanceolate, narrowly oblanceolate or narrowly oblong, lamina 0.6–1.7 cm. long, 2–6 mm. broad, apex acute or obtuse with a straight or reflexed mucro, obtuse or narrowed to the base; upper surface shining, not scaly or scaly, the scales 2–4 times their own diameter apart, margin bristly or glabrous; under surface fawn or brown, densely scaly with overlapping scales; petiole 1–2 mm. long, scaly, not bristly.

INFLORESCENCE: terminal, 1-flowered, flower-bud scales persistent; pedicels 1.4–3 cm. long, moderately or rather densely scaly, not bristly, rarely bristly.

CALYX: 5-lobed to base, 4–7 mm. long, lobes crimson or green, ovate, ovate-lanceolate or lanceolate, glabrous outside, scaly along the middle, margin fringed with long or short hairs.

COROLLA: widely funnel-shaped, 1.5–2 cm. long, 5-lobed, dark rosy-purple with or without crimson spots at the base of the upper three lobes, moderately or rather densely puberulous outside and scaly along the middle of the lobes.

STAMENS: 10, unequal, long-exserted, 0.6–1.1 cm. long; filaments villous towards the base.

OVARY: conoid, 2 mm. long, 5-celled, densely scaly; style red, longer than the stamens, glabrous.

CAPSULE: ovoid or conoid, 5–6 mm. long, densely scaly, calyx persistent.

HABITAT:

Tibet. FORREST 19919—holotype, 20235, 20861. ROCK 10122, 11188.

FORREST discovered this plant in the Salwin-Kiu-chiang Divide, south-east Tibet, in August, 1921, growing in open alpine moors at 15,000 ft. It was collected by FORREST again in the same region and by ROCK on Mount Kenyichunpo and in the region of Champutong, south-east Tibet. (Fig. 22)

It is a distinct species akin to *R. keleticum* but differs in its habit, in the narrower leaves and usually in leaf shape. From *R. prostratum* it is distinguished by its more completely prostrate matted habit, by the absence of bristles from the branchlets and petioles, and by leaf shape. A distinctive feature of this plant which has been noticed in cultivation is the rooting of the branches where in contact with the soil.

R. saluenense Franch. in Journ. de Bot., XII, 263 (1898); Notes R.B.G. Edin., VII, 40 (1912); Millais, Rhododendrons, 238 (1917); ibid. Ser. 2, 228 (1924); Bot. Mag., CLI, t. 9095 (1925–26); Hutch. in The Sp. of Rhod., 599 (1930); Ward, Plant Hunting, 106 (1930); Bean, Trees & Shrubs, III, 414 (1933); ibid. III, ed. 7, 126 (1951); Journ. Roy. Hort. Soc., LXIX, 42 (1944); ibid. LXX, 247 (1945); Rhod. Year Book, 79 (1946); ibid. 34 (1950); Rehder, Man. Cult. Trees & Shrubs, 707 (1947); Cowan, The Rhododendron Leaf, 29 (1950); Chittenden, Roy. Hort. Soc., Dict. Gard., 1782 (1951); Rhod. Handb., 80, 124 (1952). *R. amaurophyllum* Balf. f. & Forrest in Notes R.B.G. Edin., XIII, 230 (1922); Rhod. Soc. Notes, II, 272 (1920–24); New Flora & Silva, I, 160 (1928–29); Millais, Rhododendrons, Ser. 2, 81 (1924); Bot. Mag., CLI, t. 9095 (1925–26); Hutch. in The Sp. of Rhod., 599 (1930); Bean, Trees & Shrubs, III, 414 (1933); ibid. III, ed. 7, 126 (1951); Rhod. Handb., 101 (1952). *R. humicola* Balf. f. nomen; Rhod. Soc. Notes, III, 146 (1925–31); Bot. Mag., CLI, t. 9095 (1925–26); Hutch. in The Sp. of Rhod., 599 (1930); Notes R.B.G. Edin., XVII, 390, 395 (1930); Bean, Trees & Shrubs, III, 414 (1933); ibid. III, ed. 7, 126 (1951); Rhod. Handb., 146 (1947).

HABIT: erect shrub, 60 cm.–1.20 m. high; branchlets densely scaly with dry flaky stalked scales, moderately or densely bristly; leaf-bud, scales deciduous or subpersistent.

LEAVES: elliptic, oblong-elliptic or ovate-elliptic, lamina 2–3.6 cm. long, 0.8–2.4 cm. broad, apex rounded with a reflexed or straight mucro, base rounded, rarely obtuse; upper surface shining or more or less so, scaly, the scales ½–6 times their own diameter apart, rarely more, sparsely bristly or glabrous, margin bristly or glabrous; under surface yellowish-brown or brown, densely scaly with overlapping scales; petiole 3–6 mm. long, scaly, slightly or moderately bristly.

INFLORESCENCE: terminal, 1–7-flowered, flower-bud scales subpersistent or persistent; pedicels 0.8–2.5 cm. long, moderately or rather densely scaly, usually sparsely to rather densely bristly, sometimes not bristly.

CALYX: 5-lobed to base, 5–8 mm. long, lobes pinkish-purple or crimson, ovate or ovate-elliptic, puberulous (rarely glabrous) outside and slightly to rather densely scaly along the middle (rarely not scaly), margin fringed with long hairs.

COROLLA: widely funnel-shaped, 2.1–3 cm. long, 5-lobed, deep pinkish-purple or deep purple-crimson with crimson spots at the base of the upper three lobes, puberulous outside and scaly along the middle of the lobes.

STAMENS: 10, slightly unequal, long-exserted, 1–2.4 cm. long; filaments villous towards the base.

OVARY: conoid, 2–3 mm. long, 5-celled, densely scaly, glabrous, rarely

puberulous; style red, longer than the stamens, puberulous at the base or glabrous.

CAPSULE: conoid or ovoid, 0.6–1 cm. long, densely scaly, calyx persistent.

HABITAT:

Tibet. SOULIÉ—1006 isotype. FORREST 511, 16739, 18905, 19152, 19170, 19172, 19183, 19218, 19222, 19913, 19918, 20912, 21679, 21760, 21772, 22666. ROCK 10102, 10115, 10116, 10175, 10233, 11238, 21997, 22297, 22496, 22612, 23211, 23218, 23221, 23620, 23627, 23634.

Yunnan. FORREST 12934, 13313, 13543, 14054, 14908, 19479, 30911. HAND.-MAZZ. 8440, 9307. ROCK. 8890, 8937, 9151, 9282, 9367, 9960, 10079, 10082, 11001, 11010, 11012, 11506. YÜ 7860, 8611, 19058, 19088, 20607, 22163.

Yunnan/Tibet Border. ROCK 110, 152, 22954, 22958, 22968, 23545, 23548, 23556. WARD 585.

Yunnan/Tibet/Burma Border. WARD 5436.

Szechuan. FORREST 21033.

R. saluenense was described by FRANCHET in 1898 from specimens collected by ABBÉ SOULIÉ in 1894 at Dong in the valley of the Upper Mekong, and in 1895 at Sela in the Mekong-Salwin Divide. It was later found by FORREST, WARD, ROCK, and YÜ in other parts of Yunnan and south-east Tibet.

In June, 1917, FORREST collected a plant on Li-ti-ping between the Mekong and the Yangtse, which was described in 1920 as *R. chameunum*, and it was said to be "allied to *R. saluenense*, distinguished from that species by its denser branching habit, its dark green almost black (when dry) leaves, its smaller calyx with lanceolate lobes, its deep dark purple flowers".

In 1922, another species, *R. amaurophyllum* was founded on FORREST No. 18905 from the Salwin-Kiu-chiang Divide, south-east Tibet, and the name *R. humicola*, which was not validly published, was given to FORREST's plants (Nos. 19172, 19218, 19222) collected in 1919 in the same region. In *The Species of Rhododendron* both names appear under *R. saluenense* in synonymy.

Further investigation shows that the distinguishing characters mentioned above are too variable to be relied upon. *R. saluenense* exhibits wide variation in habit, in leaf size and shape, in size and degree of scaliness of the calyx, and in the colour and size of the corolla. These variations are evident not only in herbarium specimens but also in plants in cultivation.

If the two extremes are compared—the one a large shrub, 1.20 m. high, with large leaves 3.6 cm. long, the upper surface densely scaly, and the other a dwarf shrublet 12 cm. high, with small leaves 8 mm.

long, upper surface not scaly—the differences will be markedly evident In cultivation the dwarf forms, up to about 60 cm. high, appear so different that it is desirable to place them under *R. chameunum*, although intermediate forms link them with *R. saluenense*.

R. saluenense received an Award of Merit when exhibited by Major E. DE ROTHSCHILD in April, 1945.

LIST OF SPECIES AND SYNONYMS

amaurophyllum Balf. f. et Forrest = SALUENENSE
caeruleo-glaucum Balf. f. et Forrest = CAMPYLOGYNUM var. CHAROPOEUM
calciphilum Hutch. et Ward = CALOSTROTUM var. CALCIPHILUM
CALOSTROTUM Balf. f. et Ward
CALOSTROTUM Balf. f. et Ward var. CALCIPHILUM (Hutch. et Ward) comb. nov.
CAMPYLOGYNUM Franch.
CAMPYLOGYNUM Franch. var. CELSUM var nov.
CAMPYLOGYNUM Franch. var CHAROPOEUM (Balf. f. et Farrer) comb. nov.
CAMPYLOGYNUM Franch. var. CREMASTUM (Balf. f. et Forrest) comb nov.
CAMPYLOGYNUM Franch. var. MYRTILLOIDES (Balf. f. et Ward) comb. nov.
cerasiflorum Ward nomen = CAMPYLOGYNUM
CHAMEUNUM Balf. f. et Forrest
charidotes Balf. f. et Farrer = CHAMEUNUM
charopoeum Balf. f. et Farrer = CAMPYLOGYNUM var CHAROPOEUM
colobodes Balf. f. nomen = CHAMEUNUM
cosmetum Balf. f. et Forrest = CHAMEUNUM
cremastum Balf. f. et Forrest = CAMPYLOGYNUM var. CREMASTUM
damascenum Balf. f. et Forrest = CAMPYLOGYNUM
FRAGARIFLORUM Ward
glauco-aureum Balf. f. et Forrest = CAMPYLOGYNUM
humicola Balf. f. nomen = SALUENENSE
humifusum Balf. f. nomen = CHAMEUNUM
KELETICUM Balf. f. et Forrest
myrtilloides Balf. f. et Ward = CAMPYLOGYNUM var. MYRTILLOIDES
NITENS Hutch.
pamprotum Balf. f. et Forrest = CHAMEUNUM
PROSTRATUM W. W. Sm.
RADICANS Balf. f. et Forrest
riparium Ward = CALOSTROTUM
rivulare Ward = CALOSTROTUM
rubriflorum Ward nomen = CAMPYLOGYNUM
SALUENENSE Franch.
sericocalyx Balf. f. nomen = CHAMEUNUM

THE PROPAGATION OF *CAMELLIA RETICULATA*

by

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ONE of the most beautiful of all flowering shrubs is the cultivated form of *Camellia reticulata*. Its desirability has been increased even more because of its comparative rareness due to the difficulties of propagating it.

Rooting of Camellias from cuttings is the generally accepted means of increase, but in the case of *C. reticulata*, the very best propagator is unlikely to achieve more than 10 per cent success, and most will fail to root any at all. Increase by layering is likewise quite impractical because of the extreme difficulty of inducing root formation on layered branches.

Approach grafting has been the most common means of propagating this plant, and in the hands of a good propagator is a very satisfactory means of increase. It has, however, severe limitations. The bush of *C. reticulata* usually has few branches near to the ground. To utilize these branches is easy, because they can be approach-grafted on to young stocks of *C. japonica* while the latter are growing in pots plunged in the soil. To use the higher branches for approach-grafting it has been the practice to erect staging around the bush of *C. reticulata*, and to approach-graft on to *C. japonica* plants growing in pots standing on the staging. The difficulty of arranging all this and of keeping the potted stocks watered through a complete year is obvious.

The most successful propagator by approach-grafting in this country overcomes the difficulty by digging his plants of *C. reticulata* and re-planting them lying on one side, so that a considerable number of branches are near to the soil. The soil is very richly manured with a compost containing a good deal of rotted cow manure, and in the moist, warm climate of that district the bushes make extremely vigorous growth in spite of being disturbed.

This nurseryman does the approach-grafting in the early spring (August–September). The past year's (8 months old) wood of the *C. reticulata* is approach-grafted on to the *C. japonica* stock, by making a flat cut some 2 in. long on each. They are then bound firmly together.

The shoot of *C. reticulata* above the graft usually has two or more strong buds already formed at the time of grafting. These make lateral shoots some four months after grafting and by the time that the grafted plant is separated from the parent *C. reticulata* about one year after grafting, the young plant is already well branched. No doubt the considerable increase of stem diameter at the point of grafting, due to the vigorous top growth, plays an important part in making a good union in this particular nursery.

Most other propagators in this country do their approach-grafting at about mid-summer, using the half-ripe shoots of *C. reticulata.*

The inconveniences of approach grafting have led to the fairly extensive use of side-grafting for *C. reticulata*, similar to that used for other evergreens such as many Rhododendrons. Side-grafting is usually carried out in the very early spring using potted stocks of *C. japonica.* The usual practice of retaining them in a close, humid propagating case for some weeks is necessary. Side-grafting can be done in mid-summer also, using half-ripened shoots of *C. reticulata.*

The side-grafting method has proved a most precarious one for *C. reticulata.* One recent published report from a well-known English nurseryman reported that of one hundred he had done in a batch, there was not a single success.

The method we have used successfully for the past five seasons in propagating this Camellia have given such a high percentage of successes that we have had fairly numerous inquiries concerning it, and publication of a brief account seems the best way of disseminating the information.

In brief, the method is one of simple cleft-grafting in which the union is between half-ripe wood of both stock and scion.

Stages in the process are shown in Fig. 29.

The stock plant should have made a vigorous growth in the current season, and the wood should have become at least half ripe. The terminal bud is cut out and a split made from 1–1½ in. down the stem. Sometimes, when using a stock with a rather soft growth, an inch or two of the new shoot is cut away in order to make the graft in the riper wood. Always we make the transverse cut just above a leaf, with a view to maintaining better growth in that part of the stock.

The scion of *C. reticulata* should be in the half-ripe stage. As a result of a considerable number of trials we have found that soft shoots, the leaves of which have not acquired their normal size and texture, are too young. The terminal bud should be formed. The brownish bark-colouring which commences at the base of the new growth should have extended right to the apex, at least on one side of the shoot.

The stage of ripening of the base of the scion where the cut is made, is naturally the main consideration, and the difference in ripeness as between the base and the tip will be liable to vary from season to season and from one locality to another. It would, however, be obviously inadvisable to graft a scion of which the upper leaves had not hardened up as indicated above.

The above description is of the least ripened shoots which we have found satisfactory. It is possible to use much older shoots. The oldest which we have used successfully had the bark brown right to the tips and the young flower buds almost a quarter-inch thick. This was at the end of January. (i.e. late midsummer in New Zealand). In preparing the scions for grafting we commonly pick them, pack in wet sphagnum moss, and use as required as long as a week afterwards. Usually three or four leaves are left entire at the tip, and any others removed. The diameter of the scion at the point of grafting should be matched as nearly as possible to the individual stock being used. After cutting off surplus leaves, the base of the scion is cut to a wedge an inch or so long, to match the cut already made in the stock. We use for this purpose the single-edged "Valet" razor blades mounted in a simple sheet metal handle.

In fitting scion to stock, the tip of the wedge should be pressed firmly into the base of the split in the stock. At least one side should be carefully matched so that the cambium of stock and scion meet. If the bark of the scion then projects beyond the split stock at the opposite side, we have found that cutting it off flush with the stock is a good method, provided that the cut-off portion of the scion is only bark. There is a tendency for the shoots of *C. reticulata* to be thicker than those of *C. japonica*, so the above device is often necessary.

After inserting the scion into the split stock, the two are firmly bound together with raffia, making sure that the upper part of the cut surface of the wedge remains completely inserted between the split surfaces of the stock.

AFTER-CARE OF GRAFTED PLANTS

The pots after grafting are kept in a propagating case or an outdoor cold frame. It must be remembered that temperatures in these propagating houses or frames will be fairly high (70°–75° F. at midday in the autumn). If desired, wet sphagnum moss can be packed between the pots and even higher up almost to the scions, in order to maintain humidity. Every effort is made to maintain high humidity amongst the scions during the first 6–9 weeks after grafting. They are usually syringed with water three times a day, and the glass of the propagating

case or frame is shaded with newspaper or hessian during sunny periods of the day.

After about nine weeks the successful plants can usually be identified by continued swelling of flower buds. After a few trials, we prefer to leave these buds until they reach a comparatively large diameter (about $\frac{1}{3}$ to $\frac{1}{2}$ in.). It must be remembered that a grafted scion is not situated as is a rooting cutting. If the scion has united with the stock, then swelling of buds is a form of growth likely to involve the movement of sap through the union, tending to aid in its fuller development.

The stocks on which the grafting was done also need attention because there is a risk of the pots being overwatered by the regular damping down. This is perhaps best taken care of by potting in a free-draining compost, and by putting the usual crocks in the bottom of the pot.

When late autumn arrives the grafted plants should have been gradually hardened by leaving the frames open for progressively longer periods each day. The raffia may also need renewal, and any new sprouts on the stocks should be removed as they appear.

In later autumn in our mild climate, where a winter frost of 18° F. for a brief few hours is a rare event, the plants are plunged out of doors in a sheltered spot. In November-December (10–12 months after grafting) they make their new growths. As indicating the good union secured by this type of grafting, new growths of 9–15 in. length are quite common. In some cases the scion makes such shoots from two or three buds. Snails are very fond of the young growths and need to be carefully controlled with meta-fuel-bran baits.

With reasonable care, 80 or 90 per cent of the grafts should succeed.

THE CAMELLIA STOCK FOR GRAFTING

We have tried an assortment of stocks for grafting, including seedlings and named varieties of *C. japonica*, and cutting-grown plants of *C. Sasanqua* 'Hiryii'.

The best general results have been obtained by using stocks grown from cuttings of *C. japonica* var. 'Great Eastern' ('Emperor'). This variety is easy to grow from cuttings, is vigorous, and develops thick-wooded shoots which can usually be matched with the thick shoots of *C. reticulata*. Cuttings planted with bottom heat in January can be potted up three or four months later and a fair percentage produce stout new growths ready to receive scions about one year from taking the cuttings. The remainder are potted on, plunged, and in the next winter cut back to a strong bud to produce a vigorous shoot in the second season. Most seedlings of *Camellia japonica* which have been used do not

readily develop sufficiently stout shoots in their first three years of growth. This difficulty can be partly overcome by hard pruning to a vigorous bud in the autumn preceding the summer grafting period. Some of the *C. Sasanqua* varieties appear to make good stocks, though we have as yet no reliable information as to the long-term behaviour of *C. reticulata* on this stock. Using the variety *C. Sasanqua* 'Hiryii', the union seems to form more readily than with *C. japonica* 'Great Eastern'.

