Vol. III., No. II., 1926.

The Rhododendron Society Notes.

REPRINTED BY
THE PACIFIC RHODODENDRON SOCIETY

Acknowledgements

TO THIS ONLINE EDITION

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In particular, we are indebted to Fred Whitney, the last remaining officer of the Pacific Rhododendron Society which produced and published the facsimile edition in 1976, who has so graciously allowed it to be scanned to create the current version.

RHODODENDRON, CAMELLIA
& MAGNOLIA GROUP

A ROYAL HORTICULTURAL SOCIETY GROUP

2017

THE PACIFIC RHODODENDRON SOCIETY

"Dedicated to the Hobbiest and Home Gardeners"

Foreword

The Pacific Rhododendron Society has reprinted the Rhododendron Notes in an effort to further the knowledge of the Genus Rhododendron by those enthusiasts with an avid interest in the history, exploration and biographical sketches contained herein.

The Rhododendron Notes are offered to the end that the reader may more easily understand the progress encouraged by those who contributed the wealth of information contained in these volumes, thereby making clear our understanding of the Genus Rhododendron today.

The Society wishes to gratefully acknowledge the efforts on our behalf by the following persons and organizations: Dr. R. Shaw, Curator and M.V. Mathew, Librarian of the Royal Botanic Garden Edinburgh, Scotland, for providing the missing numbers; Lord Aberconway and John Cowell, Secretary of the Royal Horticultural Society, for certain photocopies and other considerations, Sir Giles Loder and Sir Edmund de Rothchild for their esteemed counsel, and to Thomas V. Donnelly our printer.

Our greatest appreciation to Dan E. Mayers of Lorien, Wadhurst, England for providing the originals and the inspiration. Without his assistance this project would never have become a reality.

The Pacific Rhododendron Society
1976

The Pacific Rhododendron Society
9025 Waverly Drive S.W.
Tacoma, Washington 98499

Printed in the United States of America.

NOTES

CONTRIBUTED BY

MEMBERS OF THE SOCIETY

FOR THE YEAR

1926

All communications regarding the publications of the Rhododendron Society should be made to Charles Eley, Esq., East Bergholt, Suffolk.

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MEMBERS' NOTES FOR THE YEAR 1926.

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The Rhododendron Society Notes.

THE RHODODENDRON SOCIETY'S FIRST SHOW, APRIL 27, 1926.

The Rhododendron Society is to be congratulated on the success of the first Exhibition of Rhododendrons, which was held at the Hall of the Royal Horticultural Society, Vincent Square, on 27th April 1926. Any doubts which may have occurred to the members as to the need for such an exhibition, or of its popularity, must have been entirely dispelled by the enthusiasm of the large numbers of visitors who attended from the opening hour of the Show till its close. The exhibits were so numerous that the accommodation was taxed to its full in providing space for all the entries staged. The display of colour could hardly have been excelled, and the popularity of Rhododendrons in our gardens at the present time was made evident to all. In a walk round the hall the exhibition demonstrated the wonderful range of colour and size of flower obtainable in one genus of plants, from the tiny heads of bloom in the Lapponicum series to the magnificent inflorescence and individual flowers of the Aucklandii type and hybrids. Many species shown had never previously been brought to the notice of the public, and in this way the efforts of the Society not only provided a gorgeous display, but to the uninitiated must necessarily have proved of considerable educational value to the gardener and amateur alike. Perhaps the feature attracting most interest was that of the class for the best group of Rhododendrons staged by an amateur, and which was keenly contested. On examining the groups staged, the opinion was forced upon one that a class devoted exclusively to species might with advantage have been added to the schedule. By doing so, not only would the exhibits have been more easily judged, but also, with the great interest attached to the numerous new species which are now reaching their flowering age, visitors would more easily have found any particular species they desired to see.

The collection arranged by Lady Aberconway and the Hon. H. D. M'Laren was awarded first place, gaining the Silver Challenge Cup and Silver-Gilt Medal. The plants and cut blooms were admirably arranged and of good quality, including representatives of many new species, and a finely grown specimen plant of Rh. Williamsianum was awarded the prize for the best plant exhibited.

Mr. Lionel de Rothschild's and Mr. A. M. Williams's groups were placed as equal seconds. The former's group contained some remarkably fine hybrids, of large size and texture and lovely colouring, notably Rh. Loderi and Rh. Kewense × Rh. Thomsonii.

Probably the finest collection in number of species was brought by Mr. A. M. Williams. This comprehensive exhibit included, to mention only a few, Rh. haematodes, Rh. litiense, Rh. croceum, Rh. Souliei, Rh. Williamsianum, Rh. Fittianum, and numerous examples of the Triflorum and Lapponicum series. His Rh. dichroanthum was also particularly fine.

The fourth prize was shared by Lady Loder and Mr. Barclay Fox, both of whom staged some remarkable hybrids of good colours and size.

In the class for twelve hybrids Lady Loder gained first place with some magnificent trusses of blooms, among which were Rh. LODERI var. King George, var. Coral, Loder's White, Leonardslee Brilliant. Lady Aberconway, who was second, also staged some specially good hybrids.

The first prize for three species went to Mr. P. D. Williams for almost perfect Rh. ARBOREUM (red), Rh. AUCKLANDII, and Rh. BURMANICUM; while Sir John Ramsden was second with Rh. FALCONERI, Rh. ROYLEI, and Rh. THOMSONII.

In the class for three hybrids not of identical parentage Mr. E. J. P. Magor and Sir John Ramsden shared the first and second prizes.

Mr. P. D. Williams with a beautiful form of Rh. DECORUM gained first prize in the class for a single species.

The best hybrid was one from Mrs. Lindsay Smith. This was a cross from Rh. LODERI × Rh. AUCKLANDII.

In the classes for single trusses of species the following gained first prizes:—

Rh. Falconeri Rh. Wightii	Mrs. Tremayne.
Rh. fictolacteum	Mr. G. A. Johnstone.
Rh. Aucklandii	Mrs. Bolitho, Trewidden.
Rh. arboreum	Mr. P. D. Williams.
Rh. niveum	Mr. G. W. E. Loder.
Rh. orbiculare	Mr. Lionel de Rothschild.
Rh. campylocarpum	Mr. G. W. E. Loder.
Rh. neriiflorum	Mr. Lionel de Rothschild.
Rh. Augustinii	Mr. E. J. P. Magor.
Rh. Nuttallii	Lord Swaythling.
Rh. yunnanense	Mr. J. B. Stevenson.