Trials have been carried out, to see whether *C. reticulata* scions at the stage of ripeness described above would graft satisfactorily on to older wood than the current season's growth. Using both cleft grafts into 1-year-old shoots, and side grafts into older wood, union was made, though much more slowly than when current season's wood of the stock was used. In the following spring and summer the scions grafted on to this older wood sometimes failed to make new growth, and where they did grow, the growths were comparatively weak.

Buds of *C. reticulata* likewise united quite freely with the stock if inserted on to *C. japonica*. It is necessary in such cases to retain the leaf on the inserted bud, and this in turn necessitates keeping the budded plant in a propagating frame until united. Even when united, however, the buds show a strange reluctance to grow.

AFTER TREATMENT OF CLEFT GRAFTED PLANTS

Plants grafted by the cleft method into the young wood of a stock, as described above, naturally may have a number of leaves and even branches of the stock. We leave all or most of these for the first year or so after grafting. Their presence is a great help in developing a good rooting system and a sturdy plant. No new shoots are allowed to develop from the stock.

In the past five seasons approximately 500 successful grafts of *C. reticulata* have been made in this way by the writer. Some of the earliest plants, left under observation in friends' gardens have shown no disadvantages as a result of the method of propagation. On the contrary they appear to be somewhat more vigorous than most plants propagated by approach-grafting.

POLYTHENE PLASTIC AS AN AID IN GRAFTING EVERGREENS

by

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THE writer has already published accounts of "Tip-grafting" as a method of propagating Rhododendrons, Camellias and other shrubs. Over the last two years successful trials have been made in which the grafted scion was covered by a bag of polythene plastic. Using this method it has been found practicable to graft Rhododendrons out of doors and to obtain better results than can be obtained in the glasshouse. The added advantage of labour-saving is probably the most important aspect. As most propagators know only too well, grafted Rhododendron plants in a propagating frame need regular attention several times a day over a period of two months or more. By grafting on to stocks *in situ* out of doors, or by grafting at the bench and then planting the grafted plant out of doors, all this later attention can be eliminated. The only work necessary, which is not required in a propagating house, is weeding of the ground among the grafted plants.

After preliminary trials in the summer of 1951–52, when three or four grafted plants were treated in this way, about one hundred were used in trials this year. In addition, some other keen amateurs tried out the method this year, and one of them (Mr. F. M. JURY of Waitara, N.Z.) told me recently that he had grafted about one hundred in this way with less than 5 per cent of failures. Mr. JURY is a farmer who has no horticultural training and no glasshouse.

We first of all graft exactly as described in the article[1] on tip grafting. Next, a small amount of damp sphagnum moss is tied around stock and scion at about the point of grafting, and a bag of polythene plastic is slipped over the top of the grafted plant and tied firmly just below the moss. Our ties for the graft, the moss, and the polythene bag have all been of raffia, but it may be that in some cases this material is liable to decay before union is complete. Grafting rubber may be a better material.

We make the polythene bags by heat-sealing one end of a short length of tubular polythene. We buy this material in rolls containing 100 ft., and in widths from 2 in. to 12 in., which means 4 in. and 24 in.

[1] R.H.S. *Rhododendron Year Book*, 1953, p. 83.

respectively in circumference. The gauge used has been mainly 250, though heavier material of 500 gauge has also been used. The 5-in.-wide tube in 250 gauge, which is suitable for most Rhododendrons, costs less than threepence per ft., and can be used for two seasons or more.

Once the plant is grafted and covered with the polythene bag, all that is necessary is to plant it in some suitable place where it receives practically no direct sun. Most of ours this year were grown under a low lath shelter near tall trees. In summer the early morning sun would strike these plants for two or three hours, but no more. Some grafted plants set where the morning sun was on them until about 11 a.m., soon had the enclosed parts badly "scalded" and killed. Mr. JURY tells me that his plants were grown in the shade of a large tree but that two or three which received too much sun were promptly killed. Once the grafted plants are set out they need no regular attention, other than the weeding, fertilizing or watering which may be necessary to ensure good growth of the stocks. Generally the conditions in good soil and light shade are more suitable than in a propagating house. After some three months the bag may be removed entirely or may for a time be left inverted over the plant but untied and open at its base.

One batch which we grafted showed complete failure, the scions all dying. This proved to be a batch rather badly infested with thrips. Thorough inspection for these pests appears to be even more necessary than in ordinary glasshouse propagation; but the thrips cannot spread out of the bag on to clean plants.

Our grafting by this method has mostly been done in January (late summer), but three scions of the large-leaved hybrid R. 'Elsae' brought to us in early spring (end of August) were successfully grafted in this way—two under the lath shade, and one on the open bench in a glass-house. All were successful, but those which were outside grew best. One made new growth some two and a half months after grafting. Bags of the 10 in. wide tube were necessary, even after the leaves had each been cut in half.

CUTTINGS AND AIR-LAYERS

The tubular form of polythene plastic is much easier to use in air-layering than the sheet material usually advised.

For cuttings we find that a pot with cuttings inserted can be watered and then sealed in a bag of polythene. If left away from strong, direct sun, the cuttings remain fresh and, of course, need no watering at all. After some twelve weeks, we found cuttings of evergreen Azaleas left in this way were well rooted.

The secret of polythene plastic is, of course, that it almost completely prevents the loss of water, but in spite of that, permits the exchange of oxygen and carbon-dioxide with relative freedom.

POSTSCRIPT (8.5.53)

An American correspondent of mine (Mr. D. G. LEACH) in a letter received this week tells me he has published a note on a similar method of treating Rhododendrons after grafting. He sprays the plants with "Wilt Pruf", an emulsion of polyvinyl chloride plastic, and then plants them outside as if they were seedlings. This emulsion spray may well prove more convenient than the bag method in those localities where the emulsion is available.

A NEW TREATMENT FOR IRON CHLOROSIS

by

James S. Wells

New Jersey, U.S.A.

THERE is hardly a grower of Rhododendrons or Azaleas who has not at some time been confronted with the problem of iron chlorosis. Sometimes this may be nothing more serious than slight yellowing of the leaves. Occasionally it may turn the leaves yellow with a suspicion of green only along the veins and mid-rib. If this condition arises it usually means the complete defoliation and subsequent death of the plant.

Iron is a peculiar substance because almost all soils and even the tissues of most plants contain considerable quantities of it. The problem lies in its availability. Iron has a brisk affinity for other chemicals and particularly in high acid soils it is usually combined with phosphorous to form iron phosphates which are relatively insoluble, and therefore, the iron is not available to the plant; yet the plant must have a moderate quantity of iron in order to grow normally. Iron is not actually consumed by the plant in the same manner as nitrogen, phosphorous and potash, but it has to be present in the leaves of the plant in order that chlorophyll can be manufactured. It acts as a catalytic agent in this process and it remains virtually unused at the end of the process. In the past, we have attempted to control iron chlorosis by applying sulphate of iron or citrate of iron direct to the ground or as a spray on the foliage of the plants. Small quantities of iron find their way into the plant from these treatments, but inevitably the iron is eventually changed, either in the soil or in the plant tissues themselves, into an iron phosphate and we are back again at the point from which we started.

Realizing that the problem centred around keeping iron in a soluble form, workers have recently produced a new complex of iron known as chelated iron. This is a chemical compound of iron with salts of ethylenediamine tetraacetic acid (EDTA). This chemical has the ability of holding a particle of iron in a loose claw-like hold, ("chela" comes from the Greek word meaning claw) and in this form the iron is transported through the soil and up through the tissues of the plant to the leaves without being affected by any other chemicals. Being

held in this chelated form, it resists the chemical action of phosphorous and other chemicals, and therefore, remains unaltered.

However, when the iron compound reaches the leaves, it is sufficiently loosely held in the molecule to be available for use in its normal catalytic reaction, but again without losing its soluble form. The material was made available in 1951 for testing. Preliminary results last year and early this year seem to support amply the original hypothesis. Chelated iron which is now available in U.S.A. under the trade name of Iron Sequestrene, manufactured by the GEIGY COMPANY, has been tested on citrus crops in Florida, where chlorosis is a serious problem, with excellent results. Last August, I obtained a small quantity of Iron Sequestrene and immediately set-up a comparative test with sulphate of iron and sulphate of iron plus magnesium sulphate, using young plants of the Kurume Azalea 'Hinodegiri', which were in a badly chlorotic condition. In these preliminary tests, Iron Sequestrene was outstandingly better. Plants sprayed at the end of August with Sequestrene at the rate of 2 oz. to 3 gal. (4 lb. to the 100 gal. of water) turned a bright, healthy green in five weeks. The effect was not rapid but it was normal and it is this last factor that I would like to emphasize. Sprays of sulphate of iron also turned the plants green, but there was a complete cessation of growth and a consequent stunting of the plants. This was not seen on the Iron Sequestrene treatments. The plants turned a normal, healthy green and by the end of September were in active growth. Untreated plants were stunted, a bright yellow and had no new growth.

Following these initial results, we proceeded to spray all of our Rhododendrons and Azaleas with Iron Sequestrene and although this was at the end of September, the plants which were in many instances badly affected with iron chlorosis, slowly turned green and by early spring there was not a plant to be found which could be considered chlorotic. We are testing this material in a number of ways this season, particularly in direct soil applications, because it would appear that this may be a means of permanently correcting the basic conditions which result in iron chlorosis.

The material is so new that we cannot yet make specific recommendations, but the preliminary results certainly justify any grower, who is troubled with chlorosis, testing chelated iron. The principle upon which this theory is founded is obviously applicable to other trace elements, and our tests this year will include the use of chelated copper, manganese, magnesium and zinc.

FURTHER NOTES ON THE PROPAGATION OF RHODODENDRONS FROM STEM CUTTINGS

by

James S. Wells

New Jersey, U.S.A.

THE article describing the methods which we have used for the propagation of Rhododendrons, which was published in the 1953 *Rhododendron Year Book*, indicated that some of our methods were still in the experimental stage and I thought that a further report of the results obtained in the 1952–53 propagating season might be of value.

HORMONE TREATMENTS

One of the most interesting results which we obtained was in the large scale use of the phenoxy compounds as an aid to rooting. Tests which were commenced in 1951–52 were continued, using a wider variety of phenoxy compounds and it was found that all of them clearly stimulated the production of roots on the difficult red varieties. Although we tried many chemicals which we thought might be an improvement upon those tested the previous year, 245 Trichlorophenoxy Alpha Proprionic acid at 1 per cent strength, once more gave the best results. Cuttings of Rhododendron 'Dr. Dresselhuys', which were taken in 8th August, 1952, had rooted strongly 100 per cent by 12th January, 1953. This was quicker rooting and a higher percentage than any other treatment. Combined with our small tests, which of necessity were made with not more than ten cuttings at a time, we put in a large number of cuttings aimed at the normal commercial production of Rhododendron 'Dr. Dresselhuys'. 6,200 cuttings were inserted on 27th–29th August, 1952, of which 4,200 were treated with 245 T.P., and the remainder with 24 Dichlorophenoxy Alpha Proprionic acid. All have now been lifted and we have rooted a total of 4,150 cuttings of which 3,400 were rooted in the group treated with 245 T.P. and 750 from the group treated with 24 D.P. We believe that this convincingly proves the superiority of 245 T.P. in the rooting of this particular variety.

When using such strong chemicals as these, it is wise to check carefully the subsequent development of plants which have been rooted. I am glad to be able to report that plants which have been properly rooted have developed in this spring growing season (June, 1953) very well indeed.

All are making vigorous growth and there appears to be no harmful after-effects from the use of these chemicals. This is especially true of cuttings which were carried through the propagation bench and were rooted without losing many of their leaves. Presumably due to differences in maturity, an occasional cutting dropped many leaves as a result of using these strong chemicals. Cuttings which root well but retain only one or possibly two leaves may not develop normally. This underlines the vital importance of careful timing and selection of propagating wood.

TIMING

For variety 'Dr. H. C. Dresselhuys', mid-August appeared to be the best time for this locality; however, it is interesting to report the extreme variation in results which followed the taking of cuttings at different times on the variety 'E. S. Rand'. On tests made in 1952–53, cuttings which were taken in August were quite useless with no rooting and a high mortality rate. I would like to quote the actual results on 245 T.P. which again proved the most satisfactory treatment. Cuttings taken on 8th August, had rooted a total of 30 per cent by 10th March, 1953, whereas cuttings taken on 5th September, 1952, rooted 100 per cent by 9th April, 1953. On many other treatments the difference was even more marked because cuttings taken in August had died 100 per cent.

MAKING THE CUTTINGS

It has been our practice in the past not to trim individual leaves but either to remove them entirely or leave them intact. Where cutting material has been taken from plants grown in the shade, leaves are often quite large and when these cuttings are placed in the propagating bench, the leaves naturally tend to mat down one upon the other. Under conditions of constant mist, leaves closely packed together in this way may rot, and we have had some difficulties from this. We decided, therefore, to make a batch of cuttings and to cut the leaves in half, but instead of reducing the total number of leaves to three or four, we tried to keep four, five or even six half-leaves at the top of the cutting.

The trimming of the leaf in this way completely eliminated the

problems arising from a mass of foliage in the cutting bench. Being relieved of some weight, the half-leaves were held erect by the petiole and no problems arose from the matting down of large quantities of wet leaves.

As far as we could see the reduction of the leaf surface in this way had no appreciable effect upon the vigour of rooting. Cuttings of all kinds rooted just as well and no rotting of the leaves was noticed from the cut edges. We have therefore, come to the conclusion that if the cutting material has large and rather floppy leaves, it is advantageous to reduce the total length of these leaves so that they can be held erect by the cutting when inserted in the bench.

INSERTING UNROOTED CUTTINGS

Our standard method of making a cutting is to wound it once with a heavy wound, as described last year, immediately treat with hormones and insert in the bench. For most varieties of Rhododendrons, our standard hormone is indolebutyric acid in talc at 2 per cent strength. No matter how carefully we select and make the cuttings, a number always fail to root by the time we lift the batch for potting. In the past, we have always reinserted these cuttings and many will immediately root. This year we wounded all cuttings of this kind, making a second heavy wound on the other side of the stem. The cuttings were then retreated with indolebutyric acid in talc at a strength of 0.8 per cent. We found that this treatment was highly beneficial and that nearly 80 per cent of the unrooted cuttings proceeded to root rapidly and vigorously, so that by the end of March they could be lifted from the house and planted outside in frames.

ROOTING MEDIUMS

This is the one factor upon which we still have some work to do. We have found that there is an apparent steady deterioration in the rooting ability of the medium with which we commence the season's work. We believe that this steady reduction in rooting power is associated with a reduction of aeration and a consequent reduction in oxygen within the rooting medium. This coming season we are planning a series of tests using a number of methods to increase the supply of oxygen at the base of the cutting. We hope and believe that this will eliminate our difficulties, and will also tend to speed up the rooting process.

RHODODENDRON NOTES

The Hybridization of Rhododendrons in the Wild

I WAS very much interested in the comments of Dr. J. M. COWAN concerning hybrid Rhododendrons in the wild, as published in *The Rhododendron Year Book* for 1953. Dr. COWAN says that in the Himalayas Rhododendrons do not hybridize in nature. Quite the reverse is true in America.

When *R. catawbiense* occurs on a north slope at a high altitude within insect flight of *R. maximum* growing at a low elevation, the two will readily cross. I have one of these natural hybrids, collected in North Carolina, growing in my garden. Normally these two species bloom a month apart, but under the right conditions of elevation and exposure in nature, their blossoming periods overlap just enough to make possible the natural hybrids of which I speak. Natural hybrids between *R. carolinianum* and *R. minus* are also found occasionally.

But it is in the Azalea series that wild hybridity occurs on a mammoth scale to the consternation of taxonomists and the confusion of amateur collectors. Hybrids between *viscosum* and *nudiflorum*; between *alabamense* and *canescens*; between *atlanticum* and both *nudiflorum* and *canescens*; between *speciosum* and *canescens*; between *calendulaceum* and *arborescens*, are all quite common. In some places, as atop Gregory Bald in our Great Smoky Mountains National Park, the admixture of species over a number of generations is particularly interesting.

Intergrades derived from as many as four different species may be found in one locality and these hybrid swarms often produce forms of superior ornamental value. But it is not too much to say that hybridizing in the wild among species blossoming at the same time and place is the rule rather than the exception in America.

DAVID G. LEACH.

Brookville, Pa., U.S.A.