In the single-spray class of Chinese or Himalayan alpine species Lady Aberconway was successful with Rh. SCINTILLANS, Rh. SARGENTIANUM, and Rh. SPHAERANTHUM. With Rh. FRAGRANTISSIMUM Mr. P. D. Williams was first in the class for a sweet-scented species.

For a deciduous species Mr. G. W. E. Loder was first with Rh. SCHLIPPENBACHII.

For the best cross between Rh. AUCKLANDII and another species Mr. C. E. Heath was successful with Rh. LODERI; while the best truss of any hybrid between Rh. AUCKLANDII and a hybrid came from Lady Aberconway.

First awards were gained by Lord Swaythling for a Rh. THOMSONII hybrid, Mr. P. D. Williams for a Rh. CAMPYLOCARPUM hybrid, and Mr. J. C. Williams for a Rh. CINNABARINUM hybrid.

For the best six plants of Rhododendron grown in pots or the open ground Mr. Rothschild was first, his plants including Rh. GLORY OF LITTLEWORTH, Rh. ISABELLA MANGLES, and other good hybrids. The same exhibitor carried off the first prize for the best three alpine Rhododendrons—here Rh. CALOSTROTUM was conspicuous.

The seventeen special classes, added to those contained in the original schedule, added greatly to the interest of the Show, and in some classes brought

a keen competition. Some very fine forms of individual species were staged, and to a considerable number of the visitors attending the Show this was probably their first opportunity of seeing flowers of the newer and rarer species of the genus. The first prizes in these special classes were awarded as follows :—

One truss of Rh. APODECTUM or Rh. DICHROANTHUM—Mr. A. M. Williams; with Rh. DICHROANTHUM.

One truss of Rh. GRIERSONIANUM—Mr. J. C. Williams.

One truss of Rh. SOULIEI—Lady Aberconway.

One truss of subseries Adenopodum—Mr. J. C. Williams; awarded for a good-coloured form of Rh. ARGYROPHYLLUM.

One truss of Barbatum series—Mr. J. C. Williams; awarded for Rh. BARBATUM.

One truss of Falconeri series—Mr. J. C. Williams; awarded for Rh. GALACTINUM.

One truss of Cinnabarinum series—Lady Loder; awarded for Rh. CINNABARINUM.

One truss of Irroratum series—Mr. E. J. P. Magor; awarded for Rh. MAGORIANUM.

One truss of Metternichii series—Mr. J. C. Williams; awarded for Rh. SMIRNOWII.

One truss of Taliense series—Mr. J. C. Williams; awarded for Rh. FABERI.

One truss of Thomsonii series excluding Rh. THOMSONII and Rh. CAMPYLOCARPUM—Mr. A. M. Williams; awarded for Rh. CROCEUM.

One truss of any subseries of Trifforum series—Mr. J. B. Stevenson; awarded for Rh. OREOTREPHES.

The two classes arranged for six vases of cut specimens in flower of evergreen and deciduous shrubs and trees suitable for growing with Rhododendrons brought some fine examples of flowering plants, which afforded an almost welcome relief from the abundance of flower of Rhododendrons. Mrs. Bolitho, who was first in the Evergreen class, had fine examples of EMBOTHRIUM COCCINEUM, DRIMYS WINTERI, and the fragrant ILLICIUM RELIGIOSUM and others in a good variation of colour. In the Deciduous class Colonel Stephenson Clarke was successful with well-flowered sprays of Japanese Cherry, the Chinese STAPHYLEA COLCHICA, and Magnolias.

The Royal Horticultural Society Floral Committee awarded a First Class Certificate to Rh. HAEMATODES shown by Mr. A. M. Williams. The specimen shown was of fine size, substance, and colour.

Awards of Merit were also awarded for Rh. CROCEUM of the subseries Soulici, also from Mr. A. M. Williams.

Rh. CAMPYLOCARPUM × Rh. FORTUNEI: this hybrid, which in colour seemed to partake most from the latter parent, came from the garden of Lord Swaythling.

Rh. ASTROCALYX: another member of the subseries Soulici, of a pale yellowish colour and the rather saucer-shaped flowers of this group.

Rh. MRS. A. M. WILLIAMS from Messrs. Wallace & Co., and Rh. SIR JOHN RAMSDEN from Messrs. Waterer, Sons & Crisp, both good in inflorescence and colour, were selected for this award by the Committee.

The groups staged by nurserymen were meritorious, and contained good examples of both species and hybrids. That of Messrs. R. Gill & Co., which was successful in securing first prize, appeared rather crowded, this being probably due to lack of space allowable to each competitor. In this group the specimens of Himalayan species were outstanding, those of Rh. Dalhousiae, Rh. Thomsonii, Rh. Nuttallii, Rh. Roylei being particularly noticeable. Some good Rh. Aucklandii hybrids also were staged.

Messrs. Waterer, Sons & Crisp were second with a good group arranged in the centre of the hall, chiefly of garden hybrids, conspicuous among them being Rh. Sir John Ramsden and other better known crosses of proved popularity.

The third prize went to Messrs. Wallace & Co. In this group Rh. charitostreptum, one of the Campylogynum series, was exhibited and viewed with interest, as well as the varied hybrids, including that named Mrs. A. M. Williams, of good size and a pleasing pinkish colour, selected for an Award of Merit by the Floral Committee. There were also attractive groups from Messrs. W. C. Slocock, Messrs. C. B. Van Ness & Son, Messrs. R. Veitch & Son, Messrs. Hillier & Sons, Mr. Reuthe, and Messrs. R. & G. Cuthbert, who with a hybrid Rh. Kaempferi in considerable number produced an almost dazzling colour effect.

R. L. HARROW.

The Rhododendron Society Notes.

AZALEAS IN THE ARNOLD ARBORETUM.

Azaleas are the gayest of plants, and the flowers of no other group of hardy shrubs present such a range of brilliant colours—white, pink, yellow, orange, salmon to flaming red and scarlet, in tones of great purity and vividness. Many species are delightfully fragrant, and all are abundantly floriferous. The first each year to flower in the Arnold Arboretum is AZALEA MUCRONULATA, which opens its blossoms in April at the blush of early spring; the last is A. VISCOSA, blooming in July. In height they average from 5 to 8 feet, but with age may grow 10 or 15 feet tall; all are of shapely habit, branching freely, and are usually broader than they are high. Some, like A. VASEYI, are partial to moist places; others, like A. CALENDULACEA, flourish on dry banks. But they are all good-natured, and easily adapt themselves to a variety of situations. They may be planted in full exposure or under the shade of trees. Most of them are ideal when associated with deciduous trees, especially Oaks, either on the fringe of woodlands or in glades. The flowers of A. KAEMPFERI are apt to bleach in full sun, and this sort is seen to best advantage under the overhanging branches of Fir or Pine. So far as I know, none of the really hardy species are subject to disease of any kind, nor are they attacked by insect pests. They demand, however, a lime-free soil.

The two great regions of the world that have supplied our gardens with Azaleas are eastern North America and north-eastern Asia. There are several Azaleas which have their home in China, there is one (A. PONTICA) in Asia Minor and parts of Europe, and two in western North America. The American species and that from Asia Minor thrive in English gardens, where many of them have been growing for more than two centuries. The Chinese species must be classed as tender; and those of Japan and continental north-eastern Asia are not altogether a success under the gray English skies, and flourish far better in New England. The difference in the amount of summer heat enjoyed probably accounts for this difference in behaviour. Nevertheless, many of the Oriental Azaleas are so beautiful as to deserve more thorough and extended trials in British gardens. Eastern North America is fortunate in having among its flowering shrubs many species of Azaleas. The centre of their distribution is the Appalachian mountain region, but they are found north as far as Vermont and Quebec, south to Florida, and west into Texas. If Rhodora be included, the range is extended into Labrador and Newfoundland. In all some fifteen species with many varieties are known, though some of these are critical and only recently recognised. Three of the species (A. NUDIFLORA, A. VISCOSA, and A. CANESCENS) have been cultivated in European gardens for about two hundred years, seeds having been received from John Bartram by Peter Collinson some time between 1725 and 1730. These Azaleas have never lost their popularity in England, though hybridisation has been carried so far that the pure species are now rare in gardens, and are confused with the hybrids.

My earliest recollection of hardy Azaleas is of a large oval-shaped bed in a garden enclosed within a Beech-hedge. The plants grew thickly together, and beneath them flourished Snowdrops, Crocus, Scillas, Grape-hyacinths, and other early spring-flowering bulbs. Later the Azaleas—Ghent hybrids and American species—furnished a galaxy of colour, and the fragrance and beauty of the scene

is still vivid in my memory. And this is the right way to plant Azaleas; thickly, and in clumps or groups, for they are surface-rooting plants, and when growing close together keep the soil about them cool and properly aerated.

Azaleas have been very extensively planted in the Arnold Arboretum, and from the end of April until mid-July produce a gorgeous display of colour. The collection proper occupies a western hill-slope, but there are groups among Oak trees, and clumps here and there by the roadsides and by the edge of ponds. As arranged these Azaleas give arresting bits of colour in all sorts of unexpected places. Here and there a flame of orange or red, a patch of yellow, a drift of pink, or a sheet of the purest white. In some places, hidden among other bushes, their exhaled fragrance leads a visitor to the discovery of isolated plants of Pinxter Flower or Wild Honeysuckle. Azaleas lend themselves to all sorts of surprises, and add alluring interest to a stroll through the grounds. Looking from vantage points through vistas of Oak and Beech, a blaze of brilliant colour fascinates the beholder. Flaming drifts of abundant blossom, a vision of ecstatic delight. A rapturous scene such as fancy associates with tropic lands. Flora dressed in her gayest robes, steeped in honeyed scents, voluptuous, alluring, irresistible.

First of the Azaleas to burst into blossom is A. MUCRONULATA, native of Korea and other parts of north-eastern Asia. This is a shrub of loose branching habit with rigid, twiggy stems thickly crowded with clusters of rose-coloured flowers. The leaves are dotted with tiny glands, and when crushed emit a pleasant fragrance; in the autumn they change to yellow and bronzy crimson. Seldom exceeding 6 feet in height, this Azalea is partial to dry and stony situations. The flowers are remarkably resistant to late frosts, but best results are obtained in positions sheltered from strong winds.

Of singular elegance and charm is A. VASEYI, with star-shaped pure pink flowers. Rather sparse in habit, it loves a moist situation, and is happiest near a pond or stream where tall Willows or other deciduous-leafed trees break the sun's rays and the water reflects its beauty. Though restricted in a wild state to the high mountains of western North Carolina, it is perfectly hardy in the British Isles. The typical form has pink flowers, but there is also one with pure white blossoms.

Vying with Vasey's Azalea in the pink purity of its blossoms is A. SCHLIPPENBACHII, whose loveliness is beginning to be noised abroad. This has broad funnel-form, fragrant flowers, each from 2½ to 3 inches across, produced in terminal clusters, usually in May before the leaves unfold. It is a sturdy bush with rigid, twiggy branches, and I have seen it as much as 15 feet tall, though usually it is less than half this height. The leaves are obovate, from 2 to 4 inches long, and in the fall change to yellow, orange, and crimson. Known from two isolated mountains in north Japan, and one or two localities in north-eastern Manchuria, it is one of the commonest shrubs in Korea, where in thin woods it is often the dominant undergrowth. On some of the mountains it is extraordinarily abundant, presenting in June the wonderful sight of mile upon mile of drifts of purest pink. In Korea, through thin woods of Oak with gray and rose-tinted unfolding leaves, I have walked for hours among a myriad blossoms of this beautiful Azalea.

An old favourite in gardens is the floriferous Pontic Azalea (A. PONTICA) with its exquisitely scented blossoms. This Eurasian species is a vigorous-growing shrub from 6 to 12 feet tall, wide-spreading, with rigid branches and hairy

oblong leaves. The flowers are clear yellow, with outthrust stamens and pistils, and are crowded together in clusters at the ends of the shoots. This Azalea has been much used by the hybridist, and crosses between it and various American species have originated the polychromatic "Ghent Azaleas," without which our gardens would lack much early summer fragrance and colour.

Familiar to many is A. NUDIFLORA, the Wild Honeysuckle or Pinxter Flower, widespread in eastern North America from Massachusetts southward. This is an excellent garden shrub growing from 2 to 6 feet tall, and densely set with thin branches, and bearing in profusion clusters of fragrant flowers, pale to crimson-pink in colour, with lobes spreading from a slender hairy tube, the stamens and pistil outthrust. It thrives in any situation, and never fails to put forth a wealth of sweetly fragrant blossoms. Two other species with pink and rose-coloured flowers are the closely related A. ROSEA and A. CANESCENS. The first-named is the most northern of American Azaleas, being found from Quebec south, while A. CANESCENS is confined to North Carolina. Both are broad, irregularly branching shrubs from 4 to 15 feet tall, with fragrant tubular flowers opening before the leaves unfold.