The Cultivation of Epiphytic Rhododendrons

The requirements of all epiphytic Rhododendrons are similar to those of the better known epiphytic section of Orchids. Both occur naturally in the wild where they are attached to their host. In no

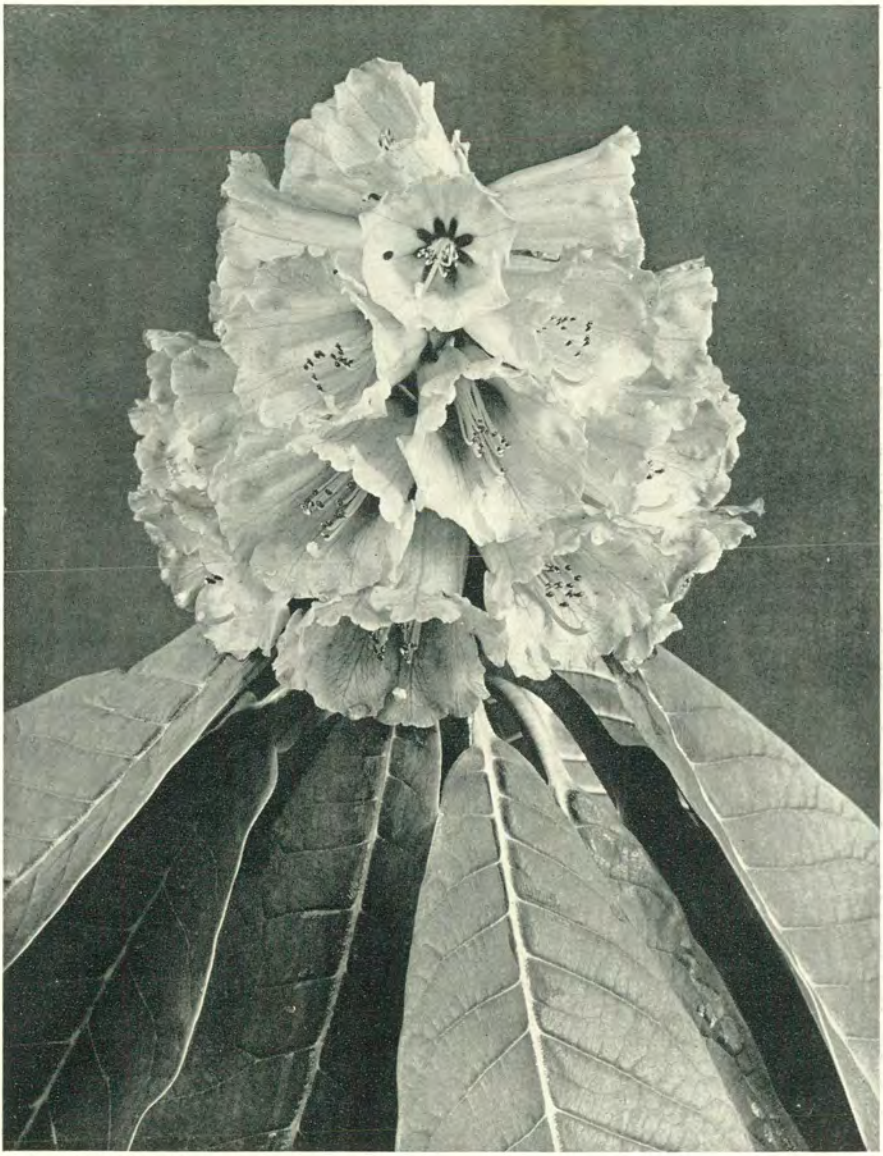

Photo. J. E. Downward]

FIG. 27.—*Rhododendron giganteum* (Forrest No. 19335) **F.C.C.,** 17th Feb. 1953. Exhibited by Her Grace The Duchess of Montrose, Brodick Castle, Isle of Arran, Scotland (*see* p. 145)

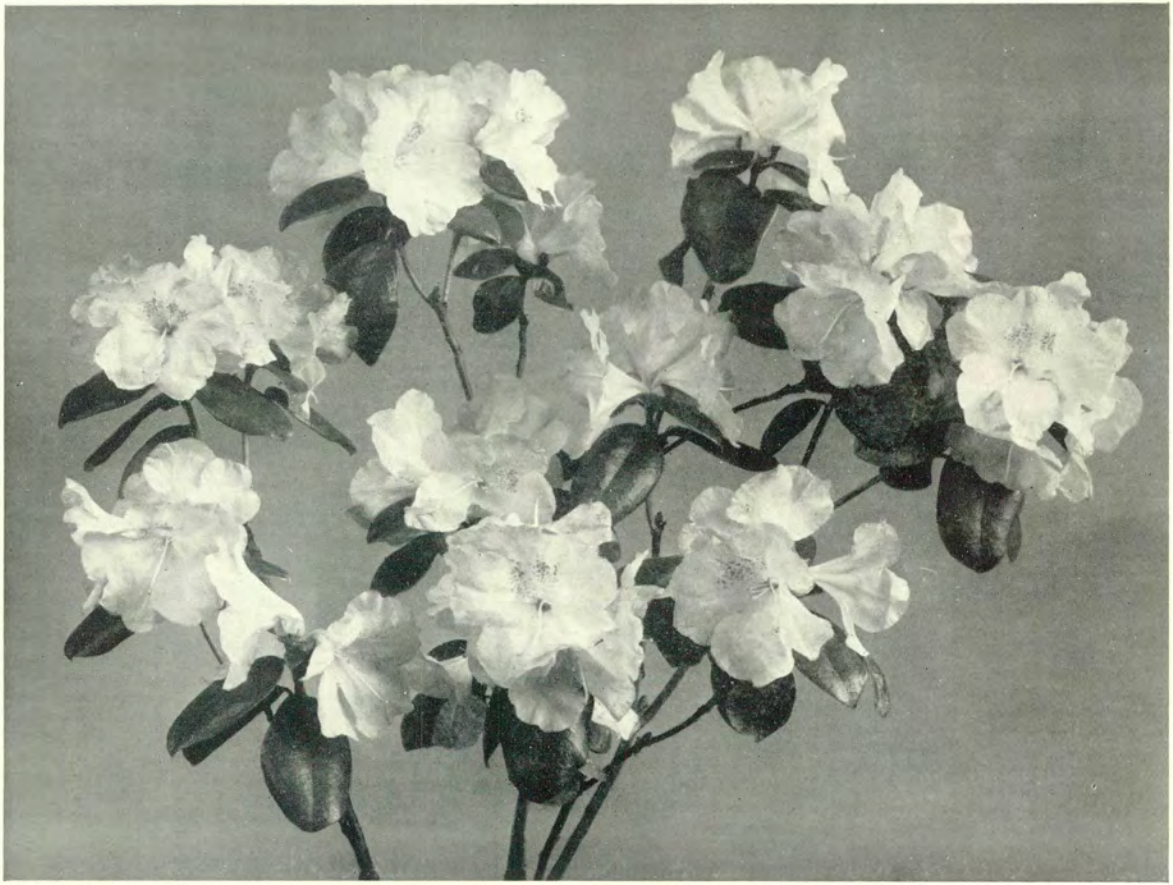

Photo. J. E. Downward]

FIG. 28.—Rhododendron 'Tessa' 'Roza' **A.M.,** 3rd March, 1953. Exhibited by Mrs. Roza M. Stevenson

(*see* p. 147)

THE PROPAGATION OF *CAMELLIA RETICULATA*

FIG. 29.—(*left*) The stock of *C. japonica* and the scion of *C. reticulata* prepared for grafting. The stock has been hard pruned in the previous winter and its shoot is that of the current season

(*centre*) The scion inserted and bound in place

(*right*) A typical grafted plant approximately sixteen months after grafting. The point of union is indicated by the two projecting shoulders of wood at the leaf immediately below the fork. Two new shoots each 10–12 in. long have been produced (*see* p. 100)

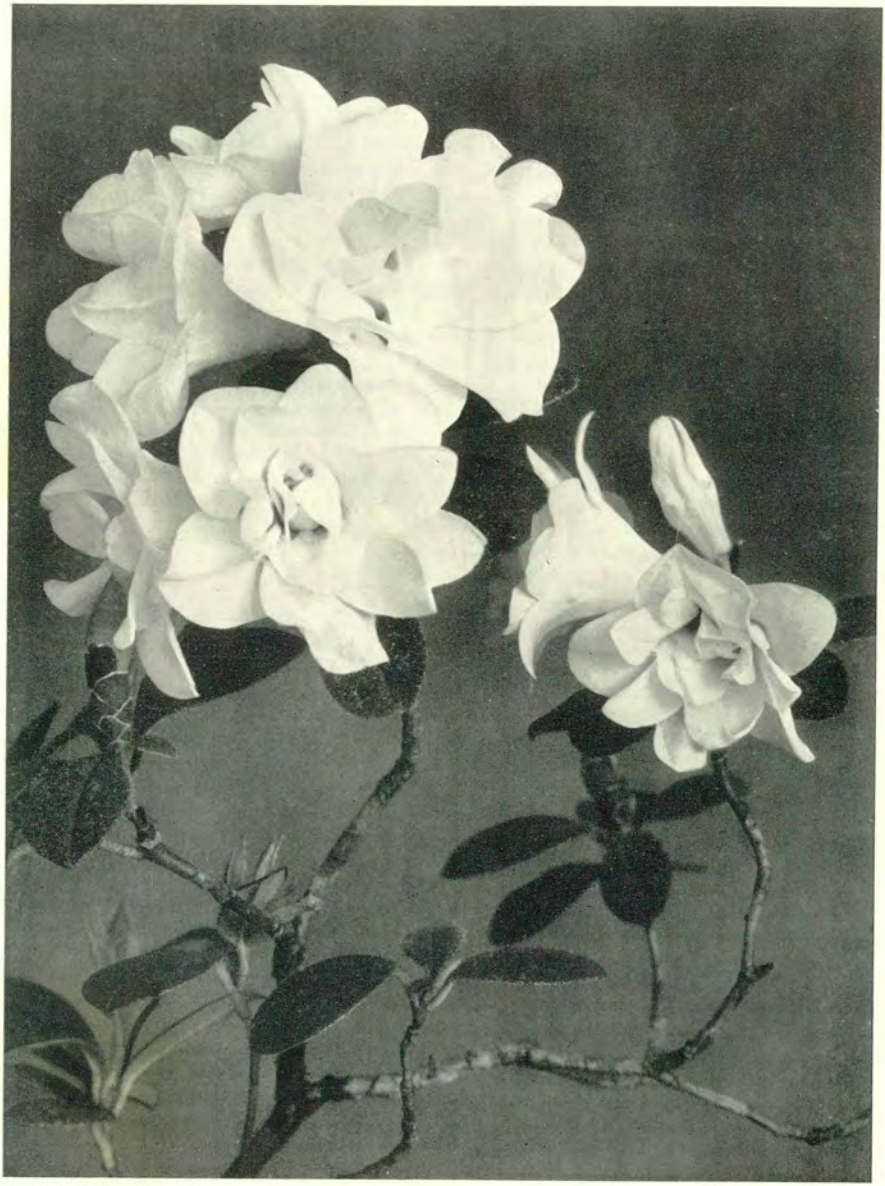

Photo. J. E. Downward]

FIG. 30.—*Rhododendron Johnstoneanum*, double form, shown at the Rhododendron Show 28th April, 1953

circumstance do they feed parasitically but instead obtain sustenance from among the lichens, mosses and deposits of organic material.

Established practice in the cultivation of Rhododendrons does not recognize this epiphytic habit. All too often plants are grown in pots containing close peaty soil on staging in the greenhouse in the same manner as non-epiphytic terrestrial species. As a result conditions are so diametrically opposed to their natural needs that the plants become stunted, yellow and hard-looking. Pots on benches dry out quickly as the atmospheric conditions of the normal house make for rapid transpiration through the leaf surface.

It was this unsatisfactory position that led to some original experiments at Wisley. First a small collection of *R. javanicum* hybrids potted up in the conventional way were placed in the temperate portion of the Orchid range. While the epiphytic Orchids grew perfectly, the Rhododendrons languished. It occurred to the writer to treat both genera in the same way—the same compost, the same receptacles,the same treatment—the results of which are seen in figure 33.

The plants are grown on small wooden platforms made from strips of wood 1 in. square. and ½ in. apart. The strips are held in position by crosspieces of the same dimensions beneath the platform, these serving to facilitate free drainage. Teak wood is best but seasoned oak is a good substitute.

The ideal compost of equal parts of sphagnum moss, coarse peat and fibre from lime-free loam can be held in position on the platform by strong string or fine wire. With small plants this is easy but in the case of larger ones transferred from pots the soil should be washed away from the roots which can then be carefully arranged in the compost. A layer of sphagnum moss should be pricked into the surface to finish off this operation. Under favourable conditions the moss will grow and act as an indicator, for if the conditions are right for the moss, they are also right for epiphytic Rhododendrons. As plants grow they may be transferred to larger platforms and a top dressing of the compost described can be added.

Hanging baskets of similar construction can be used for certain Rhododendrons such as the trailing *R. pendulum*. *R. Lochae*, the only Australian species of the genus, with its red to scarlet flowers, also lends itself ideally to this form of culture.

At Wisley the following Rhododendrons have grown exceptionally well in this experiment: *Lindleyi*, 'Grierdal', *jasminiflorum*, *Lochae*, and *javanicum* hybrids, as well as such non-epiphytic species as *Taggianum*, *rhabdotum*, *inaequale*, and *Oldhamii*.

FRANCIS HANGER.

NAMES OF RHODODENDRON HYBRIDS REGISTERED DURING 1953

Name	*Parentage*	*Raiser or Exhibitor*	*Date*
ARENA	*haematodes* × Matador	R. H. S. Wisley	1953
CONYAN	*concatenans* × *pseudoyanthinum*	Stevenson	1953
DREAM GIRL	Day Dream × Margaret Dunn	Brandt	1953
EUDICH	*dichroanthum* × *euchaites*	Stevenson	1953
GLASGOW GLOW	*Griersonianum* × Scarlet Lady	Stirling-Maxwell	1953
GLORIANA	Fabia × Goldsworth Orange	R. H. S. Wisley	1953
GREAT BRITAIN	Britannia × *Griffithianum*	Digby	1953
HELEN	*decorum* × Souldis	Brandt	1952
MOONSHINE	Adriaan Koster × *litiense*	R. H. S. Wisley	1953
MOUKOENSE	*moupinense* × *pemakoense*	Brandt	1953
NECTARINE	(Coronis × *Griersonianum*) × Margaret Dunn	Brandt	1952
ROYAL BEAUTY	*cinnabarinum* × *Roylei* Lady Rosebery	Digby	1953
RUBY BOWMAN	*Fortunei* × Lady Bligh	Druecker	1953
SALUTATION	*Griffithianum* × *lacteum*	Rothschild	1953
TENSING	Fabia × Romany Chai	R. H. S. Wisley	1953
WARDANTHUM	*dichroanthum* × *Wardii*	Stevenson	1953
WERRINGTON	Humming Bird × *repens*	A. M. Williams	1953
WHITE CLIFF	*Griffithianum* × Loder's White	Digby	1953

NEW VARIETIES OF HYBRIDS ALREADY REGISTERED

Hybrid	*Variety*	*Raiser or Exhibitor*	*Date*
HAWK	CREST	Rothschild	1953
LODERI	PINK SATIN	Evans	1953
MOONSHINE	SUPREME	R. H. S. Wisley	1953
PEREGRINE	FLEDGLING	Crown Lands	1953
SURPRISE	PACKET	Digby	1953
TESSA	ROZA	Stevenson	1953
THE MOOR	TREMEER	Harrison	1953
THOMALEUM	OPORTO	Ingram	1953

THE RHODODENDRON SHOW

28th and 29th April, 1953

by

N. K. Gould

THE competitive classes for Rhododendrons, held at Westminster on 28th and 29th April, 1953, numbered no fewer than 88, and attracted a larger number of entries than in any previous year. The quality of the exhibits was, on the whole, very good; and the competition again illustrated the wide range of variation in many species and hybrids and indicated the desirability of growing the best forms.

Class 1, for a truss of each of eight species, contained as usual some very fine material. Mr. EDMUND DE ROTHSCHILD took the first prize with a richly-coloured *Thomsonii, irroratum,* a bold pale cream *Falconeri, fictolacteum, sinogrande,* pink *arboreum, haematodes* and a bright rose-pink *habrotrichum.* The second prize was won by Lord ABERCONWAY and THE NATIONAL TRUST with a pink *bullatum,* a white *Griffithianum, Thomsonii, cinnamomeum,* an intensely coloured specimen of *arboreum, fictolacteum, haemotodes* and *vernicosum.* For the third place THE DOWAGER MARCHIONESS OF LONDONDERRY brought from Mount Stewart a very clear, pale *Wardii,* pink *bullatum, Johnstoneanum,* a lovely, widely-expanded *vernicosum, Taggianum, crinigerum, Lindleyi* and a pink *Griffithianum.* A fourth prize was awarded to THE COMMISSIONERS OF CROWN LANDS, who showed *concatenans, campylocarpum,* Ward's blush-pink *decorum, glischrum,* blood-red *arboreum, Falconeri, Thomsonii* and a large, fringed *fictolatceum.* Exhibits from THE EARL OF STAIR, Sir HENRY PRICE and Mr. R. O. HAMBRO included some notable specimens of the large-leaved species.

In Class 2, for a truss of each of three species, THE DOWAGER MARCHIONESS OF LONDONDERRY was awarded the first prize with handsome examples of *fictolacteum, Falconeri* and a large primrose *Macabeanum.* Mr. DE ROTHSCHILD's second prize exhibit comprised *Wardii, orbiculare* and *campanulatum* in bright, contrasting colours. Col. R. S. CLARKE's entry of *Falconeri, strigillosum* and a fine deep rose form of *Metternichii* won the third place.

A truss of each of eight hybrids was specified for Class 3, and in Mr. DE ROTHSCHILD's first prize exhibit 'Hawk' var. 'Crest', which was awarded the First Class Certificate on the first day of the show, was quite outstanding with a fine truss of large rich yellow flowers.

'Fortune' and 'Idealist' were also especially noteworthy, and other flowers included were 'Kiev', 'Karkov', 'Naomi', 'Yvonne' and 'Queen of Hearts'. The second prize entry, from Bodnant, comprised 'Loderi' var. 'King George', 'Hecla', 'Cornish Cross', 'Laura Aberconway', 'Cornish Cross' × 'Kewense', 'Chanticleer' × 'King George', 'Gretia', with very rich glowing red bells, and 'Choremia', another of intense colouring. THE CROWN LANDS exhibit, placed third, contained the pale cream 'Mariloo', 'Damaris' of similar hue, 'Gretia', a pretty pale lavender *campanulatum* hybrid, 'Queen Wilhelmina', 'Loderi', 'Gladys' var. 'Rose', and the deep glossy red 'Gypsy King'.

There were twelve entries in Class 4, for three hybrids. Exbury again secured the first place, with an exquisite example of 'Mariloo', the snow-white 'Eurydice', and 'Adelaide'. The Misses GODMAN showed large and perfect specimens of 'Red Glow', 'Cornish Cross' and 'White Glory' for the second prize. Mr. M. HAWORTH-BOOTH successfully entered 'Joyce Ramsden', much resembling 'Cornish Cross', 'Agnes Beaufort' and an unnamed hybrid of *Thomsonii* × 'H. M. Arderne', and a fourth prize was awarded to Mr. L. S. FORTESCUE, who showed 'Hawk', 'Carita' and 'Cornish Cross'.

Class 5 called for three hybrids shown in the spray, and not in single trusses. In Mr. DE. ROTHSCHILD's first prize group were 'Naomi' var. 'Pink Beauty', rich rose-pink flushed with cream, with ten superb trusses, 'Carita' var. 'Golden Dream', and the deep blue-lavender 'Eleanore'. Lord ABERCONWAY took second prize with a pale cream form of 'Penjerrick', 'Cornish Cross', and 'Soulbut'. Another entry from the same exhibitor, containing 'Laura Aberconway', 'Eros' × 'King George' and 'Cornish Cross' × 'Kewense' was placed third. Mrs. R. M. STEVENSON secured the fourth prize with 'Luscombei', 'Damaris' and 'Penjerrick'.

The McLaren Challenge Cup, as first prize, was won by Mr. E. M. KING in Class 6, for a truss of one species. Mr. KING chose a superb example of *Falconeri*. The second place was filled by a large pink form of *fictolacteum* from THE CROWN LANDS, and a white form of the same species won the third prize for THE DOWAGER MARCHIONESS OF LONDONDERRY, who also showed a nice truss of *Lindleyi*. Among the other entries there was a handsome example of *Hodgsonii* from Mr. HAMBRO.

In Class 7, for a single truss of one hybrid, Mr. DE ROTHSCHILD entered a lovely specimen of the intense red 'Kiev', which won the Loder Challenge Cup, and his 'Hawk' var. 'Crest' was given second place. From THE CROWN LANDS came a delightful truss of 'Gladys' var. 'Rose' of palest cream and rose, and Lord DIGBY showed *verni-*

cosum × 'Ernest Gill'. Among the sixteen other entries a fine truss of 'King George' from Bodnant and a high, widely-spaced truss of of 'Loderi' var. 'Georgette' shown by Sir GILES LODER were prominent.

Class 8 required one truss of each of six hybrids raised by, or in the garden of, the exhibitor. The Crosfield Challenge Cup, awarded as first prize, went to Mr. DE ROTHSCHILD, for a group comprising 'Janet', with huge blush-pink funnel-shaped flowers, 'Kiev', 'Hawk' var. 'Crest', 'Fortune', 'Idealist', and 'Naomi' var. 'Pink Beauty', all of which were in superb condition. Lord ABERCONWAY won the second prize with a selection in which the deep reds figured prominently. They were 'Hecla', 'Cornish Cross' × 'Kewense', 'Cornish Cross' × 'King George', 'Gretia', 'Cardinal', and 'Choremia'. Another entry from the same exhibitor was placed third, and included 'Eros' × *arboreum*, 'Laura Aberconway', 'Chanticleer' × 'King George', *arboreum* × *Griffithianum*, snowy white and of delicate texture, 'Eros' × 'King George' and 'Camilla'. Sir GILES LODER won the fourth prize with 'Glory of Leonardslee' × *Thomsonii*, 'Victory', 'White Glory', 'Ruthelma' var. 'H. Whitner', *galactinum* × 'Loderi' and 'Loderi' var. 'Georgette'.

In Class 9, for three hybrids raised by, or in the garden of, the exhibitor, the Exbury entry of 'Idealist', 'Carita' var. 'Golden Dream', and 'Naomi' var. 'Pink Beauty' won the first prize. The other two places were filled with exhibits from Bodnant, the first comprising 'Laura Aberconway', 'Cornish Cross' × 'Kewense' and 'Houlstonii' × 'Penjerrick', the second 'Cardinal', 'Beauty of Tremough' and 'Gretia'.

In Class 10, for one spray or branch of any species, there were eleven entries. A fine, richly-coloured form of *concatenans* from Sir HENRY PRICE was given first place, followed by a clear lavender-blue *Augustinii* shown by Lord ABERCONWAY and a brightly-coloured *campylocarpum* from THE CROWN LANDS.

A truss of *R. arboreum* or any of its sub-species was specified in Class 11, and Lord ABERCONWAY took the first prize for a compact truss of a good blood-red form. A shapely white-flowered specimen from the Rt. Hon. EARL OF STAIR filled the second place, and a frilled pink one shown by Mr. DE ROTHSCHILD the third. There were twelve other exhibits showing a good range of form and colour. The following class covered the other species of the Series Arboreum. THE COMMISSIONERS OF CROWN LANDS took first prize for a handsome truss of *argyrophyllum*, with clear rose-pink blooms. Lord ABERCONWAY's deep parma-violet coloured *niveum* was given second place, and Col. CLARKE gained third place with a somewhat light-coloured form of *argyrophyllum*.

Class 13 was devoted to the Series Barbatum. Mr. DE ROTHSCHILD

entered a nice globular truss of rose-pink *habrotrichum* which was placed first, a larger form of the same species from Sir GILES LODER gaining second place. Mr. HAMBRO's *crinigerum* was third and Col. CLARKE's *strigillosum* fourth. There were fourteen other entries, including *glischrum*, *monosematum*, and *diphrocalyx*.

A large and very richly-coloured *tephropeplum* from Mrs. STEVENSON was given the first place in Class 14, for a truss or spray of any species in the Series Boothii. Mr. GERALD WILLIAMS, M.P. entered a paler form of the same species which was awarded the second prize, and a specimen of *megeratum*, with glossy yellow bells, from Lord ABERCONWAY, was placed third. There were several other exhibits of *tephropeplum* in varying shades of colour. A comparable colour-range was to be observed in the next class, covering the Series Campanulatum. Mr. DE ROTHSCHILD's pale blue *campanulatum* was judged the most meritorious entry; Lord ABERCONWAY's primrose, crimson-spotted *lanatum* came next; and Mrs. STEVENSON's evenly coloured blue *campanulatum* was third. The type species was also represented by a number of other attractive forms.

There were surprisingly few entries in Class 16, for a spray of any Rhododendron of the Series Cinnabarinum, where Sir GILES LODER's *cinnabarinum* var. *Roylei*, of rich mahogany-red was placed first. Sir HENRY PRICE and THE CROWN LANDS supplied prize-winning exhibits of *concatenans*. In Class 17, for a truss of *Falconeri*, there were thirteen entries. Mr. E. M. KING showed a fine high truss made up of firm-textured flowers with reflexed margins, which took first prize. Sir GILES LODER's second prize entry was of a very similar form. The third prize went to Mr. HAWORTH-BOOTH for a pretty pale lemon form.

Some interesting and varied plants were represented in Class 18, for a truss of *fictolacteum*. Mrs. STEVENSON's specimen of K.W. 4509, with good foliage and large, flared, blush-pink bells was selected for the first place, followed by a white, deeply-blotched form from Sir HENRY PRICE and a close, well-filled truss of a blush-pink form sent by Mr. E. M. KING. In the next class, for any species of the Series Falconeri other than *Falconeri* or *fictolacteum*, the first prize went to Col. CLARKE for a neat truss of blush-white, dark-blotched *coriaceum* from Forrest's No. 25872. The second was awarded to Sir HENRY PRICE for *arizelum*, with good foliage and blush, Lily-like flowers. Mr. HAMBRO's *Hodgsonii*, with the tall full truss characteristic of good forms of this species, was placed third. The class included a number of other interesting entries, such as *basilicum*, *eximium* and *galactinum* from Lord DIGBY and a handsome truss of *rex* from Mrs. STEVENSON.

Class 20, for a truss of *Griffithianum*, attracted few entries. The first

prize exhibit of a huge pure white form came from Lord ABERCONWAY. Mr. HAMBRO and Mrs. DAVID selected blooms of the pink-flushed form which won, respectively, the second and third prizes. Other species of the Series Fortunei, called for in Class 21, did not appear in as wide a range as one would have expected. A pink *Fortunei* from Lord DIGBY was given first place, followed by a rather small truss of *vernicosum* from EXBURY and *orbiculare* from Mr. HOWLETT. Among a number of other entries the only other species represented was *decorum*.

The Series Fulvum was represented in Class 22 by a solitary example of the type species shown by Lord DIGBY. In the next class the Series Grande was much more handsomely shown. THE DOWAGER MARCHIONESS OF LONDONDERRY'S first-prize entry of *Macabeanum*, which had a high, compact truss of large bells, was outstanding in quality. The second prize entry of the same species from Lord DIGBY was also very fine, and Mr. HAMBRO staged a good truss of *grande* for the third prize.

In Class 24, for any species of the Series Irroratum, Lord ABERCONWAY'S exhibit of a rather heavily spotted form of *Aberconwayi* was selected by the judges for the first place. Next to this came Sir HENRY PRICE'S *irroratum*, with narrow white corollas. A quite distinct form of the same species, having pale shrimp-pink flowers covered with dark spots, was shown by Lord ABERCONWAY for the third place. Lord DIGBY showed the darker-hued *tanastylum*, and *Hardingii* was entered by Col. CLARKE.

The species *Wightii* was chosen by every exhibitor in Class 25, covering the Series Lacteum, and the judges had no light task in making their awards. The prizewinners were Col. CLARKE, Mrs. GORDON, and Mr. DE ROTHSCHILD.

In Class 26, Series Maddenii, sub-series Megacalyx, one may always expect to see some striking exhibits, for this sub-series contains the giant-flowered species. Mr. ARMYTAGE-MOORE'S first-prize entry of *Nuttallii* wholly fulfilled one's expectations, having a superb nine-flowered truss of huge Lily-like, lemon-centred flowers. Then came Col. STERN'S specimen of *Lindleyi*, with six perfect blooms and large, clean foliage, followed by the same species from THE CROWN LANDS with four lovely, widely opened flowers. In the next class, for the other two sub-series, there was a neat, ten-flowered truss of the pale sulphur-yellow *burmanicum* from Mr. HOWLETT in the first place, a blush form of *polyandrum* from THE CROWN LANDS, placed second, a nice white *ciliicalyx* sent by the Misses GODMAN in the third place, and a large white *polyandrum* from Lord ABERCONWAY, who had also entered *inaequale* and *burmanicum*.

The extensive Series Neriiflorum was spread over four classes. In Class 28, for any species of the sub-series Haematodes, examples of three slightly different, but all good, forms were shown by Mr. DE ROTHSCHILD, Lord ABERCONWAY, and Sir HENRY PRICE. The sub-series Neriiflorum was excellently represented in the next class. Mr. HOWLETT won the first prize with a neat, well-filled truss of *euchaites*, and Mr. DE ROTHSCHILD the second with a paler coloured form of the same species. THE EARL OF STAIR'S *neriiflorum* was third, and a fourth prize was given to Mrs. STEVENSON for *euchaites*. There was no response to the invitation of Class 30 for the species *aperantum*. In the next class, for other species of the sub-series Sanguineum, Lord DIGBY secured the first place with a very dark, waxy *haemaleum*, and his *scyphocalyx* was placed third. The somewhat uncommon *rhodanthum*, from THE CROWN LANDS, occupied the second place.

Several of the more attractive species of the large Series Taliense were on view in Class 32. The first prize was awarded to Mr. DE ROTHSCHILD for a pretty specimen of *Bureavii*, with white, rose-flushed blooms set in a rosette of lustrous foliage. The same exhibitor's *Faberi*, with scarlet-blotched white flowers, was given second place, and this was followed by two other less familiar species, *sphaeroblastum* from Sir HENRY PRICE and *Wiltonii* from Col. CLARKE. Among the other exhibits were to be seen *Roxieanum*, *Prattii*, *Wasonii* and its variety *rhododactylum* and *Clementinae*.

There were ten entries in Class 33, for a spray of *campylocarpum*, and all were of fine quality. In the prize list appeared the names of the Misses GODMAN, Mr. DE ROTHSCHILD and Lord DIGBY. In the next class for other species of the same sub-series *caloxanthum* was chosen by almost every contestant, Col. CLARKE, Sir GILES LODER and Mrs. STEVENSON taking the prizes. From THE CROWN LANDS there was a specimen of the dainty *callimorphum*. The sub-series Martinianum and Selense were represented in Class 35 by a neat truss of *rhaibocarpum* with blotched rose-pink flowers from Lord ABERCONWAY, a daintily-speckled *Martinianum* shown by Mrs. STEVENSON, and *rhaibocarpum* from Lord DIGBY. Somewhat surprisingly only two species appeared in the next class for the sub-series Souliei. Lord DIGBY took first prize with a spray of a well-coloured form of *Wardii*, which was also entered by three other exhibitors. Both Lord ABERCONWAY and Sir HENRY PRICE chose *Williamsianum* winning second and third prizes respectively. The Bodnant exhibit was of a large, dark-coloured form; that from Wakehurst Place had paler and narrower bells. Only the species *Thomsonii* appeared in the next class for its sub-series. All of the ten entries were of high quality. Lord ABERCONWAY'S large truss of well-

shaped blooms was given first place; from THE CROWN LANDS and from Sir GILES LODER came almost equally choice specimens.

The next five classes were devoted to the Series Azalea. The popular species *Schlippenbachii* had Class 38 to itself, Col. CLARKE, Mr. DE ROTHSCHILD and Lord ABERCONWAY winning the prizes. In the next class, for one other deciduous species, there were a very shapely spray of *Vaseyi* and a good *Albrechtii* from THE CROWN LANDS, which were placed first and fourth respectively; a very rich ruby-red *Albrechtii* from Lord DIGBY and a delicate *quinquefolium* from Sir GILES LODER. Class 40, for entries of three deciduous species, was well filled. Lord ABERCONWAY was awarded the first prize for *Schlippenbachii, Albrechtii* and *reticulatum*. The second went to Mr. DE. ROTHSCHILD for a pleasing set of *Schlippenbachii, reticulatum* and *quinquefolium*, and for the third prize THE CROWN LANDS sent *Albrechtii, quinquefolium* and *reticulatum*.

In Class 41, for a spray of any evergreen species or hybrid Azalea, the first two places were filled by well-flowered branches of 'Hi-no-degiri' and 'Haru-no-Kyokii' from THE CROWN LANDS, and the third by an attractive rose-pink variety 'Pekoe' sent by Mr. DE ROTHSCHILD. Among the other exhibits was the pretty double mauve 'Fujimanyo' entered by Lord DIGBY. In the following class, for sprays of three varieties, the first prize was awarded to THE CROWN LANDS for 'Kure-no-yuki', 'Kirin' and 'Hi-no-degiri', the second to Sir GILES LODER for 'Hi-no-degiri' and two un-named seedlings, and the third to Mr. DE ROTHSCHILD for 'Hi-no-mayo', 'Peko', and 'Sir William Lawrence'.

It is somewhat surprising that the next class, for a single spray of any species of the Series Anthopogon should be supported by only three entries. These were a large-flowered pink *cephalanthum* from Mr. DE ROTHSCHILD, and very similar specimens of *primulaeflorum* from Mrs. STEVENSON and Lord ABERCONWAY. In Class 44, for the Series Campylogynum, only one prize was awarded, to Col. CLARKE, for a light mauve coloured specimen of the type species.

The Series Edgeworthii was represented by three very attractive entries of the pink form of *bullatum*, from Mr. HAMBRO, THE COMMISSIONERS OF CROWN LANDS, and THE DOWAGER MARCHIONESS OF LONDONDERRY. There was greater variety in the next class, for the Series Glaucum. Sir GILES LODER showed a pleasing old-rose coloured *glaucophyllum* which was given first place, and Messrs. SLOCOCK'S entry of the same species was second. In the third place was Mr. DE Rothschild's *pruniflorum*, with open bells of purplish mauve. THE CROWN LANDS showed *tsangpoense*, and several exhibitors entered *charitopes*.

Class 47, for a spray of the Series Heliolepis, attracted only four entries. Lord DIGBY's large rosy-purple *desquamatum* was given first place, then came a lighter mauve form of the same species from Mr. DE ROTHSCHILD, followed by a good form of *rubiginosum* from Lord ABERCONWAY.

In Class 48, for a spray of any species of the Series Lapponicum, Sir HENRY PRICE was awarded the first prize for a dense spray of *russatum*, in rich violet. Equally vivid exhibits of *scintillans* won the second and third prizes for THE CROWN LANDS and Mr. DE ROTHSCHILD, respectively. The species *hippophaeoides, impeditum, chryseum* and *microleucum* were to be seen among a number of other interesting entries. The Series Lepidotum was represented in Class 49 by two exhibits only: the distinctive *Baileyi* from THE CROWN LANDS, and *imperator*, which has been transferred to Series Uniflorum by Dr. COWAN, sent by Sir HENRY PRICE.

Series 51, for the Series Saluenense produced a rich ruby-purple form of *calostrotum*, exhibited from THE CROWN LANDS, a rather similar example of the same species from Bodnant, and a pretty purple *riparium* from Mrs. STEVENSON. In the next class, covering both the Series Scabrifolium and Virgatum, Lord ABERCONWAY's *spiciferum*, with rose-red blossoms, *spinuliferum* from Mr. DE ROTHSCHILD, and a good form of *racemosum* sent by Sir HENRY PRICE filled the first three places. Of the all-yellow Series Trichocladum, featured in the following class, Lord ABERCONWAY was second with *melinanthum*, and Sir HENRY PRICE third with *mekongense*.

A long stretch of tabling was required to accommodate the fourteen entries in Class 54, for the Species *Augustinii*. The first prize was awarded to Mrs. STEVENSON for a superb spray of a clear lavender-blue form, Mr. ARMYTAGE MOORE was second with a deep lavender, red-stamened form, the third place was filled with a specimen of more delicate tint from THE CROWN LANDS, and Lord ABERCONWAY entered one of the attractive green-eyed forms which was awarded a fourth prize. Only one prize was awarded in the next class, to a beautiful mauve, yellow-blotched *chasmanthum*, from Lord ABERCONWAY. In Class 56, for the sub-section Oreotrephes, the first place was occupied by a spray of *oreotrephes* with fine trusses of extra large flowers, from Mr. DE ROTHSCHILD. Lord ABERCONWAY showed a somewhat paler form, and Mrs. STEVENSON's *timeteum* took the third prize. The intense colouring of *pseudoyanthinum* and *concinnum* struck a bright note in Class 57, where a glowing ruby-red spray of the first-named, from THE CROWN LANDS, won the first prize, and *concinnum* won the lower awards for Mrs. STEVENSON and Mr. HAMBRO. There were six other

entries of almost equally high quality. In the next class, for the sub-series Triflorum, there came from THE CROWN LANDS a specimen of *xanthocodon* with narrow waxy yellow bells, to win the first prize, followed by *ambiguum* from Mr. C. E. SEXTON and Mrs. STEVENSON. Several entries in this class really belonged to other classes of the Series Triflorum, and were, in consequence, disqualified. The sub-series Yunnanense, whose members are so well adapted for exhibition, comprised no fewer than sixteen entries. Lord ABERCONWAY showed a superb dense spray of *Davidsonianum* in a very superior rose-pink variety, which won the first prize, and the same species won the third for THE COMMISSIONERS OF CROWN LANDS. THE EARL OF STAIR was awarded the second for a pale mauve, red-spotted *yunnanense*, and the fourth went to Lord DIGBY who showed *suberosum* with dainty white blooms. Among the other entries *zaleucum* from THE CROWN LANDS, *pleistanthum* from Messrs. WATERER, and *caeruleum album* from Bodnant were noteworthy.

Class 60 was open to any species not already provided for, and for the first prize Mrs. STEVENSON entered a specimen of the snow-white *hyperythrum* of the Series Ponticum. Col. CLARKE showed *Metternichii* of the same series, and also *adenophorum*, which as a member of the Series Taliense should have been in Class 32.

Classes 61 to 80 inclusive were for single trusses of hybrids, and as usual in this section of the competition the exhibits were numerous, varied and generally of very high quality. A few which particularly caught the eye were 'Loderi' var. 'Georgette', (Class 62) shown by Sir GILES LODER, with a tall, well-spaced truss of soft pink flowers, the lovely cream 'Penjerrick' (Class 65) from TOWER COURT, Lord ABERCONWAY'S 'Tyermanii' (Class 72), remarkable for size and purity of its blooms, the Thomsonii hybrid 'Red Glow' (Class 68) with a large glowing carmine truss, and 'White Glory' (Class 78) with a perfectly-formed inflorescence of snow-white bells, both from Leonardslee, and a large and shapely specimen of 'Temple Belle' shown in Class 80 by Sir HENRY PRICE.