About the end of the first week in May, A. POUKHANENSE commences to blossom. This is the common Azalea of Korea from the central parts south, and was first introduced into cultivation by the Arnold Arboretum as late as 1905. In gardens it is a densely branched, rounded, or flat-topped shrub, from 1 to 4 feet tall, and more through, with terminal heads of rosy purple flowers rich in delightful fragrance. It is partly or wholly deciduous, and in the autumn the leaves are tinted orange to crimson. The double-flowered A. YODOGAWA, now frequent in gardens, is nothing but a form of this Korean Azalea, though its habit is more lax.

A Japanese species with rich magenta-coloured flowers is A. RETICULATA, better known as A. RHOMBICA, which varies in habit from a low twiggy, flat-topped bush scarcely a yard high to a loosely branched shrub 18 feet tall. Placed by itself with a foil of dark evergreen behind, this Azalea in blossom is strikingly handsome.

For vividness of colour and spectacular beauty A. KAEMPFERI, A. JAPONICA, and A. CALENDULACEA must be granted pride of place. In the Arnold Arboretum may be seen broad masses of these Azaleas, and in late May and early June these are amazing sheets of flaming colour, illuminating the landscape from afar. From every vantage point they compel attention, and visitors are irresistibly drawn toward them.

Kaempfer's Azalea is the common Mountain Azalea of Japan, where it is abundant from the extreme south far into the northern part of the country, emblazoning the wayside and mountain slopes from sea-level up to 4000 feet high with unscented flowers varying in colour from salmon to rich red. The flowers last longer, and are seen to best advantage, when growing in the partial shade of Conifers and other evergreen plants. In full sun their brilliance pales, the colours bleach, and the blossoms fade more quickly. In Massachusetts this plant is wholly deciduous, but further south the leaves are retained through the winter. Though discovered late in the seventeenth century, this Azalea was not brought into cultivation until 1892, when Professor Sargent sent seeds to the Arnold Arboretum. With us it is perfectly hardy, extraordinarily flori-

ferous, and among the most valuable of all exotic plants. In England, owing to less summer heat, it has not proved so tractable, flowering sparsely, and often suffering from late spring frosts.

More sturdy of habit, with rigid, ascending stems, is A. JAPONICA, also widespread on the mountains of Japan. This has broad, funnel-shaped flowers, each about 2 inches across, sweetly fragrant, and aggregated 6 to 12 together at the end of every shoot. The colour varies from orange-red to flame-red, or almost red, and there is a form (*aurea*) with soft yellow blossoms. At its maximum this is a shrub 10 feet tall and 5 feet through, but more usually it is from 4 to 5 feet high and as much in diameter. Vigorous of habit, free-flowering, and perfectly hardy, this handsome Azalea deserves the widest possible recognition. Very closely related is A. MOLLIS from China, with rich yellow flowers, but less hardy. By crossing these two species the hybrid race of "Mollis Azaleas," of which Anthony Koster is a typical example, have been brought into being. Some of these are perfectly hardy, and none more so than the handsome orange-yellow "Louisa Hunnewell."

The third of this group is the Flame Azalea of the Appalachian Mountains, and right well does it merit the name, for A. CALENDULACEA is one of the most gorgeous of all American shrubs. All who have seen it growing wild extol its beauty, and we who know it in gardens are captive to its brilliance. The colours range from yellow through orange to scarlet, and the flowers, which have little or no fragrance, open with or immediately after the unfolding of the leaves. This Azalea grows naturally in open woods and by the side of watercourses, and may be any height from 4 to 15 feet, and as much through. In gardens it is not particular in the matter of site, but massed on a bank or in thin Oak woods is most effective.

Before the last flowers of the Flame Azalea have fallen those of A. ARBORESCENS, another Appalachian species, commence to open. This is one of the loveliest of all the American Azaleas, with its large fragrant flowers, pale rose-colour in the bud, and the purest white when fully expanded. The stamens and pistil are exserted far beyond the spreading lobes of the tubular flowers, and being of a bright red-crimson colour add much to the beauty of the blossoms. It is a much-branched shrub, from 8 to 15 feet high, with dark-green leaves, lustrous above and pale below, and with an odour of newly mown hay. Unlike the preceding species, the leaves of this Azalea and those of A. VISCOSA are fully grown before the flowers appear.

Carrying the Azalea season well into July, and last of all to open its flowers, is A. VISCOSA, the Swamp Honeysuckle. This is an inhabitant of the swamps of the eastern part of America, from south-eastern Maine to South Carolina. An irregularly branching shrub from 3 to 15 feet tall, this Azalea as a garden plant is valuable for the delightful fragrance of its long-tubed, clammy, viscid, pure white flowers, and for their lateness.

As we have passed some of the different kinds in review their individual characteristics have been pointed out and appraised, but it is the extravagance of colour and wealth of blossom that impresses first, last, and all the time. Colour among flowers is like movement among animals, a virile expression of life. If this analogy be admitted, then Azaleas are rich in animation and vivacity.

E. H. WILSON.

ARNOLD ARBORETUM, HARVARD UNIVERSITY, 1926.

THE FOLLOWING NOTES HAVE BEEN CONTRIBUTED BY MR. H. F. TAGG, F.L.S., OF THE ROYAL BOTANIC GARDEN, EDINBURGH.

NUMERICAL INDEX TO RHODODENDRONS OF THE GRANDE SERIES COLLECTED BY MR. GEORGE FORREST, 1925.

Field Number.	Species Name.	Field Number.	Species Name.
26311	Rh. giganteum	26791	Rh. sidereum
26316=27346	,, protistum	27147	,, sidereum
26429=27614	,, protistum	27346=26316	,, protistum
26456	,, sinogrande	27355=27730	,, giganteum
26458=27673	,, sidereum	27614=26429	,, protistum
26468	,, sinogrande	27673=26458	,, sidereum
26633=27677	,, sidereum	27677=26633	,, sidereum
26634=27679	,, sidereum	27679=26634	,, sidereum
26647	,, sinogrande	27730=27355	,, giganteum
26663	,, sinogrande	27761	,, sidereum

SECOND LIST * OF THE SEED NUMBERS OF RHODODENDRONS COLLECTED BY MR. J. F. ROCK, WITH NAMES DETERMINED FROM THE EQUIVALENT NUMBERS ATTACHED TO THE DRIED SPECIMENS.

* A first list appeared in the *Rhododendron Society Notes*, vol. iii. (1925). p. 32.