In Class 82, for a plant of any dwarf Rhododendron for the rock garden, Mr. DE ROTHSCHILD won with a nice bush of 'Carmen' in deep, glowing mahogany-red. From THE CROWN LANDS came *fastigiatum* and the rose-coloured Kurume Azalea 'Kirin'. The next class invited specimen plants, not over 4 ft. tall, of evergreen Rhododendrons, and here THE COMMISSIONERS OF CROWN LANDS scored again with the beautiful Logan variety of 'Damaris', with cool, sulphur-yellow trusses on every growth, and a bush of *russatum* 3 ft. high and nearly 6 ft. in diameter. Messrs. WATERER'S shapely young bush of

'Bonfire' with about forty trusses of blood-red flowers, gained second prize.

Class 85, for two leaves of each of six Rhododendrons, seems to be more popular with visitors than competitors, and as in previous years attracted much interest. THE CROWN LANDS first prize exhibit consisted of leaves of *basilicum, mallotum, sinogrande, Falconeri, fulvum* and *diaprepes* var. 'Gargantua'. Mr. DE ROTHSCHILD showed *Macabeanum, Bureavii, mallotum, sinogrande, Beanianum* and *Falconeri*. From Mr. HAMBRO'S garden came *crassum, mallotum, Edgeworthii, polyandrum, Griffithianum* and outsize specimens of *sinogrande*. THE DOWAGER MARCHIONESS OF LONDONDERRY submitted two sets of leaves, among which some good examples of *protistum, Macabeanum, Clementinae* and *Lindleyi* were to be seen.

There were six entries in Class 86, for a vase or bowl of flowers and foliage. The first prize was awarded to Mr. HUGH F. THOBURN, who achieved a most attractive arrangement, mainly of small-flowered types, in a large white vase, the pink, blue and white hues predominating. Among the material used we noted *Augustinii, fastigiatum, yunnanense* and 'Temple Belle'. Sir GILES LODER'S second prize exhibit was a very large and rather close, but not muddled, arrangement, mainly in pale pink, blue and yellow shades. The individual specimens of *Augustinii, campylocarpum, Souliei* and other species were most effectively placed. Mr. HAMBRO'S exhibit, placed third, was largely composed of pale yellow flowers, contrasting with sprays of *Augustinii* and *concinnum*.

The last two classes were open only to exhibitors who had not previously won a prize. In Class 87, for any species, Lady BURY brought from Mount Stewart a very good clear yellow *Wardii* which was given first place, followed by *orbiculare* from Brigadier NICHOLSON, *Griffithianum* entered by Mrs. DAVID, and *campylocarpum* from Mr. FORTESCUE.

Lady BURY was also successful in the class for a hybrid, with a lovely spray of 'Countess of Haddington'; and Brigadier NICHOLSON was again second with 'Quaker Girl'. The third exhibit, an unnamed hybrid, was entered by Miss COSEMA DE BORDARI.

THE SEATTLE RHODODENDRON SHOW, 1953

by

B. O. Mulligan

THE formerly annual Rhododendron Show in Seattle, in abeyance for various reasons since 1948, was held again this year under the joint auspices of the Seattle Chapter of the American Rhododendron Society (President, Mr. EDWARD B. DUNN) and the Arboretum Foundation.

The problem of a suitable location with adequate facilities was finally solved by the choice of the High School Memorial Stadium, utilizing not the field itself but the covered space behind the south stands and a part of the wide concrete approach from the entrance gates. The appointed dates were 16th and 17th May, a time when a maximum number of attractive varieties should be flowering.

The whole of the organization of the show was undertaken by a committee headed by Mr. DUNN and Mr. D. G. GRAHAM, past president, with sub-committees appointed to look after the staging arrangements, sale of tickets, publicity, exhibitors, classification of entries in the classes for cut trusses and other matters.

The schedule comprised thirty-four classes, of which the first was for a display of 300 sq. ft. or more, Classes 2–6 inclusive for specimen plants, 7–15 for cut trusses of species in different series, Class 16 a collection of twelve trusses of hybrids, 17–34 hybrids of various series or according to colour classification, while Class 33 was for any new hybrid raised by the exhibitor.

In the final arrangement of the show all the high concrete walls at the back of the exhibits were screened by cut young trees of *Abies grandis*, 20–35 ft. in height, set up by the PRENTICE NURSERY and DECORATING COMPANY. The principal planted exhibits were arranged side by side along the high south wall of the stadium, and opposite to them across the main gangway, tables were set up for the classes of cut trusses.

Part of the approach area, about 55 ft. in length and of varying width up to 15 ft., was occupied by an exhibit from the UNIVERSITY OF WASHINGTON ARBORETUM, including several large plants of *Rhododendron* 'Azma', with groups of Azaleas, *R. Kaempferi* and *R.* 'Daviesii' *R. occidentale* and *R. molle* hybrids. On the opposite side were two non-competitive groups of various brightly coloured hybrid Rhododendrons such as 'Mars', 'Pygmalion', 'Vulcan', and others, sent by the

PRENTICE NURSERY and jointly by Mr. L. VAN WINKLE and the secretary Mr. D. K. MCCLURE.

The first prize exhibit in Class 1, set up by the PRENTICE NURSERY AND DECORATING COMPANY on an area of more than 600 sq. ft., showed a rocky landscape planted with a wide range of both species and hybrids. Amongst the former a large plant of *R. rhabdotum* in flower was the *pièce de résistance*; *R. Fortunei* and *R. venator* were also well represented, with the uncommon hybrid from Oregon between *R. macrophyllum* and *R. occidentale*, and some vigorous young plants of *R. sinogrande*, *R. Falconeri*, and *R. fictolacteum*. Amongst other hybrids in flower were 'Garnet', 'White Swan', 'Pilgrim', 'Lady Primrose', and 'Mandalay'. The Exbury Azaleas 'Berryrose' and 'Ginger' were displayed here, probably for the first time in Seattle. Another feature was a number of the tall old hybrids between *R. decorum* and some of the native species raised by the late Mr. MORGAN of Hoquiam, Washington.

Second place was taken by the KING OF SHRUBS NURSERY, Bellevue, —Mr. ENDRE OSTBO—one of the best known Rhododendron raisers in this region, who showed his own 'King of Shrubs', 'Mrs. D. G. Graham', 'Lily No. 3' (an *auriculatum* hybrid), the pink flowered *R. occidentale* × 'King of Shrubs', as well as others such as 'Flare', 'Felicity', and a new hybrid of 'Earl of Athlone' × 'Rubina', produced by Mr. LESTER BRANDT of Tacoma, Washington. This exhibit formed a most effective and striking blend of red, rose, flame and peach tones.

Third prize was given to an exhibit of similar size (315 sq. ft.) from Mr. DONALD G. GRAHAM, a leading amateur grower; this featured very large plants in full bloom of 'Mrs. Furnival', 'Mrs. E. C. Stirling', 'Faggetter's Favourite', 'Gill's Gloriosa', and *R. chasmanthum*; in the foreground was a plant of the Knap Hill Azalea 'Persil'.

An Honorable Mention went to the joint display of R. E. TINDALL and HOPKINS NURSERY, which used young trees of *Laburnum Vossii* and birches to form a setting for *Azalea* 'Koster's Brilliant Red', *A. japonica* var. *aurea*, *A. japonica* × *occidentalis*, *Rhododendron* 'Bow Bells', *R. radicans*, and others.

A very interesting exhibit came from Mr. HALFDAN LEM, another prominent commercial raiser in the Seattle area. This included hybrids between 'Mrs. G. W. Leak' and 'Loderi King George', 'Earl of Athlone' and 'Britannia', and a striking plant of ('Nereid' × 'Doncaster') × 'Vulcan', in which the calyx was almost as large and of the same red hue as the bowl-shaped corolla.

The RAINIER MOUNTAIN ALPINE GARDENS made a very distinct and different planting of mainly dwarf species, featuring a large old plant of *R. keleticum*, and groups of *R. cremastum*, *R. glaucophyllum*, *R. calostrotum*, *R camtschaticum* and several others.

In addition to these one other amateur and five commercial exhibits were set up, showing a wide range of both older and more recent Rhododendron hybrids, with a smaller number of species.

In the single plant classes, that for any species was won by Mr. JAMES BRENNEN with *R. cinnabarinum*; Mrs. CAPERCI'S *R. keleticum* was second. Mr. GRAHAM'S immense 10-ft.-tall specimen of 'Mrs. Furnival', judged the best plant in the show, easily won the class for any hybrid, in which there were twenty-six entries (Fig. 31). For any form of *R.* 'Loderi' there was but one entry, 'Pink Diamond', awarded first prize for Mr. L. VAN WINKLE. *R. mucronatum* 'Sekidera' won in series Azalea for Mrs. W. TROSPER, who was also winner for a hybrid Azalea (*Oldhamii* × *indicum*); Mr. GRAHAM'S 'Persil' was second. Altogether more than fifty plants of all kinds and sizes were brought in for these five classes.

The next nine classes were for flower trusses or sprays of species, in various series normally flowering during May. In the *Fortunei* Series Mr. GEORGE GRACE of Portland won with a pink form of *R. decorum*, Mr. E. GARRETT'S *R. Fortunei* being second. In *Triflorum* Mrs. HENRY ISAACSON'S *R. yunnanense* was placed first, with Mrs. SULLY'S *R. Augustinii* second. In *Ponticum* the native *R. macrophyllum* occupied both first and second place, for Mr. GARRETT and Mr. GRACE respectively. Amongst the *Azalea* representatives *R. mucronatum* was leader (Mrs. MORITZ MILBURN), with *R. occidentale* in second place (Mrs. ARTHUR KRAUSS). The Class for any other series produced a winner for Mr. GRAHAM in *R. haematodes*, *R. glaucophyllum* being second (Mr. W. R. HILL).

Then followed fourteen classes for cut trusses of hybrids, by series and by colour.

In the major class for twelve distinct kinds, the sole entry, from Mr. GRACE, was awarded first prize; included in it were 'Bow Bells', 'Borde Hill', 'Blue Peter', 'Dawn's Delight', 'Prof. Hugo de Vries', and 'White Swan'. For a truss of *R.* 'Loderi' Dr. W. HUTCHINSON was winner with 'Venus', Mr. GARRETT second with 'King George', and Mr. GRACE third with 'White Diamond'. For any hybrid of *R. Griersonianum* Mr. GRACE led with 'Fusilier', Mr. E. L. HACKWORTH being second, from thirteen entries. In the class for hybrids of *R. cinnabarinum*, 'Lady Chamberlain' took all three places, Mr. GRACE and Mr. HACKWORTH again being first and second. For a hybrid of *R. campylocarpum* Dr. HUTCHINSON was first with 'Lady Bessborough', Mr. GRACE being second in this instance.

For a white hybrid Mr. GRACE'S 'White Swan' was the winner and was also judged the best truss in the show; 'Beauty of Littleworth' and 'Snow Queen' were second and third out of twenty-four entries. Amongst yellow varieties 'Souv. of W. C. Slocock' won first prize

for Mr. GARRETT, 'Butterfly' from Mr. T. F. MARTIN being second and 'Zuider Zee' third from Dr. HUTCHINSON.

In clear pink varieties Mr. GARRETT again won with 'Faggetter's Favourite', Mr. GRACE being second with 'Prof. Hugo de Vries', from twenty-eight entries. Amongst the rose tones 'Betty Wormald', shown by Mrs. U. M. DICKEY, was first, 'Lady Stuart of Wortley' from Mr. T. F. MARTIN second. In bright red 'Jean M. de Montague' took all three places, for Mr. N. ROGERS, Mr. MARTIN, and Mrs. W. CALVERT respectively.

Likewise for dark red hybrids, 'Mars' swept the board, the winner being Dr. HUTCHINSON, Mr. C. PRENTICE second, Mr. GRACE third. For a salmon or apricot hybrid 'Golden Jubilee' won first prize for Mrs. DON PALMER; no other awards were made. Out of fifteen entries in the blotched hybrids 'Mrs. G. W. Leak' took first prize for Mr. GARRETT, while 'Mrs. Furnival' won second for Mr. HACKWORTH. 'Purple Splendour' was judged best among the purple hybrids, for Dr. HUTCHINSON, with 'A. Bedford' second for Mr. GRACE.

For a new hybrid raised by the exhibitor Mr. GRACE was the only entrant and took first prize with *R. venator*× 'Tally-ho'. The best Azaleodendron was 'Broughtonii' var. 'aureum', shown by Mr. PRENTICE, with 'Glory of Littleworth' second and third. First place for a spray of a deciduous Azalea was won by Mrs. H. ISAACSON with 'Adriaan Koster', second being 'Pink Delight' from Mr. GRAHAM. An unnamed red variety won first prize in evergreen Azaleas for Mrs. LYMAN BLACK, Mrs. KRAUSS being second with 'Snow'.

As a display it must be considered an admirable production on a somewhat difficult site, providing a wide selection both of hybrids and species for the pleasure and information of the general public. The weather also assisted materially by remaining both dry and cool throughout the two-day show period so that plants stayed in good condition until its close, which has not always been the case in previous years.

Unfortunately however, perhaps owing at least in part to other attractions that week-end, the public did not attend in anticipated numbers, so that financially the show was not the success which it was hoped it would be. Nevertheless some valuable lessons were learned which may well be turned to good account in the future, when perhaps another more favourable location may be available. The work of the President, Secretary, and other officers and committee chairmen and members is especially worthy of mention, since without their vigorous efforts and co-operation much less would have been accomplished in the time available.

Photo. Courtesy of "Seattle Times"]

THE SEATTLE RHODODENDRON SHOW, 1953

FIG. 31.—Mr. E. B. Dunn, President of the Seattle Chapter, American Rhododendron Society, with Mrs. Wendell Trosper, Chairman of Publicity Committee, admiring Mr. D. G. Graham's prize winning plant of 'Mrs. Furnival' (*see* p. 127)

Fig. 32.—The non-competitive Show of the Tacoma Chapter of the American Rhododendron Society on 16th May, 1953 (*see* p. 129)

Photo. J. R. Scase]

FIG. 33.—Epiphytic Rhododendrons growing on wooden platforms in the temperate section of the Orchid Range (*see* p. 113)

Photo, J. E. Downward]

WISLEY EXHIBIT OF *CAMELLIA JAPONICA* VARIANTS

FIG. 34.—A collective exhibit from leading commercial and private growers on 14th April 1953 showing diversity and confusion in nomenclature (*see* p. 131)

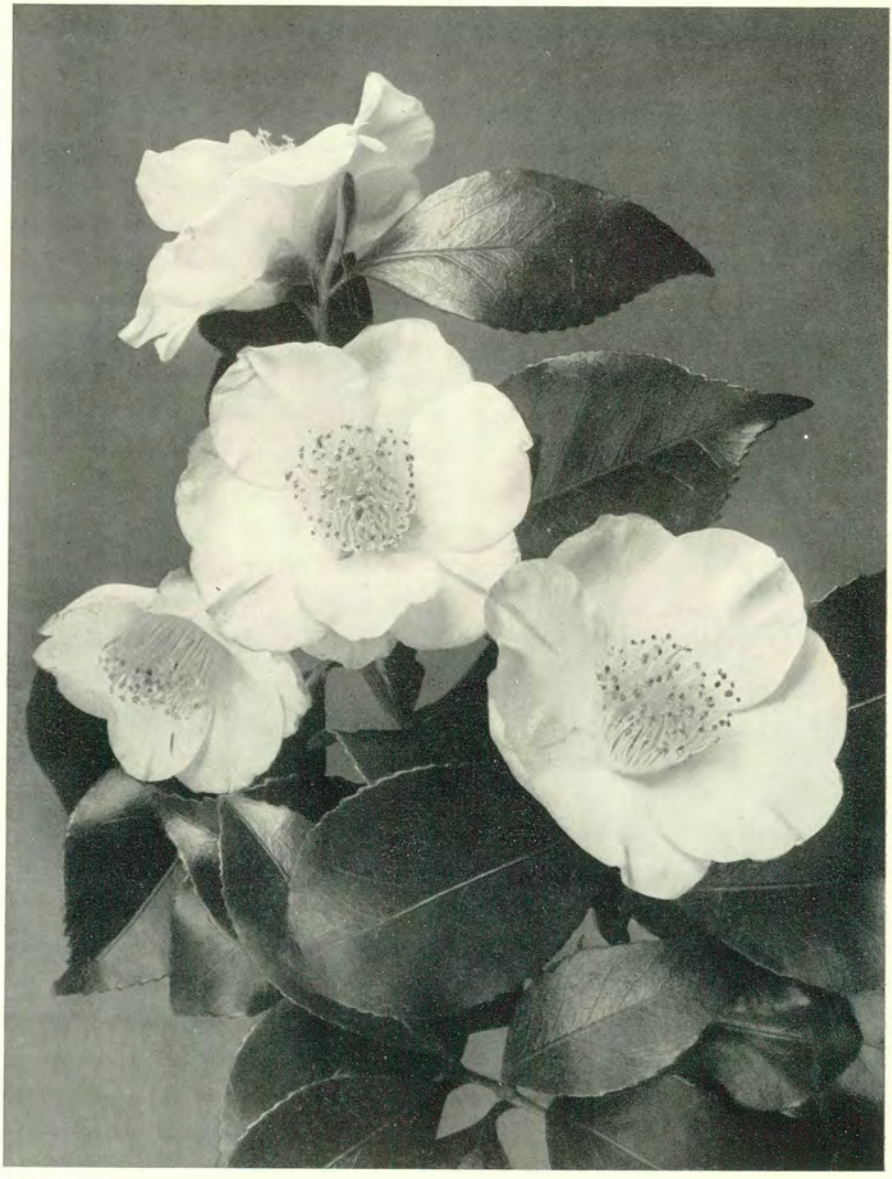

Photo. J. E. Downward]

FIG. 35.—*Camellia japonica* 'Alba simplex' 'Snow Goose' **A.M.,** 28th April, 1953. Exhibited by Sir Giles Loder, Bt. (*see* p. 143)

THE TACOMA RHODODENDRON SHOW, 1953

by

G. Frederick Robbins

THE Tacoma Chapter of the American Rhododendron Society held its annual show on 16th and 17th May, 1953. As usual, the show was sponsored by the Bank of California, N.A., and was held in the lobby of the bank at Tacoma, Washington.

Mother Nature truly smiled on us this past winter on lovely Puget Sound. An extremely mild winter, sprinkled with plenty of rain, made the shrubs more beautiful than ever. The foliage was superb and the flowers never showed such fine true colours.

All the nurserymen had plenty of fine plants, many of which were excellent specimens. The plants were massed around the lobby of the Bank in a "U" shape, approximately 10 ft. deep with the exception of the Tacoma Society booth, which was 16 ft. by 33 ft (Fig. 32).

Among the fine plants displayed by the nurserymen were: 'Hawk', 'Flame', 'Firetail', and Azalea 'Persil' displayed by A. R. HINEMAN. Mr. LESTER BRANDT displayed some of his own fine crosses. The most outstanding was a trumpet-shaped clear yellow, a seedling from 'Day Dream' × 'Margaret Dunn'. He also showed a plant of 'Butterfly' about 10 ft. high which was well flowered.

The Tacoma Chapter of the Society, set up a woodland display of mass planting with a background of fir trees behind an old cedar rail fence, (these weathered rails were split in 1889 and are still in use) giving a good rustic effect. The members brought some very fine specimens which included 'Mrs. E. C. Stirling' and 'Snow Queen', each about 8 ft. high; also, 'Rainbow', 'Naomi', 'Loderi Pink Diamond', 'Golden Horn', 'Lady Chamberlain', *yunnanense*, 'Matador', 'Betty Wormald', 'Mother of Pearl', 'Cynthia', 'Mrs. Chas. Pearson', 'Countess of Derby' and a large specimen plant of 'The Hon. Jean Marie Montague', about 6 ft. by 7 ft. with seventy huge trusses. There were approximately forty-five plants in the booth and they made a gorgeous display which attracted a great deal of favourable attention and comment.

Mrs. KENNETH JANECK, assisted by Mrs. E. E. JOHNSON and Mrs. GEORGE PEASE, arranged the two displays in the centre of the lobby. They featured dwarf Rhododendrons and Azaleas. The display was

very well arranged with the use of choice Primroses, fine ferns and mosses. The Rhododendrons used were *radicans, keleticum, camtschaticum, glaucophyllum, calostrotum, saluenense, trichostomum ledoides.*

BERNADINE BUDIL and Mrs. ALBERT GUY prepared a beautiful and unusual display of corsages using Rhododendron flowers. This was a leading attraction for the ladies.

Mr. GEORGE GRACE from the American Rhododendron Society in Portland, Oregon, brought up a representative display of approximately fifty cut trusses.

The show this year was considered the best Rhododendron show ever held in the Tacoma area, and was seen by more than 6,000 people. There were more fine specimen plants and newer varieties than shown before. The sphagnum moss ground gave a very fine setting. The nurserymen, Mr. EDWARD COOPER and his crew, and the society committees should rate many thanks for their fine work.

A great deal of credit for the success of the show must go to Mr. E. H. VAN FOSSEN, President, and Mr. CARL FAWCETT, Chairman, and Mr. CARL SCOOG, Co-Chairman. They gave a tremendous amount of time and work toward the show. Mr. FAWCETT organized every detail so that the show was set up and taken down with clockwork precision. The hard working committees and members did some very fine work. Host and Hostesses were present during the entire show to answer questions.

It should be noted that the Tacoma Chapter Show is a non-competitive show. No awards are given and no judging done. The Tacoma Chapter feels that the show is equally good and a better feeling is maintained among the members and nursery men than when the show is competitive.

WISLEY EXHIBIT OF *CAMELLIA JAPONICA* VARIANTS

by

Francis Hanger

ALL lovers of Camellias are fully aware of the great confusion existing in the nomenclature of *C. japonica* variants.

It is not possible to attribute the trouble to any one cause in particular, the apparent unlimited muddle having been caused by numerous minor deviations over the years. The Camellia first came into vogue in this country during the early part of the nineteenth century for it had much to commend it to the Victorians, lovers of formal and regular shaped flowers. It made an ideal plant for conservatories, where during the winter and early spring the perfect flower forms were much admired. This popularity led to the importation of many new varieties, chiefly from France, most of which were of Japanese origin, and it is here that one of the chief seeds of present day confusion was sown. There are cases where the Japanese names were changed to Latin or new French and English names created. Therefore it is not surprising that the same variety became known under different names in different countries. With the passage of time constant interchange of varieties between the countries has taken place, and in this way three or four names or synonyms for one variety became current.

The Camellia is also a plant prone to bud sporting or mutation. It is not uncommon to find on an old-established plant three or four different coloured flowers on different branches simultaneously. Again the flower form is not always constant—doubles, semi-doubles and singles occurring occasionally together on the same plant. It is easy to imagine the resultant confusion when named plants behave in this manner and the progeny are distributed by nurserymen and amateurs. The propagator, therefore, has to ensure that the material selected is of the desired form and in extreme cases the labelling of branches may be necessary in the blooming season. In any event it is obvious that bud sporting and variation of flower form has contributed to the confused nomenclature.

Seeds from *C. japonica* hybrids are easily raised, and being hybrids do not come true, the result being a new batch of variants which often receive names already given to previous varieties. Another chief contributor to the muddle is the lost label, and new names being attached by conflicting responsible authorities.

How easy it is for plants to obtain wrong varietal names can be best explained by two experiences of the writer during the past season.

A Camellia labelled 'Lady——', growing in the collection on Battleston Hill, flowered beautifully during the spring months, and it was noticed that in every way it resembled the popular C. 'Donckelari'. The name of the donor was obtained from the entry book and inquiries proved that the donor had attended a dinner party where this Camellia was used for floral decoration and on leaving she was allowed to take away a spray which her gardener in turn was successful in rooting. As no one locally could with certainty name this lovely variety, it was thought appropriate to name it 'Lady——' after the hostess.

The second experience happened when visiting the garden of a friend at Camellia time. Noticing a fine specimen plant of a *japonica* hybrid I inquired its name, which proved to be one I had never heard before. It was explained that the plant had been bought when in flower at a local nursery, where the name was unknown and the new owner thought it a good idea to name it after his adopted son. Unfortunately, this particular plant had also caught the eye of certain nurserymen who now have rooted cuttings for sale.

Being fully conscious of all the foregoing facts, the Camellia Show and Schedule Committee requested WISLEY to stage a collective exhibit from all the leading commercial and private growers in the country in an effort to unravel the confusion.

It was decided to endeavour to establish the correct names of sixty of the more commonly grown varieties, most of which are in commerce. To arrive at uniform agreement on the correct names, it was essential to get as many blooms of the sixty varieties listed from as many different sources as possible. A tentative list of these was sent to twenty-four growers asking them to study it and to make any additions or suggestions which they thought constructive.

The response from the twenty-four growers was magnificent. All co-operated, but special mention must be made of Mrs. E. C. OBBARD of Samares Manor, Jersey, who sent a very large consignment and of Mr. JOHN DE PUTRON of the CALEDONIA NURSERY, Guernsey, who not only produced four large boxes of blooms, but accompanied them to this country to ensure their safe arrival in time for the exhibition (Fig. 34).

This extensive collection was arranged in such a manner as to enable all examples of a variety from their many different sources to be staged together, commencing at the one end with the pure whites, then the soft pinks, so to the deeper shades of pink and rose, followed by the reds and finally finishing off with the dark reds to crimson. Such an

arrangement soon made it evident that numerous synonyms were present. Before arriving at this important conclusion special attention was paid to the foliage of each variety and also the form of the blooms. It is interesting to know that the leaf of the plant makes a true indicator, and in many cases the determining decision must rest upon the foliage.

The large semi-double white C. 'grandiflora alba' was received under such names as 'Gauntlettii' and the Japanese 'Sode Gakushi'. The last name most probably will prove to be the original one.

Specimens labelled 'Altheaflora', 'Charlesii' and 'Blackburniana' appeared to be identical and should all be called 'Altheaflora'. In turn blooms were received wrongly labelled 'Anemonaeflora', the true flower of which is a small six-petalled single, crimson-red in colour, with a perfect anemone centre.

There appeared to be much confusion existing amongst the single whites—'Alba simplex', 'Devoniensis', 'White Swan' and 'Snowflake'. The same must be said of the beautiful crimson-red 'Kimberley'. The inferior 'Tokagama' was in many cases named 'Kimberley', but the former does not open its flowers so widely, is less brilliant in colour and has much less prominent golden stamens. Then again, the variety 'Tokagama' was often mis-spelt in the show as 'Tokayama' which should be a double white form.

As shown it was very difficult to distinguish 'Imbricata' and its varieties from others under the names of 'Mathotiana' varieties. C. 'tricolor', and 'Sieboldi' were often confused with tricolour forms of 'Lady Vansittart', while the white form of the latter often masqueraded under the name of 'Magnoliaeflora'.

The writer could continue almost indefinitely quoting examples of confusion amongst the varietal names of *Camellia japonica* hybrids, made evident by the staging of this collective exhibit, but enough has been written to emphasize the importance of co-operation amongst growers to enable as far as possible a solution to the existing muddle.

I cannot finish this article without sounding a word of praise for the Southern California Camellia Society of Pasadena, California, U.S.A., who have long realized the existing trouble and who have made such an excellent commencement by publishing their book *The Camellia—Its Culture and Nomenclature.*

THE CAMELLIA COMPETITION

14th and 15th April, 1953

by

Lanning Roper

THE Camellia Competition held in the New Hall on 14th and 15th April, showed clearly the growing interest in this genus. There was a total of 286 entries by fourteen exhibitors. In 1951 eight exhibitors put up ninety-seven entries; in 1952 exhibitors increased to ten and entries to 168. Thus in two years entries tripled. The timing of such a competition is always difficult and the spring of 1953 was no exception; for some localities the date was early for plants grown in the open and late for those under glass. The standard of entries was on the whole good, but a few entries were hardly up to exhibition quality.

An outstanding exhibit of Camellias was staged by Wisley with the help of The Royal Botanic Gardens, Kew; Mrs. E. OBBARD, Jersey; THE CALEDONIA NURSERIES, Guernsey; and private and commercial growers throughout the country. Blooms of the different varieties of *Camellia japonica* were submitted and staged side by side for comparative purposes. In this way a representative collection of outstanding varieties was gathered together and it was possible to see the wide variation in quality of different forms and nomenclature difficulties were apparent. This exhibit has been described by Mr. FRANCIS HANGER in an article printed elsewhere in this volume. Congratulations should go to Dr. FLETCHER, the Director, and to Mr. F. E. W. HANGER, the Curator, for this constructive and educational exhibit.

On the dais was a display of twenty-seven *Camellia saluenensis* blooms cut from the open on Battleston Hill, Wisley, in a variety of forms ranging from deep purple to pale flesh colour, some rather tubular in shape, others opening flatly in a wide flare. The great variation showed how important selection is.

An Award of Merit was given to C. *X. Williamsii* 'Francis Hanger', raised by THE CURATOR at Wisley from C. *japonica* 'alba simplex'. This is a distinguished hybrid combining the purity of colour of 'alba simplex' with the merits of the *Williamsii* hybrids. The flowers are 3 in. in diameter and this plant should prove a valuable addition to single white Camellias.

The schedule of the competition was ambitious, including 65 classes in three sections. Section One was for single blooms—Class 1 for

C. japonica 'Contessa Lavinia Maggi' had four entries. Mr. S. BARRANGER of Woolland, Weybridge, took first prize with a 3-in. bloom of good form, white tinged pink with irregular carmine blotches. Mr. H. H. THOMAS of Helligan, St. Austell, S. Cornwall, showed a slightly smaller flower, pale pink, heavily veined with a few blotches for the second place. THE HON. LADY NORMAN of Ramster, Chiddingfold, took third.

Class 2 for the deservedly popular *C. japonica* 'Elegans' (Syn. 'Chandleri elegans') had nine entries of high quality. First place went to Mr. D. F. LENEY of Springhead, Haslemere, for a 4-in. deep pink flower with wide outer petals and a full centre of irregular petaloids, a few of which were whitish. In second place Sir GILES LODER, Bt., showed a very compact symmetrical flower with almost no white petaloids. Messrs. JOHN WATERER, SONS & CRISP, LTD. were third with a bloom of particularly pleasing colour coming nearer to a salmon-red. A fourth prize was given in this class to Mr. C. ARMYTAGE MOORE of Winterfold House, Cranleigh, for a deeper coloured form with a small centre. This class was interesting for it showed the variation not only in colour but in the number of petals and the character of the anemone-form petaloid centre.

Sir GILES LODER, the only exhibitor in Class 3 for 'Lady Hume's Blush' was given second place for a very pale, loosely formed flower. One of the loveliest of Camellias is the double imbricated 'Mathotiana' called for in Class 4. Miss F. GODMAN of South Lodge, Horsham, won first prize with a fine red flower, $4\frac{1}{4}$ in. in diameter and $1\frac{1}{2}$ in. high. Mr. C. BARRANGER took second with an even larger flower, but of a little looser and less symmetrical form. Mr. REGINALD TRY of Byways, St. Leonard's Hill, Windsor, was third with a 4-in. bloom of an unusual dull purplish-red, with deeper veining. It would be interesting to know if the flowers of this are consistently this colour, as it was suggested that this variety changes colour if touched by very light frost. Class 5 for var. 'rosea' of the above had five entries. Messrs. JOHN WATERER, SONS & CRISP LTD., were first with a $3\frac{1}{2}$-in. flower of a clear rose pink with no bluish caste. The neatly imbricated inner petals were pointed in contrast to the rounded outer ones. In second place, Mr. D. F. LENEY exhibited a slightly paler, almost star-shaped bloom with the outer petals reflexed while Mr. E. DE ROTHSCHILD's entry which took third was paler with a deeper flush at the base and centre of the petals.

First place among the six entries in Class 6 for 'Mathotiana alba' went to Mr. BARRANGER for a $3\frac{1}{2}$-in. flower of pure cold white with a faint yellow glow at the centre. Messrs. JOHN WATERER, SONS & CRISP LTD., were second with a rather flatter example of lighter texture

while Mr. D. F. LENEY showed a small well shaped bloom with a solid unopened centre.

Only two prizes were given to the three entries in Class 7 for 'alba plena', a complete double, first place going to Mr. BARRANGER for a very full, slightly cup-shaped bloom of purest white and second to Mr. C. ARMYTAGE MOORE for a slightly blush-tinged flower with a broad very glossy leaf. The five entries in Class 8 were all a little past their prime for 'nobilissima' is an early-flowering incomplete double, which is supposed to have originated over 100 years ago. Mr. ARMYTAGE MOORE's first prize entry was 2½ in. in diameter with very full centre of narrow petaloids, white tinged pale yellow. Sir GILES LODER and Mr. BARRANGER took second and third respectively.

In Class 9 for 'Preston Rose' there were only two entries, the first and only award going to Messrs. JOHN WATERER, SONS & CRISP LTD., for a lovely clear pink flower of medium size with a very full centre of crisp large petaloids intermixed with a few golden stamens. Class 10 calling for one bloom of any anemone-centred variety of *C. japonica* had six entries in five varieties, two exhibitors showing 'Elegans'. 'Platypetala' which took a first for JOHN WATERER, SONS & CRISP LTD., was an attractive flower, 3 in. in diameter, white with reddish pink streaks on about a third of the petals, the centre filled with numerous warm yellowish petaloids. Sir GILES LODER was third with a large scarlet 'Altheaflora' with large flat biserrated outer petals and a solid petaloid centre. Second place went to THE COMMISSIONERS OF CROWN LANDS for 'Blackburniana' very similar to 'Altheaflora' but slightly darker in colour. In fact, they were in all probability the same.

Class 11 for any double red variety of *Camellia japonica* not specified above had ten entries, four of which were unnamed. First place went to Mr. REGINALD TRY for a fine rose-coloured 4-in. flower with a high centre of loosely imbricated petals edged white. Mr. BARRANGER took second place with 'imbricata rubra' and Messrs. JOHN WATERER, SONS & CRISP LTD., third with a brilliant red imbricated 'Souvenir de Madame Francillon'.

Mr. BARRANGER took first in Class 13 for an unspecified double pink with 'rubescens major'; Messrs. JOHN WATERER, SONS & CRISP, Ltd., were in second place with a slightly paler form and Mr. LENEY third with 'Debutante', a fine pink with a few petaloids. This last is a variety of American origin which appeared in the 'thirties. Class 13 for a double white not previously specified had six entries. Miss E. GODMAN showed a fine form of 'imbricata alba', a neat regularly imbricated complete double. Mr. ARMYTAGE MOORE was second. THE

COMMISSIONERS OF CROWN LANDS were third with a small unnamed white of compact form.

Class 14 for a double blotched or striped variety not previously specified attracted six entries. THE COMMISSIONERS OF CROWN LANDS were in the lead with an unnamed rather flat incomplete double, white with streaks and flecks of red. 'Mikado' rated second for Mr. TRY with rose petals conspicuously edged with white and a few irregular yellowish petaloids. Third prize went to Miss E. GODMAN for a large 4-in. rose flower sparsely spotted white on a few of the outer petals, and marbelized on several of the inner ones.

Eight exhibitors staged the three double varieties called for in Class 15. Mr. BARRANGER was first with three fine 'Mathotiana', the type, which is red, and var. 'rosea' and 'alba.' This was one of the outstanding exhibits in the show for the blooms were of even quality, in perfect condition and beautiful in their symmetry. Mr. LENEY took the other two places with the charming satiny pink 'Debutante', an unnamed imbricated crimson and 'Marianna Gaeta', an imbricated pink with pointed petals, in one group, and in his trio for third place, 'Valtevareda' a pink with high cushioned imbricated centre and two unnamed anemonaeflora types, the first deep rose-red and the other scarlet.

Class 16 for 'Adolphe Audusson' proved the excellence of this variety and what variation there is in the number of petaloids, the colouring and the prominence of the golden stamens. First prize was awarded to Mr. C. ARMYTAGE MOORE for a fine flower with a high boss of golden stamens surrounded by broad petals of turkey red. Mr. BARRANGER, in second place, showed a slighly paler flower with very prominent anthers and very few petaloids. Mr. MICHAEL HAWORTH-BOOTH'S entry was a very high crowned flower with petals of good substance surrounded by fine foliage.

The equally popular 'Donckelari' in Class 17 was closely contended. First place went to THE HON. LADY NORMAN for a lovely bloom with a few white spots which seemed to fade into the deep red rather than to be overlaid. Mr. BARRANGER'S bloom was even larger, over $4\frac{3}{4}$ in. in diameter with sixteen broad petals of an almost uniform dark red save for a slight white marbling on several inner petals. Miss E. GODMAN'S entry in third place was slightly more irregular in shape and with more pronounced white markings.

THE HON. LADY NORMAN was again first in Class 18 for the beautiful 'Gloire de Nantes'. The reddish pink bloom shaded purple was perfectly formed with prominent golden stamens. Sir GEORGE JESSEL, Bt., took second prize with a slightly fuller flower and THE COMMISSIONERS

OF CROWN LANDS, third with a paler specimen. All the blooms were in perfect condition. This variety introduced by HENRI GUICHARD of Nantes in 1895 is a lovely one and stood out in the competition.

One of the largest flowers among the *C. japonica* hybrids was Sir GILES LODER's winning entry in Class 19 for the much loved 'Lady Clare'. The deep pink semi-double flower measured 5 in. in diameter and there were rather more petaloids than in some forms. Mr. C. ARMYTAGE MOORE's entry in second place had prominent yellow stamens and several white patches on the petals. Mr. DE ROTHSCHILD's entry in third place was less compact and flatter.