Seed No.	Name.	Series and Subseries.
59029	cephalanthum, *Franch.*	Cephalanthum.
59030	haemaleum, *Balf. f. et Forrest*	Neriiflorum (Sanguineum).
59031	sanguineum, *Franch.*	,,
59033	cloiophorum, *Balf. f. et Forrest*	,,
59034	,, ,, var.	,,
59035	Seed number said to=specimen numbers 10900 and 10281 Specimen no. 10900 is sanguineum, *Franch.*, var. Specimen no. 10281 is didymum, *Balf. f. et Forrest*	,, ,,
59036	haemaleum, *Balf. f. et Forrest*, var.	,,
59037	himertum, *Balf. f. et Forrest*	,,
59038	citriniflorum, *Balf. f. et Forrest*	,,
59039	sanguineum, *Franch.*, var.	,,
59040	Seed number said to=specimen numbers 10905 and 8912 Spec. no. 10905 is chlanidotum, *Balf. f. et Forrest* Spec. no. 8912 is sanguineum, *Franch.*	,, ,,

Seed No.	Name.	Series and Subseries.
59041	roseotinctum, *Balf. f. et Forrest*	Neriiflorum (Sanguineum).
59042	trichomiscum, *Balf. f. et Forrest*	,,
59044	Seed number said to=specimen numbers 10909 and 10268	
	Spec. no. 10909 is epipastum, *Balf. f. et Forrest*	,,
	Spec. no. 10268 is temenium, *Balf. f. et Forrest*	,,
59045	aff. eclecteum, *Balf. f. et Forrest*	Thomsonii (Thomsonii).
59046	haemaleum, *Balf. f. et Forrest*	Neriiflorum (Sanguineum).
59047	Martinianum, *Balf. f. et Forrest*	Thomsonii (Dasycladum).
59050	rhaibocarpum, *Balf. f. et W. W. Sm.*	Thomsonii (Selense).
59051	Seed number said to=specimen numbers 10916 and 9125	
	Spec. no. 10916 is colletum, *Balf. f. et Forrest*	Lacteum (Lacteum).
	Spec. no. 9125 is a member of the Taliense series	Taliense (Taliense).
59052	hypolepidotum, *Balf. f. et Forrest*	Campylogynum (Brachyanthum).
59053	,, ,,	,,
59054	Wardii, *W. W. Sm.*	Thomsonii (Soulei).
59055	sanguineum, *Franch.*	Neriiflorum (Sanguineum).
59056	,, ,, aff.	,,
59057	floccigerum, *Franch.*	Neriiflorum (Haematodes).
59069	chaetomallum, *Balf. f. et Forrest*	,,
59070	,, ,,	,,
59074	,, ,,	,,
59076	hypolepidotum, *Balf. f. et Forrest*	Campylogynum (Brachyanthum).
59081	floccigerum, *Franch.*	Neriiflorum (Haematodes).
59083	sanguineum, *Franch.*	Neriiflorum (Sanguineum).
59084	aff. serpens, *Balf. f. et Forrest*	Neriiflorum Forrestii.
59087	gymnanthum, *Diels*	Irroratum.
59090	sanguineum, *Franch. forma*	Neriiflorum (Sanguineum).
59092	,, ,,	,,
59094	aff. eclecteum, *Balf. f. et Forrest*	Thomsonii (Thomsonii).
59096	sanguineum, *Franch. forma*	Neriiflorum (Sanguineum).
59097	aff. eclecteum, *Balf. f. et Forrest*	Thomsonii (Thomsonii).
59098	,, ,,	,,
59099	eclecteum, *Balf. f. et Forrest*	,,
59101	anisocalyx, *Balf. f. et Forrest*	,,
59102	aff. eclecteum, *Balf. f. et Forrest*	,,
59106	haemaleum, *Balf. f. et Forrest*	Neriiflorum (Sanguineum).
59107	aff. eclecteum, *Balf. f. et Forrest*	Thomsonii (Thomsonii).
59108	,, ,,	,,
59109	,, ,,	,,
59110	,, ,,	,,
59111	,, ,,	,,
59112	,, ,,	,,

Seed No.	Name.	Series and Subseries.
59113	aff. eclecteum, *Balf. f. et Forrest*	Thomsonii (Thomsonii).
59121	floccigerum, *Franch.*	Neriiflorum (Haematodes)
59125	Seed number said to specimen numbers 11078 and 8715	
	Spec. no. 11078 is telopeoides, undescribed	Thomsonii (Campylocarpum).
	Spec. no. 8715 is undetermined, but one of	Neriiflorum (Sanguineum).
59126	eclecteum, *Balf. f. et Forrest*	Thomsonii (Thomsonii).
59127	chaetomallum, *Balf. f. et Forrest*	Neriiflorum (Haematodes).
59128	haemaleum, *Balf. f. et Forrest*	Neriiflorum (Sanguineum).
59129	said to=specimen numbers 11083 and 8921	
	Spec. no. 11083 is ixeuticum, *Balf. f. et W. W. Sm.*	Barbatum.
	Spec. no. 8921 is iodes, *Balf. f. et Forrest*	Taliense (Roxicanum).
59144	said to=specimen numbers 11122 and 10358	
	Spec. no. 11122 is tritifolium, *Balf. f. et Forrest*	Taliense (Roxicanum).
	Spec. no. 10358 is dictyotum (undescribed)	Taliense (Sphaeroblastum).
59166	horaeum, *Balf. f. et Forrest*	Neriiflorum (Sanguineum).
59167	,, ,,	,,
59168	said to=specimen numbers 11158 and 10218	
	11158. We have no specimen of this number	
	Spec. no. 10218 is sanguineum, *Franch. forma*	,,
59169	himertum, *Balf. f. et Forrest*	,,
59170	pocophorum (undescribed)	Neriiflorum (Haematodes).
59171	chaetomallum, *Balf. f. et Forrest*	,,
59174	repens, *Balf. f. et Forrest*, var.	Neriiflorum (Forrestii).
59175	chaetomallum, *Balf. f. et Forrest*	Neriiflorum (Haematodes).
59176	sanguineum, *Franch. forma*	,,
59177	said to=specimen numbers 11177 and 10098	
	Spec. no. 11177 is didymum, *Balf. f. et Forrest*	Neriiflorum (Sanguineum).
	Spec. no. 10098 is haemaleum, *Balf. f. et Forrest*	,,
59178	hemidartum (undescribed)	Neriiflorum (Haematodes).
59179	aff. eclecteum, *Balf. f. et Forrest*	Thomsonii (Thomsonii).
59180	chaetomallum, *Balf. f. et Forrest*	Neriiflorum (Haematodes).
59181	pocophorum (undescribed)	,,
59190	,, ,,	,,