Among the visitors to the show more people were heard to exclaim over the exquisite colouring of 'Magnoliaeflora' in Class 20 than over any other. Of the six entries first prize went to Mr. C. ARMYTAGE MOORE's loose star-shaped bloom composed of fifteen evenly spaced petals and a few golden stamens. Messrs. JOHN WATERER, SONS & CRISP LTD., were second with a larger, slightly pinker example and Mr. BARRANGER's bloom of an even deeper blush pink with very long stamens and slightly ragged petals was third.

The next three classes called for semi-doubles not previously specified. Class 21 for a red variety attracted seven entries, some of unusual varieties. THE COMMISSIONERS OF CROWN LANDS filled first place with a fine bloom of 'Mercury', 3 in. in diameter and in fine condition. The delightfully fimbriated bloom of 'Fred Sander' with its broad irregularly arranged petals and stamens of a brilliant crimson took second for Mr. BARRANGER. This variety is so reminiscent of a carnation that one even expects the clove scent. The 4½-in. bloom of 'Apollo' shown by Messrs. JOHN WATERER, SONS & CRISP, Ltd., was third.

Of the six entries in Class 22 for a pink variety, four were unnamed, including Mr. BARRANGER's first-prize bloom which was a twelve-petalled 4-in. bloom with a ring of stamens. Mr. TRY was second and Mr. E. DE ROTHSCHILD third with 'Joy Sander'. Class 23 for a white had three entries, all different varieties. Mr. ARMYTAGE MOORE's was first with a 4½-in. 'alba grandiflora' of great beauty; MESSRS. JOHN WATERER, SONS & CRISP, LTD., were second with an unnamed variety and Mr. E. DE ROTHSCHILD third with 'Snowflake'.

Class 23 for any semi-double blotched or striped variety proved an interesting class. 'Lady Audrey Buller' also known as 'Nagasaki', won first place for Sir GILES LODER. The bloom was 4¾ in. across, the broad outer petals bearing usually three white patches on a red ground. Mr. E. DE ROTHSCHILD showed a form of 'Nagasaki' with a predominantly red ground with several white blotched petals. In third place Messrs. JOHN WATERER, SONS & CRISP, LTD., showed the delightful anemone-

centred 'Général Lamoriciére', pale pink with darker candy-pink striping and centre.

Class 25 for any three semi-double varieties was keenly contested by six exhibitors, Mr. C. ARMYTAGE MOORE was placed first with 'Lady Clare', 'Adolphe Audusson' and 'Magnoliaeflora'. Mr. BARRANGER also chose 'Adolphe Audusson' to go with 'Bush Hill Beauty' and a very large 'Donckelari' over 5 in. across. Three less well known varieties were staged by THE COMMISSIONERS OF CROWN LANDS, for third place, the scarlet 'latifolia', 'Hassai Wada' and 'Unku'.

'Alba simplex' in Class 26 is still one of the finest of the singles. Mr. TRY, Mr. E. DE ROTHSCHILD and Sir GILES LODER were placed in that order. Class 27 for 'Devoniensis', another fine single white with a rather flatter flower than 'alba simplex', was contested by Mr. ARMYTAGE MOORE and Messrs. JOHN WATERER, SONS & CRISP, LTD., who took first and second respectively. Sir GEORGE JESSEL and Sir GILES LODER submitted the only entries in Class 28 for 'Jupiter', being placed in the order listed.

No prizes were given to the seven entries in Class 29 for any single flowered red variety not previously specified, and only first and second prizes to the six entries in Class 30 for a single-flowered pink variety, first going to THE COMMISSIONERS OF CROWN LANDS for 'Hatsu-Sakura' and second to Miss E. GODMAN for an unnamed large rose-scarlet. In Class 31 for a single-flowered white, first place went to Mr. DE ROTHSCHILD for 'White Swan' and third to Sir GEORGE JESSEL for an unnamed slightly irregular bloom rather like a wild rose. Mr. DE ROTHSCHILD again took first in Class 32 for a single-flowered blotched or striped variety with 'Lady de Saumerez'. The only other entry did not conform to specification.

THE COMMISSIONERS OF CROWN LANDS were placed first in Class 33 for three single-flowered varieties of *C. japonica* with 'Hatsu-Sakura', 'Devoniensis' and an unknown red. Messrs. JOHN WATERER, SONS & CRISP, LTD., Mr. DE ROTHSCHILD, and Mr. ARMYTAGE MOORE were second, third and fourth with groups, each of which featured different varieties.

One bloom each of six varieties was called for in Class 34. Mr. BARRANGER was first with 'Mathotiana' and its two colour varieties, all of a high standard, 'Contessa Lavinia Maggi', 'Gloire de Lorraine' and 'rubescens major'. THE COMMISSIONERS OF CROWN LANDS were placed second with an interesting selection, including two lesser known varieties, 'Général le Clerc' and 'Kurun Jura'. Mr. DE ROTHSCHILD and Mr. LENEY were third and fourth each with six different varieties not shown by others in the same class. It is unusual to have no duplication of varieties in a class calling for so many varieties to form a group.

Turning to the Species, Class 35 called for one bloom of the wild form of *C. reticulata*. The two exhibitors were Mr. DE ROTHSCHILD, who showed a single strong pink of rather irregular form for first place, and Mr. ARMYTAGE MOORE, who was second with a paler bloom. Class 36 for the garden form of this lovely plant attracted six entries, led by Mr. ARMYTAGE MOORE, with Mr. LENEY, Messrs. JOHN WATERER, SONS & CRISP, LTD., and Sir GILES LODER being placed in the order given. All blooms showed variation in colour, the number of petals and symmetry. Mr. ARMYTAGE MOORE and Sir GILES LODER showed the largest blooms, both being over 5 in.

The seven entries of *C. saluenensis* in Class 37 showed considerable variation in size and colour. Mr. DE ROTHSCHILD's first prize bloom was tubular in shape and of a deep rose madder, contrasting with the large rather irregular flesh pink flower which took second for Mr. ARMYTAGE MOORE, who also showed a second entry which took fourth after Messrs. JOHN WATERER, SONS & CRISP, LTD. Class 38 for any pale pink variety of *Williamsii* surprisingly had only four entries, places going to Mr. DE ROTHSCHILD, THE COMMISSIONERS OF CROWN LANDS and Messrs. JOHN WATERER, SONS & CRISP, LTD. Mr. DE ROTHSCHILD was the only contender in Class 39 for a dark pink variety of *Williamsii*. THE COMMISSIONERS OF CROWN LANDS showed the lovely 'Salutation' for first place in Class 40 for any other hybrid of *C. saluenensis*. The pale pink flowers over 4½ in. in diameter are light in texture and do not seem to lend themselves to cutting as well as some other varieties. Mr. DE ROTHSCHILD had the only other entry, a very deep pink semi-double with fifteen petals and a boss of golden stamens.

Class 41 for any hybrid not specified above attracted the same exhibitors as the five previous ones. THE COMMISSIONERS OF CROWN LANDS were placed first with 'Salutation', Messrs. JOHN WATERER, SONS & CRISP, LTD., second with an unnamed double anemone-flowered bloom of deep scarlet-pink, and Mr. DE ROTHSCHILD, third with the attractive shell-pink, imbricated double, 'Frau Minna Seidel', a Japanese variety which came to Europe via Germany in about 1893.

Class 42 for any three species and/or varieties and/or hybrids indicated a preference for hybrids. Mr. ARMYTAGE MOORE showed a garden form of *C. reticulata*, a fine large 'Devoniensis' and a 'Lady Clare' for first place, and 'Elegans' 'Adolphe Audusson' and *C. saluenensis* for second. Messrs. JOHN WATERER, SONS & CRISP, LTD., were third with 'Adolphe Audusson', 'platypetala' and 'Beauté de Nantes' while Mr. LENEY was fourth with 'Debutante', a garden form of *C. reticulata* and 'Mathotiana rosea'.

In Class 43 for a group of six as above Mr. ARMYTAGE MOORE was

again first, Messrs. JOHN WATERER, SONS & CRISP, LTD., second and Mr. DE ROTHSCHILD third.

Section II called for sprays rather than single blooms. Class 51 for *C. cuspidata* was won by Mr. DE ROTHSCHILD with a spray covered with four and five-flowered clusters. In second place Sir GILES LODER's entry had lovely foliage. Lady NORMAN was third. 'Elegans' was selected by Dr. FREDERICK WALLACE LINTON BOGLE, Sir GILES LODER and Mr. ARMYTAGE MOORE in Class 52 for one spray of any double variety of *Camellia japonica*. They were placed in the order given. Class 53 for any semi-double was won by Mr. ARMYTAGE MOORE with a fine bloom of 'Lady Clare'. Sir GILES LODER put up 'Lady McCulloch', a white striped pink, and Mr. BARRANGER chose 'Bush Hill Beauty' and these received second and third.

Class 54 for any single-flowered variety proved the beauty of the singles. 'Alba simplex' shown by Sir GILES LODER was an outstanding first with its large well formed flowers borne copiously on a stout spray. Mr. ARMYTAGE MOORE filled second with 'Devoniensis' and Mr. DE ROTHSCHILD's clear pink blooms of 'Coppelia' were an attractive third.

The prizes in Class 55 for any three varieties of *C. japonica* went to Mr. BARRANGER, Sir GILES LODER and Lady NORMAN, in that order. Mr. DE ROTHSCHILD was the only exhibitor in Class 56 for a spray of the wild form of *C. reticulata* while Mr. ARMYTAGE MOORE, Sir GILES LODER and Mr. DE ROTHSCHILD took the first three places with sprays of garden varieties.

THE COMMISSIONERS OF CROWN LANDS were awarded first for a fine large pale pink form of *C. Williamsii* and Mr. ARMYTAGE MOORE second for a deep pink variety in Class 58. THE COMMISSIONERS OF CROWN LANDS took second in Class 59 for 'Cornish Snow'. It is strange that there were no other contenders. In Class 60 for any other hybrid of *C. saluenensis*, again the COMMISSIONERS OF CROWN LANDS were alone, once more taking second place. Class 61 for any three species and/or varieties and/or hybrids had four entries, Mr. ARMYTAGE MOORE was placed first, THE COMMISSIONERS OF CROWN LANDS second and Lady NORMAN third. Class 62 increasing the number to six, was also won by Mr. ARMYTAGE MOORE followed by Lady NORMAN in second place.

Classes 63–71 were omitted. Class 72 called for a Camellia plant in bloom. Mr. DE ROTHSCHILD's lovely plant of a *saluenensis* hybrid with very deep pink, semi-double, cup-shaped flowers, with prominent golden stamens took first and Messrs. JOHN WATERER, SONS & CRISP, LTD., were second with a large-flowered form of 'White Swan'. The latter was the only exhibitor in Class 72 for three Camellia plants in

bloom, showing 'Beauté de Nantes', 'Kelvingtoniana', and 'Valtevareda'.

The last class called for a vase or bowl of Camellias. Sir GILES LODER took first with a green glass bowl filled with sprays of 'Lady McCulloch' and 'Althaeflora'. Sir GEORGE JESSEL in second place chose a white and blue pottery container in which were arranged a mass of single and double pink variegated varieties. Third Prize went to Dr. F. WALLACE LINTON BOGLE for a flat glass plate with about a dozen specimen blooms of 'Elegans'.

NON-COMPETITIVE CLASSES

At the end of the Hall under the clock, Sir GILES LODER staged a table group of Camellias from Leonardslee which received a Silver Gilt Banksian Medal. This included a representative collection of all the species and varieties then in flower. Huge branches 4–5 ft. long formed the background of varieties including 'Elegans', 'Adolphe Audusson' 'Chandler's Red' and 'alba plena'. Then there were smaller sprays and single blooms of the majority of the old favourites as well as the lovely garden form of *C. reticulata, saluenensis* and the *Williamsii* hybrids. Sir GILES was certainly lavish in his cutting and his exhibit was a great contribution to the Camellia Competition.

A Silver Gilt Banksian Medal also went to the central floor exhibit exclusively of Camellias staged by Messrs. HILLIER & SONS. Large trees in tubs were arranged down the centre and on the corners. Some of the specimens were 5–7 ft. tall. Species were particularly well represented including *C. cuspidata, reticulata, saluenensis* and the less well known *C. Thea* and *C. Tsaii*. Among the varieties of *C. japonica* there were fine plants of 'Campbelli', 'Adolphe Audusson', 'Magnoliaeflora', 'Fred Sanders', 'Gloire de Nantes', 'Kimberley', 'Jupiter', etc.

Messrs. HASKINS, BROS. LTD., of Bournemouth were the only other nursery to stage an exhibit entirely devoted to Camellias. A Silver Banksian Medal was awarded to their table exhibit of smaller plants steeply pyramided to the centre. There were attractive forms of 'Lady Clare', 'Gloire de Nantes', 'Peach Blossom', 'latifolia' and the garden form of *C. reticulata*. Mixed groups of Rhododendrons, Camellias and seasonal flowering material were staged by other nurseries, including THE SUNNINGDALE NURSERIES, Messrs. JOHN WATERER, SONS & CRISP, LTD., Messrs. L. R. RUSSELL LTD., Messrs. C. J. MARCHANT and Messrs. BURKWOOD & SKIPWITH LTD.

AWARDS TO CAMELLIAS AND RHODODENDRONS 1953

Camellia japonica 'Alba simplex' 'Snow Goose' A.M. 28th April, 1953. On this plant the flowers are single, flat and 3½ in. across. The petals are large, of good substance and white in colour with a little irregular, crimson flecking. The filaments are pale yellow and the anthers deep yellow. Exhibited by Sir Giles Loder, Bt., Leonardslee, Horsham, Sussex (Fig. 35).

Camellia japonica 'Apollo' A.M. 3rd March, 1953. A fine garden form with flat, single flowers 4 in. across. The petals are a bright shade of Geranium Lake (H.C.C. 20/1) and contrast pleasantly with the pale filaments and bright yellow anthers. Exhibited by Sir Giles Loder, Bt., Leonardslee, Horsham, Sussex.

Camellia japonica 'Elegans' A.M. 3rd March, 1953. A most popular form and the one often erroneously referred to by many people as 'Chandleri Elegans.' The notched petals and petaloid stamens form an incomplete double flower with an 'Anemone' centre. The corolla is 4 in. across and variable in colour although near a light shade of Neyron Rose (H.C.C. 623). On some flowers there are irregular white markings. Exhibited by Commissioners of Crown Lands, Windsor Great Park, Berks.

Camellia japonica 'Hatsu-Sakura' A.M. 3rd March, 1953. An outstanding cultivar with single flowers 4½ in. across. The large petals are thick and waxy in texture and coloured a pleasing, pale shade of Camellia Rose (H.C.C. 622), darkening a very little towards the edges. In the centre of the inflorescence is a large prominent cluster of yellow stamens many slightly petaloid. Exhibited by Commissioners of Crown Lands, Windsor Great Park, Berks (Fig. 16).

Camellia japonica 'Magnoliaeflora' A.M. 17th February, 1953. This is undoubtedly an outstanding variety and a very popular one too. The flowers are variable in size and colour. The largest of them are about 4 in. across and have fifteen petals coloured a varying shade of soft pink with some slightly darker stains on the reverse side. The stamens are clustered in a tight, small bunch and occasionally some are petaloid. Exhibited by Commissioners of Crown Lands, Windsor Great Park, Berks.

Camellia japonica 'Nagasaki' A.M. 3rd March, 1953. A large-

flowered variety, incomplete-double and up to 4½ in. across. It is a light shade of Neyron Rose (H.C.C. 623) in colour and has a limited amount of white marbling. The stamens are few, the majority adopting a large petaloid form. Exhibited by The Director, R.H.S. Gardens, Wisley, Ripley, Surrey.

Camellia japonica 'Prince Frederic William' A.M. 17th March, 1953. Flowers on this pleasing Camellia are formal-double, having many rows of petals fully imbricated and without any stamens showing. Each flower is 3½ in. across and coloured a bright shade of Camellia Rose (H.C.C. 622) with a somewhat darker stain on the outside of the basal petals. Exhibited by The Director, R.H.S. Gardens, Wisley, Ripley, Surrey (Fig. 18).

Camellia × Williamsii 'Francis Hanger' (*japonica* 'Alba simplex' × *saluenensis*) **A.M.** 14th, April, 1953. A new hybrid which freely shows a vigorous habit and a freedom of flowering. The single flowers are pure white, 4 in. across and centred by a prominent cluster of golden-yellow stamens. Exhibited by The Director, R.H.S. Gardens, Wisley, Ripley, Surrey (Fig. 17).

Rhododendron Beanianum (K.W. 6805) **A.M.** 31st March, 1953. Capt. F. Kingdon-Ward found this plant in upper Burma on his ninth expedition to Asia and writes of his discovery in the *Gardeners' Chronicle* (vol. LXXXI, Third Series, p. 303. 1927). Later it was named in honour of Mr. W. J. Bean, late Curator of the Royal Botanic Gardens, Kew, by Dr. J. Macqueen Cowan writing in *The New Flora and Silva*, vol. 10 (1938) pp. 245–247.

It is a distinctive shrub. The leaves are blunt-lanceolate, thick and spongy and coated on the underside with a dense, rich cinnamon-brown tomentum. Likewise the petiole is coated with tomentum. The truss is made up of about nine flowers each coloured Cardinal Red (H.C.C. 822/2). Similarly, the petaloid calyx is of the same deep colour. Exhibited by Col. The Lord Digby, D.S.O., M.C., Cerne Abbey, Dorchester.

Rhododendron ciliatum A.M. 31st March, 1953. A shrub from the Sikkim Himalayas found at about 10,000 ft. The nodding flowers are white with a faint tinge of pink along the centre of each petal and occur three or four in each truss. The corolla is 1½ in. long and 2 in. wide, narrow-campanulate and on a bristly pedicel. The petioles are also setose and the elliptical leaves 3 in. long and 1¼ in. wide. Exhibited by Col. The Lord Digby, D.S.O., M.C., Cerne Abbey, Dorchester.

Rhododendron cinnabarinum Roylei A.M. 19th May, 1953. This is a colour form of *R. cinnabarinum*. Like the type it is extremely free flowering and should be planted in every Rhododendron garden. The lax, graceful truss is made up of about seven flowers. Each corolla is pendant on a short scaly pedicel and coloured on the outside Currant Red (H.C.C. 821/1), a shade which deepens towards the base and lightens near the lobes; inside the corolla is Blood Red (H.C.C. 820/2) dulled with a waxy bloom. Exhibited by Commissioners of Crown Lands, Windsor Great Park, Berks.

Rhododendron coriaceum A.M. 14th April, 1953. A shrub or small tree with large, oblanceolate leaves coated on the underside with a pale fawn indumentum. The lax truss is about sixteen–twenty-flowered. In colour the flowers of different specimens vary considerably. On the plant exhibited they were white with a deep crimson blotch and a little spotting on the upper segment. Exhibited by Commissioners of Crown Lands, Windsor Great Park, Berks (Fig. 25).