Seed No.	Name.	Series and Subseries.
59191	Genestierianum, *Forrest*	Campylogynum (Brachyanthum).
59201	irroratum, *Franch.*	Irroratum.
59208	said to=specimen numbers 11289 and 9533	
	Spec. no. 11289 is rhaibocarpum, *Balf. f. et W. W. Sm.*	Thomsonii (Selense).
	Spec. no. 9533 is rhaibocarpum, *Balf. f. et W. W. Sm.*	,,
59212	irroratum, *Franch.*	Irroratum.
59216	campylogynum, *Franch.*	Campylogynum (Campylogynum).
59220	irroratum, *Franch.*	Irroratum.
59236	probably gymnogynum, *Balf. f. et Forrest*	,,
59239	eritimum, *Balf. f. et W. W. Sm.*	,,
59242	,, ,,	,,
59248	,, ,,	,,
59249	,, ,,	,,
59251	said to=specimen numbers 11380 and 8262	
	Spec. no. 11380 is irroratum, *Franch*	,,
	Spec. no. 8262 is heptamerum, *Balf. f.*	,,
59252	eritimum, *Balf. f. et W. W. Sm.*	,,
59263	Traillianum, *Forrest et W. W. Sm.*	Lacteum.
59437	brunneifolium, *Balf. f. et Forrest*	Neriiflorum (Sanguineum).
59438	chaetomallum, *Balf. f. et Forrest*	,,
59441	cloiophorum, *Balf. f. et Forrest forma*	,,
59444	aff. sanguineum, *Franch.*	,,
59448	brunneifolium, *Balf. f. et Forrest*	,,
59449	dictyotum (undescribed)	Taliense (Sphaeroblastum).
59450	cloiophorum, *Balf. f. et Forrest*	Neriiflorum (Sanguineum).
59453	haemaleum, *Balf. f. et Forrest*	,,
59454	eclecteum, *Balf. f. et Forrest*	Thomsonii (Thomsonii).
59455	aff. citriniflorum, *Balf. f. et Forrest*	Neriiflorum (Sanguineum).
59456	haemaleum, *Balf. f. et Forrest*	,,
59458	aff. mesopolium, *Balf. f. et Forrest*	,,
59459	fulvastrum, *Balf. f. et Forrest*	,,
59460	pothinum, *Balf. f. et Forrest*	,,
59474	floccigerum, *Franch.*	Neriiflorum (Haematodes).
59479	megeratum, *Balf. f. et Forrest*	Boothii.
59483	didymum, *Balf. f. et Forrest*	Neriiflorum (Sanguineum).
59487	haemaleum, *Balf. f. et Forrest forma*	,,
59488	aff. eclecteum, *Balf. f. et Forrest*	Thomsonii (Thomsonii).
59490	,, ,,	,,
59491	repens, *Balf. f. et Forrest*, var.	Neriiflorum (Forrestii).
59492	aff. eclecteum, *Balf. f. et Forrest*	Thomsonii (Thomsonii).
59493	sanguineum, *Franch.*	Neriiflorum (Sanguineum).
59494	aff. eclecteum, *Balf. f. et Forrest*	Thomsonii (Thomsonii).

Seed No.	Name.	Series and Subseries.
59496	sanguineum, *Franch.*	Neriiflorum (Sanguineum).
59498	aff. sanguineum, *Franch.*	,,
59499	aff. eclecteum, *Balf. f. et Forrest*	Thomsonii (Thomsonii).
59500	cloiophorum, *Balf. f. et Forrest*	Neriiflorum (Sanguineum).
59501	aff. eclecteum, *Balf. f. et Forrest*	Thomsonii (Thomsonii).
59503	,, ,,	,,
59514	porphyroblastum, *Balf. f. et Forrest*	Taliense (Sphaeroblastum).
59525	gymnanthum, *Diels*	Irroratum.
59527	said to—specimen numbers 11149 and 9326	
	Spec. no. 11149 is undetermined	Lacteum (Levistratum).
	Spec. no. 9326 is undetermined	Taliense (Taliense).
59532	pocophorum (undescribed)	Neriiflorum (Haematodes).
59533	chaetomallum, *Balf. f. et Forrest*	,,
59535	caeruleoglaucum, *Balf. f. et Forrest*	Campylogynum.
59536	hemidartum (undescribed)	Neriiflorum (Haematodes).
59539	chaetomallum, *Balf. f. et Forrest*, var.	,,
59540	charitostreptum, *Balf. f. et Ward*	Campylogynum (Brachyanthum).
59542	chaetomallum, *Balf. f. et Forrest*	Neriiflorum (Haematodes).
59543	catacosmum (undescribed)	,,
59545	rhaibocarpum, *Balf. f. et W. W. Sm.*	Thomsonii (Selense).
59546	cloiophorum, *Balf. f. et Forrest*, var.	Neriiflorum (Haematodes).
59548	chaetomallum, *Balf. f. et Forrest*	,,
59549	horaeum, *Balf. f. et Forrest*	,,
59552	chaetomallum, *Balf. f. et Forrest*	,,
59555	didymum, *Balf. f. et Forrest*	,,
59556	probably gymnogynum, *Balf. f. et Forrest*	Irroratum.
59560	chaetomallum, *Balf. f. et Forrest*	Neriiflorum (Haematodes).
59579	irroratum, *Franch.*	Irroratum.
59581	,, ,,	,,
59582	,, ,,	,,
59586	agastum, *Balf. f. et W. W. Sm.*	,,
59611	crithmum, *Balf. f. et W. W. Sm.*	,,
59614	irroratum, *Franch.*	,,
59620	,, ,,	,,

DETERMINATIONS OF RHODODENDRONS OF THE CAMPYLOGYNUM SERIES.

1. Subseries Aureum.

Rh. aureum, *Franch.*

Delavay	Sept. 1890	Forrest	No. 13725	Forrest	No. 21778
Farrer	No. 1596	,,	,, 15583	,,	,, 22652
Ward	,, 5446	,,	,, 20880	,,	,, 22653
Forrest	,, 11727	,,	,, 21463	,,	,, 23006
,,	,, 12376	,,	,, 21707	,,	,, 23291

RH. AUREUM, *Franch.* (continued).

Rock No. 8474=11299
,, ,, 9506
Rock No. 11299=8474
,, ,, 11308

RH. SPODOPEPLUM, *Balf. f. et Farrer.*

Farrer No. 1645

RH. TEPHROPEPLUM, *Balf. f. et Farrer.*

Farrer No. 1567
Forrest ,, 20230
,, ,, 21706
,, ,, 22801
,, ,, 25572=25775
,, ,, 25644=25766
,, ,, 25714=25820
,, ,, 25766=25644
,, ,, 25775=25572
,, ,, 25820=25714
Forrest No. 26431=27611
,, ,, 26439=27455
,, ,, 26457=27670
,, ,,? 26473=foliage only
,, ,, 27455=26439
,, ,, 27611=26431
,, ,, 27670=26457
Rock ,, 10213
,, ,, 11228

2. SUBSERIES BOOTHII.

RH. CERINUM, *Balf. f. et Forrest.*

Farrer No. 813
,, ,, 1550
Forrest ,, 17592
Forrest No. 18125
,, ,, 18216
,, ,, 24229

RH. COMMODUM, *Balf. f. et Forrest.*

Farrer No. 861
Forrest ,, 17866
,, ,, 18152
,, ,, 18231
,, ,, 18787
,, ,, 24131
,, ,, 25340
,, ,, 25637=25754
Forrest No. 25754=25637
,, ,, 26113
,, ,, 26422=27622
,, ,, 26447=27458
,, ,, 26635
,, ,, 27458=26447
,, ,, 27622=26422

AFF. RH. COMMODUM, *Balf. f. et Forrest. Foliage only.*

Forrest No. 25631
,, ,, 25851
Forrest No. 25852

RH. MEGERATUM, *Balf. f. et Forrest.*

Forrest No. 12942
,, ,, 13574
,, ,, 14059
,, ,, 15288
,, ,, 16558
,, ,, 17352
,, ,, 18942
Forrest No. 19570
,, ,, 20332
,, ,, 20906
,, ,, 21701=22834
Rock ,, 8787
,, ,, 9064
,, ,, 9116=11006

Rh. monanthum, *Balf. f. et W. W. Sm.*

Farrer No. 1343
Forrest ,, 951
,, ,, 19844
,, ,, 19956
,, ,, 20879
,, ,, 21825=22654
Forrest No. 22654=21825
,, ,, 25617=25858
,, ,, 25858=25617
Ward ,, 3722
,, ,, 5478

Rh. sulfureum, *Franch.*

Delavay No. 2212
Forrest ,, 4143 A
,, ,, 4143 B
,, ,, 6777
,, ,, 12434
,, ,, 15589
,, ,, ?15594 foliage only
Forrest No. 15770
,, ,, 15782
,, ,, 16005
,, ,, 17737
,, ,, 19384
Rock ,, 3142
,, ,, 7651 forma

Rh. tapeinum, *Balf. f. et Farrer.*

Farrer No. 938
,, ,, 1566
Ward No. 3095
,, ,, 3196

Rh. theiochroum, *Balf. f. et W. W. Sm.*

Forrest No. 11910
,, ,, 12114
,, ,, 24235
Forrest No. 26303
,, ,, 26414

3. Subseries Brachyanthum.

Rh. brachyanthum, *Franch.*

Delavay No. 159
Forrest ,, 4153
,, ,, 6763
,, ,, 11580
Forrest No. 15487
Ward ,, 5437
,, ,, 5481

Rh. charitopes, *Balf. f. et Farrer.*

Forrest No. 19872
,, ,, 20835
,, ,, 25570
,, ,, 25581
Forrest No. 25789
,, ,, 25808
,, ,, 25847
Farrer ,, 1627

Rh. charitostreptum, *Balf. f. et Ward.*

Rock No. 59540=10194=11172 Ward No. 3302

Rh. Genestierianum, *Forrest.*

Farrer No. 1531
Forrest ,, 17824
Forrest No. 18329
,, ,, 18746

Rh. Genestierianum, *Forrest* (continued).

Forrest	No.	19917	Forrest	No.	26005
,,	,,	20845	,,	,,	26419
,,	,,	21692	,,	,,	26808
,,	,,	22655	,,	,,	27378
,,	,,	24831	,,	,,	27758
,,	,,	25422	Rock	,,	59191=11202=10149

The following three gatherings are allied to Rh. Genestierianum. They may be a form of that species, or a new species, but the material is imperfect. F. 26014 is said to have white flowers :—

Forrest	No.	24097	Forrest	No.	26014
,,	,,	24285			

Rh. hypolepidotum, *Balf. f. et W. W. Sm.*

Farrer	No.	1668	Forrest	No.	19216	Soulié No. 1027
Forrest	,,	692	,,	,,	19541	
,,	,,	13302	,,	,,	22723	
,,	,,	13550	,,	,,	25575	
,,	,,	14052	,,	,,	25843	
,,	,,	19190	Rock	,,	59052=10917= 8831	
,,	,,	19198	,,	,,	59053=10919= 9083	
,,	,,	19207	,,	,,	59076=10991=10068	

Rh. shweliense, *Balf. f. et Forrest.*

Forrest	No.	18151	Forrest	No.	24154

4. Subseries Campylogynum.

Rh. caeruleo-glaucum, *Balf. f. et Forrest.*

Forrest	No.	19181	Rock	No.	10073
,,	,,	19871	,,	,,	59535=10176=11160
Rock	,,	9081			

Rh. campylogynum, *Franch.*

Delavay	No.	122	Forrest	No.	14865
,,	,,	271	,,	,,	23288
Forrest	,,	4151	,,	,,	23289
,,	,,	4152	,,	,,	25706
,,	,,	6760	Rock	,,	6354
,,	,,	13518	,,	,,	59216=9482=11305
,,	,,	13709	Soulié	,,	1026

Rh. charopoeum, *Balf. f. et Farrer.*

Farrer	No.	1670			

Rh. cremastum, *Balf. f. et Forrest.*

Forrest	No.	14266	Forrest	No.	18665

RH. DAMASCENUM, *Balf. f. et Forrest.*

Forrest	No.	475	Forrest	No.	20781
,,	,,	504	,,	,,	20954
,,	,,	14004	Ward	,,	793
,,	,,	19481			

RH. GLAUCO-AUREUM, *Balf. f. et Forrest.*

Forrest	No.	15908	Forrest	No.	22300
,,	,,	17544	,,	,,	24321
,,	,,	18007	,,	,,	24587
,,	,,	18030	,,	,,	26765
,,	,,	18754	,,	,,	27357

RH. MYRTILLOIDES, *Balf. f. et Ward.*

Farrer	No.	1046	Forrest	No.	27118
Forrest	,,	24570	,,	,,	27503
,,	,,	24955	,,	,,	27569
,,	,,	25430	,,	,,	27656
,,	,,	26988	Ward	,,	1785
,,	,,	26991	,,	,,	3172

RHODODENDRONS OF THE FALCONERI SERIES.

A list of specimens collected in China, Burma, and south-eastern Tibet, with notes on the distribution of the species.