Rhododendron diaprepes 'Gargantua' A.M. 23rd June, 1953. A single plant of this variety was raised at Tower Court in 1923 from seed of a plant of *R. diaprepes* (Forrest 11958). It is of considerable botanical interest, being the only triploid (2n=39) recorded by Dr. E. K. Janaki Ammal after a cytological study of 360 species. The larger size of all its parts makes it easy to distinguish from this type. In the specimen exhibited the obovate-oblanceolate leaves were fully 8 in. long, with recurved margins and rounded, mucronate tips; the flower 5 in. across, of firm, waxy texture, the lobes widely spreading, fimbriate and recurved, in colour white with a green flush at the base of the tube. The flower is strongly and pleasantly scented. Exhibited by Mrs. R. M. Stevenson, Tower Court, Ascot (Fig. 26).

Rhododendron fictolacteum 'Cherry Tip' A.M. 14th April, 1953. A colourful variant with unopened buds a shade of bright cherry pink. It was raised from seed collected by Dr. F. J. Rock under his number 59255. The truss is a compact one containing about twenty-six flowers. Each of these is funnel-campanulate, 2 in. long and 2 in. wide. They are white in colour with some pink flushes while the upper segments are stained with a deep crimson blotch and numerous spots up to the base of the lobes. Exhibited by Col. The Lord Digby, D.S.O., M.C., Cerne Abbey, Dorchester (Fig. 24).

Rhododendron giganteum Forrest No. 19335 **F.C.C.,** 17th February, 1953. A magnificent example of the form collected by

George Forrest was very beautifully shown and reflected great credit on the exhibitor.

The truss was compact, 8 in. high, 6½ in. across and made up of 27 flowers. The corollas were campanulate, of good substance and 2 in. long and 2¼ in. wide. In each were eight lobes with the edges slightly waved. The outside of the corolla was heavily veined and the segments streaked down the centre with a staining of Magenta Rose (H.C.C. 627/1). At the base of each segment was a conspicuous, dark nectary. The leaves were very large, being up to 16 in. in length and 8 in. across; glabrous above and below except for slight indumentum along the midrib on the under surface. Exhibited by Her Grace The Duchess of Montrose, Brodick Castle, Isle of Arran (Fig. 27).

Rhododendron 'Hawk' 'Crest' F.C.C. 28th April, 1953. A magnificent yellow-flowered hybrid of great merit and undoubtedly the finest plant yet shown from the crossing of R. 'Lady Bessborough' and *R. Wardii*.

The leaves are oblong-elliptical, 4½ in. long and 2½ in. wide, mucronate and of a stout leathery texture. On the upper surface, the foliage is a dark olive green and beneath very pale green. The large truss is composed of about twelve flowers. Each of these flowers is shallow campanulate, 2½ in. long and 4 in. wide with pronounced lobes 1½ in. long and 1¼ in. wide. The colour is Primrose Yellow (H.C.C. 601/2–601/3) with a slight darkening around the throat on the upper segments. Exhibited by E. de Rothschild, Esq., Exbury House, nr. Southampton.

Rhododendron litiense F.C.C. 19th May, 1953. Exhibited by Col. The Lord Digby, D.S.O., M.C., Cerne Abbey, Dorchester. This species has previously received an A.M., 19th May, 1931, when exhibited by Lionel de Rothschild, Esq., Exbury, Southampton (Fig. 5). (*See J.R.H.S.* 57 xxxiii. 1932.)

Rhododendron lutescens 'Bagshot Sands' A.M. 31st March, 1953. This is a fine large-flowered form. The inflorescence is composed of about thirteen flowers in a compact bunch. The corolla is a wide-funnel shape, 1 in. long, and 1½ in. across and coloured Primrose Yellow (H.C.C. 601/2) with some dark spotting chiefly on the base of the central segment. The leaves are broad-lanceolate, 3 in. long and 1 in. wide, mucronate and scaly beneath. Exhibited by Mrs. Roza M. Stevenson, Tower Court, Ascot, Berks.

Rhododendron 'Moonshine' 'Supreme' A.M. 28th April,

1953. A fine hybrid made at Wisley from the cross R. 'Adriaan Koster' and *R. litiense*. About fifteen flowers make up a compact truss. The pedicels are long, pale green and glandular. The broad-campanulate corolla is 1¾ in. long and 2½ in. wide. It is coloured a shade of Primrose Yellow (H.C.C. 601/1–601/2) and has some darker staining on the upper segment together with a little indistinct spotting. Exhibited by The Director, R.H.S. Gardens, Wisley, Ripley, Surrey.

Rhododendron 'Tessa' 'Roza' A.M. 3rd March, 1953. A Rhododendron which will give bright colour early in the season with flowers in clusters of three and four. In these the corolla is a broad-rotate-campanulate shape 1½ in. long and 2½ in. wide. It is coloured a varying shade of rosy-pink against a pale background while the upper segment is spotted with deep carmine markings; the reverse side is irregularly stained with deep pink. The leaves are a lustrous green above and pale beneath together with some scaling. Exhibited by Mrs. Roza M. Stevenson, Tower Court, Ascot, Berks (Fig. 28).

Rhododendron obtusum 'Kaempferi' A.M. 19th May, 1953. A free-flowering, loosely branched shrub found in central and northern Japan. In Britain it has proved to be a plant of great garden value and in light shade will thrive anywhere that Rhododendrons are grown. The corolla is 1¼ in. long and 1¾ in. wide with large, frilled lobes. It is coloured Camellia Rose (H.C.C. 622/1) while the tips of the lobes are a slightly darker shade. The stamens are rosy pink. Exhibited by Commissioners of Crown Lands, Windsor Great Park, Berks.

Rhododendron 'Romarez' A.M. 7th July, 1953. Raised at Tower Court from a cross between *Kyawi* and *Griersonianum*, this hybrid has the advantage of flowering some five weeks later than 'Tally Ho' which is of similar colouring. 'Romarez' has fine long-elliptic leaves up to 8 in. long, dark mat-green above and covered with brown indumentum beneath. The well-shaped truss contains eight to twelve funnel-shaped flowers flared at the mouth, 3½ in. across, and coloured Geranium Lake (H.C.C. 620). The stamens and style are dark ruby-red. Exhibited by Mrs. R. M. Stevenson, Tower Court, Ascot, Berks.

Rhododendron seinghkuense A.M. 3rd February, 1953. A small spreading undershrub of the Series Edgeworthii collected by Kingdon Ward in upper Burma. The short-jointed, twiggy branchlets bear ovate-oblong, bullate leaves up to 2½ in. long and 1½ in. wide, covered beneath with brownish tomentum. The terminal inflorescences consist of one or two flowers each, the flower having a broadly bell-

shaped sulphur-yellow corolla 1½ in. across and short stamens bearing red-brown anthers. In most parts of the British Isles it is only suitable for the cool greenhouse, where it is one of the earliest to flower. Exhibited by The Commissioners of Crown Lands, Windsor Great Park, Windsor, Berks (Fig.23).

Rhododendron 'Tensing' A.M. 19th May, 1953. A new hybrid raised from the crossing of R. 'Fabia' and R. 'Romany Chai' which, in turn, are both hybrids of *R. Griersonianum*. The large truss is loosely formed, has a flat top and is composed of 13 creped-lobed flowers. The pedicel is 1 in. long, stout and, like the underside of the leaves, covered with a light tomentum which is soon glabrous. The corolla is 3 in. long and 4 in. wide, funnel-campanulate and the tube characteristically cylindric and furrowed for a third of the corolla. In colour this hybrid is a shade of Camellia Rose (H.C.C. 622) which gradually merges into a tinge of orange in the throat. Exhibited by The Director, R.H.S. Gardens, Wisley, Ripley, Surrey.

AWARDS TO RHODODENDRONS AFTER TRIAL AT WISLEY, 1952-1953

The Council of the Royal Horticultural Society has made the following awards to Rhododendrons after trial at Wisley on the recommendation of the Rhododendron and Camellia Committee. The number in brackets after the description of the variety was that under which it was grown in the trial.

'Albatross'. (Raised, introduced and sent by Messrs. Knap Hill Nursery Ltd., Woking, Surrey.) **A.M.** 26th May, 1953: A deciduous Azalea. Plant vigorous, 3 ft. high, 2¾ ft. spread, very free flowering, light green foliage, young leaves tinged bronzy red. Flower truss 3 in. diameter, lax, 8–10 flowers per truss. Corolla 2¾ in. diameter, 2¼ in. long, tubular opening to wide funnel shape, margins of petals waved, white with reverse of petals slightly tinged pink, buds cream tinged pink. (796)

'Beauty of Littleworth'. (Sent by Messrs. Walter C. Slocock Ltd., Goldsworth Nursery, Woking, Surrey.) **F.C.C.** 11th May, 1953: A hardy hybrid evergreen Rhododendron. Plant vigorous, 18 ft. high, 15 ft. spread, very free flowering, large dark green foliage. Flower truss 8 in. diameter, 8½ in. high, high flattened conical shape, flowers well spaced, 15–18 per truss. Corolla 4½ in. diameter, 3½ in. long, very open funnel shape, margins of petals waved, pure white with speckling of garnet red or upper petal at throat, buds tinged mauvy pink. (135)

'Byron'. (Sent by Messrs. Sunningdale Nurseries, Windlesham, Surrey.) **A.M.** 11th May, 1953: A *rustica flore pleno* Azalea. Plant vigorous, 3 ft. high, 3½ ft. spread, fairly compact, free flowering, light yellow-green foliage. Flower truss 4½ in. diameter, 2½ in. high, flattened dome shape, 14–16 flowers per truss. Corolla 2 in. diameter, 1¾ in. long, tubular campanulate, white, outer petals slightly tinged with Carmine Rose (H.C.C. 621/2) buds cream tipped cerise. (881)

'Freya'. (Sent by Messrs. Sunningdale Nurseries) **A.M.** 11th May, 1953: A *rustica flore pleno* Azalea. Plant vigorous, 4 ft. high, 4½ ft. spread, erect grower, fairly free flowering, light green foliage slightly tinged brown. Flower truss 3½ in. diameter, 1¾ in. high, flat dome shape, 18 flowers per truss.Corolla 1½ in. diameter, 1¼ in. long, tubular campanulate, Shell Pink (H.C.C. 516/1) tinged at tips of the petals with Carmine Rose (H.C.C. 621/1). (921)

'Goldcrest'. (Raised, introduced and sent by Messrs. Knap Hill Nursery Ltd.) **A.M.** 11th May, 1953: A deciduous Azalea. Plant vigorous, 3½ ft. high, 3½ ft. spread, upright grower, free flowering, light green foliage tinged red. Flower truss 5 in. in diameter, 2 in. high, flat, 12–14 flowers per truss. Corolla 2¾ in. diameter, 2 in. long, tubular one-third of its length opening to fully expanded funnel shape, Chrome Yellow (H.C.C. between 605 and 605/1) with upper petal blotched Indian Yellow (H.C.C. 6) at throat. (799)

'Harvest Moon'. (Raised, introduced and sent by Messrs. Walter C. Slocock Ltd) **A.M.** 26th May, 1953: A deciduous Azalea. Plant vigorous, 2¾ ft. high, 3 ft. spread, upright and compact, very free flowering, light dull green

foliage. Flower truss lax, flat, 6–8 flowers per truss, corolla 2½ in. diameter, 2¼ in. long, open funnel shape, margins of petals waved and much creped, Amber Yellow (H.C.C. between 505 and 505/1) with a blotch on upper petal at throat of Chrome Yellow (H.C.C. 605), slightly scented. (974)

'Lady Elphinstone'. (Raised by Mr. C. E. Brown, introduced and sent by Messrs. D. Stewart & Son Ltd., Ferndown, Dorset.) **A.M.** 22nd May, 1952: An evergreen Azalea. Plant vigorous, 2 ft. high, 3 ft. spread, compact and upright, free flowering, dark green foliage. Truss two-flowered. Corolla 2½ in. diameter, 1½ in. long, open funnel shape, margins of petals waved and slightly crinkled, Carmine Rose (H.C.C. 621) with a blotch on upper petal at throat of slightly darker Carmine Rose. (770)

'Lapwing'. (Raised, introduced and sent by Messrs. Knap Hill Nursery Ltd.) **A.M.** 11th May, 1953: A deciduous Azalea. Plant very vigorous, 6 ft. high, 6 ft. spread, forms a well shaped bush, free flowering, bright green foliage. Flower truss 4½ in. diameter, 2½ in. high, flattened dome shape, 13–16 flowers per truss. Corolla 2 in. diameter, 1½ in. long, tubular for one-third of its length opening to much expanded funnel shape, Straw Yellow (H.C.C. 604/3) tinged pink at tips, upper petal Chrome Yellow (H.C.C. 605/1) blotched Indian Yellow (H.C.C. 6). (794)

'Moliere'. (Sent by Messrs. M. Koster Ltd., Boskoop, Holland.) **A.M.** 26th May, 1953: A hardy hybrid evergreen Rhododendron. Plant vigorous, 7½ ft. high, 9 ft. spread, free flowering, medium dull green foliage. Flower truss 7 in. diameter, 8 in. high, high conical shape flattened at the top, slightly lax, 12–15 flowers per truss. Corolla 2½ in. diameter, 2 in. long, open funnel shape, margins of petals slightly incurving, a dull shade near Rose Red (H.C.C. 724) spotted black on upper petal at throat. (253)

'Mrs. Peter Koster'. (Sent by Messrs. M. Koster & Sons, Boskoop, Holland.) **A.M.** 11th May, 1953: A deciduous Azalea. Plant vigorous, 5 ft. high, 5 ft. spread, free flowering, mid green foliage. Flower truss 4½ in. diameter, 2½ in. high, flattened dome shape, 12–16 flowers per truss. Corolla 3½ in. diameter, 1¾ in. long, open funnel shape, Scarlet (H.C.C. between 19/1 and 19) with a blotch on upper petal at throat of Burnt Orange (H.C.C. 014). (636)

'Mount Everest'. (Raised and sent by Messrs. Walter C. Slocock Ltd.) **A.M.** 11th May, 1953: A hardy hybrid evergreen Rhododendron. Plant vigorous 10 ft. high, 9 ft. spread, very free flowering, dark dull green foliage. Flower truss 5½ in. diameter, 5½ in. deep, conical shape, compact, 10–12 flowers per truss. Corolla 2¾ in. diameter, 2 in. long, funnel-campanulate shape, pure white speckled brown on upper petal at throat, buds white, style conspicuous with yellow tip. (133)

'New Moon'. (Raised, introduced and sent by Messrs. Walter C. Slocock Ltd.) **A.M.** 11th May, 1953: A hardy hybrid Rhododendron. Plant vigorous, 3 ft. high, 3¼/4 ft. spread, compact habit, very free flowering, dark dull green foliage. Flower truss 7 in. diameter, 6 in. high, flattened dome shape, 12–14 flowers per truss. Corolla 3½ in. diameter, 2 in. long, open funnel shaped. White flushed Primrose Yellow (H.C.C. 601/2) on throat and upper petal, buds cream tinged mauvy pink, stamens white, anthers light brown. (727)

'Princess'. (Raised, introduced and sent by Messrs. Walter C. Slocock Ltd.) **A.M.** 26th May, 1953: A deciduous Azalea. Plant very vigorous, 6½ ft. high, 7 ft. spread, erect, free flowering, light green foliage. Flower truss 5¾ in. diameter, 6 in. high, almost globular shaped, 15–20 flowers per truss with some trusses having up to 30 flowers. Corolla 2¼ in. diameter, 2¼ in. long, tubular opening to much expanded funnel shape, Carmine Rose (H.C.C. 621/1) with paler streak along centre of petal, with a blotch on upper petal at throat of Maize Yellow (H.C.C. 607). (654)

'Purple Emperor'. (Raised, introduced and sent by Messrs. Knap Hill Nursery Ltd., Woking, Surrey.) **A.M.** 26th May, 1953: A hardy hybrid evergreen Rhododendron. Plant vigorous, 6½ ft. high, 4 ft. spread, free flowering, dark green slightly glossy foliage. Flower truss 7 in. diameter, 5 in. high, dome shape, 17–20 flowers per truss. Corolla 3 in. diameter, $2\frac{1}{10}$ in. long, open funnel shaped, petals waved with margins frilled, a shade of purple near Doge Purple (H.C.C. 732/3) getting paler towards throat, upper petal speckled black at throat. (739)

'Redshank'. (Raised, introduced and sent by Messrs. Knap Hill Nursery Ltd.) **A.M.** 26th May, 1953: A deciduous Azalea. Plant vigorous, 3½ ft. high, 4½ ft. spread, loose growing, free flowering, medium green glossy foliage. Flower truss 3½ in. diameter, 3½ in. high, dome shape, crowded, 15–20 flowers per truss with some trusses having up to 30 flowers. Corolla 2¼ in. diameter, $1\frac{9}{10}$ in. long, open funnel shape with the margins of the tips of the petals waved, Tangerine Orange (H.C.C. 9/2) veined and flushed Nasturtium Red (H.C.C. 14/1) with a large blotch on upper petal at throat of Indian Yellow (H.C.C. 6/1). (783)

'Ribera'. (sent by Messrs. Sunningdale Nurseries) **A.M.** 11th May, 1953: A *rustica flore pleno* Azalea. Plant vigorous, 3 ft. high, 3 ft. spread, upright, rather straggly, light yellowy green foliage. Flower-truss 3½ in. diameter, 1½ in. high, very flat dome shape, 16–18 flowers per truss. Corolla 1½ in. diameter, 1 in. long, tubular campanulate, Camellia Rose (H.C.C. between 622/2 and 622/3) slightly fading towards tips of the petals. (920)

'Sakata Red'. (Growing in R.H.S. collection of plants at Wisley.) **A.M.** 6th May, 1952: A Kurume Azalea. Plant vigorous, 1 ft. high, 2 ft. spread, spreading, free flowering, bright medium green, glossy foliage. Truss 2–3 flowered. Corolla 1¾ in. diameter, 1¼ in. long, open funnel shape with margins of petals reflexed, near Geranium Lake (H.C.C. 21).

'Spek's Orange'. (Raised, introduced and sent by Mr. Jan Spek, Boskoop, Holland.) **F.C.C.** 26th May, 1953: A deciduous Azalea. Plant vigorous, 3½ ft. high, 4 ft. spread, compact, very free flowering, light green foliage. Flower truss 5½ in. diameter, 4 in. high, almost globular, 8–12 flowers per truss. Corolla 2½ in. diameter, 2 in. long, very open funnel shape, a shade near Poppy Red (H.C.C. 16/1) with upper petals slightly darker and having a greenish blotch, buds deep orange. **A.M.** 1948. (743)

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INDEX

Figures in Clarendon refer to illustrations.
An asterisk denotes award after trial at Wisley. (a) denotes an Azalea.