In 1919 Sir Isaac Bayley Balfour contributed to the *Notes* of the Society a paper on the Falconeri Series, and gave the distribution of the species as indicated by the specimens then in his possession. Since that time the many gatherings made by Forrest and Rock have extended our knowledge of the distribution of some of the species, and they have given us a number of distinct geographical forms. The larger range of specimens makes clear also that some of the characters used by Sir Isaac in distinguishing certain of the species are less constant than the material then available suggested. Thus transitional forms appear to link together RH. BASILICUM, RH. MEGAPHYLLUM, and RH. REGALE, and in the list below these three are treated as an aggregate species.

RH. ARIZELUM, *Balf. f. et Forrest.*

Collector.	Locality.	Lat. N.	Long. E.	Date.
Farrer				
863	Hpimaw Pass.			April 1919
1549	Chaw-chi Pass.			May 1920
Forrest				
15857	Shweli—Salwin Pass.	25° 20′		July 1917
15898	,, ,,	25° 30′		June 1917
15982	,, ,,			Oct. 1917

RH. ARIZELUM, *Balf. f. et Forrest* (continued).

Collector.	Locality.	Lat. N.	Long. E.	Date.
Forrest				
17872	N'Maikha—Salwin divide.	26° 20′		May 1919
17969	Shweli—Salwin divide.	25° 40′		May 1919
18028	N'Maikha—Salwin divide.	26° 30′		June 1919
18045	,, ,,	26° 20′		June 1919
18376	,, ,,	26° 30′		Aug. 1919
18513	,, ,,	25° 10′		Sept. 1919
18766	,, ,,			Nov. 1919
18822	,, ,,			Nov. 1919
20079	Salwin—Kiu-chiang divide.	28° 24′	98° 24′	July 1921
20105	,, ,,	28° 24′	98° 24′	Aug. 1921
20120	,, ,,	28° 24′	98° 24′	Sept. 1921
20306	,, ,,	28° 24′	98° 24′	Sept. 1921
20365	,, ,,	28° 24′	98° 24′	Sept. 1921
20366	,, ,,	28° 24′	98° 24′	Sept. 1921
20381	,, ,,	28° 24′	98° 24′	Sept. 1921
20817	,, ,,	28° 24′	98° 24′	Oct. 1921
20820	,, ,,	28° 24′	98° 24′	Oct. 1921
20821	,, ,,	28° 24	98° 24′	Oct. 1921
21861	,, ,,	28° 50′	98° 15′	June 1922
21862	,, ,,	28° 18′	98° 27′	June 1922
21863	,, ,,	28° 18′	98° 27′	June 1922
21864	,, ,,	28° 48′	98° 17′	June 1922
21865	,, ,,	28° 48′	98° 17′	June 1922
21866	,, ,,	28° 50′	98° 15′	June 1922
21867	,, ,,	28° 50′	98° 15′	June 1922
21868	,, ,,	28° 50′	98° 15′	June 1922
21869	,, ,,	28° 60′	98° 15′	June 1922
21871	,, ,,	28° 18′	98° 27′	June 1922
22703	=21864	..	..	Oct. 1922
22770	=21861	..	..	Oct. 1922
22771	=21863	..	..	Oct. 1922
22772	=21866	..	..	Oct. 1922
22784	=21862	..	..	Oct. 1922
22785	=21867	..	..	Oct. 1922
22786	=21865	..	..	Oct. 1922
22787	=21868	..	..	Oct. 1922
22788	=21869	..	..	Oct. 1922
22890	=21871	..	..	Oct. 1922
24193	Shweli—Salwin divide.	25° 30′	98° 58′	May 1924
24236	,, ,,	25° 30′	98° 58′	May 1924
24740	N'Maikha—Salwin divide.	26° 23′	98° 48′	June 1924
25608	Salwin—Kiu-chiang divide.	27° 5′	98° 38′	July 1924
25627	,, ,,	27° 18′	98° 40′	July 1924
25782	=25608	..	..	Oct. 1924
25841	=25627	..	..	Oct. 1924

Collector.	Locality.	Lat. N.	Long. E.	Date.
Forrest				
25959	Mekong—Yangtze divide.	27° 5′	99° 35′	Oct. 1924
26038	No locality given.	..	..	Nov. 1924
26935	N'Maikha—Salwin divide.	26° 20′	98° 48′	June 1925
27067	,, ,,	26° 30′	98° 48′	July 1925
27108	.. ,,	26° 17′	98° 46′	July 1925
27616	=26935	..	..	Nov. 1925
27624	=27108	..	..	Nov. 1925
Rock				
10119	Region of Chamatong. ..	..	..	1923
10120	,, ,, ...	..	..	1923
10128	,, ,, ...	..	..	1923
10221	,, ,, ...	..	..	1923
11159	,, ,, ...	..	..	1923
11165	,, ,, ...	..	..	1923
11187	,, ,, ...	..	..	1923
11207	,, ,, ...	..	..	1923
11211	,, ,, ...	..	..	1923
11640	,, ,, ...	..	..	1923
11642	,, ,, ...	..	..	1923
Ward				
3101	Above Laktong.	26° 10′	98° 30′	May 1919
5438	Salwin—Irrawaddy divide.			Oct. 1922

Rh. arizelum has a wide distribution from the south to the north along longitudes 98° to 99° E. No specimens have been gathered east of longitude 99° E. The type was gathered by Forrest on the Shweli—Salwin divide in latitude 25° 20′ to 30′ N. Other gatherings by Forrest, Farrer, Ward, and Rock extend this distribution northward to north-eastern Upper Burma and south-eastern Tibet. The southern type has relatively short leaves, oval and obovate, or shortly and broadly oblanceolate. The ratio of length to breadth is as 15 is to 7. From the Salwin—Kiu-chiang divide in south-eastern Tibet, Forrest and Rock have gathered many specimens which differ from the southern type in having longer leaves, narrowly oblanceolate, tapering to a cuneate base from the broadest part, which is relatively much nearer the leaf apex than in the southern forms. Ratio length to breadth is as 19 is to 6. The leaf underside in most of the northern forms is of a lighter colour. Never in the northern forms is the leaf base rounded or cordulate. Moreover, in the northern forms the flower truss is larger and the inflorescence rhachis longer.

The colour of the corolla ranges from white, creamy-white, or yellowish to pink and crimson. Most of the gatherings have a crimson blotch at the base of the corolla, but others are described as "soft yellow without markings," or yellow with a faint crimson blotch. The habitat altitudes range from 11,000 to 14,000 feet.

RH. BASILICUM, *Balf. f. et W. W. Sm.*, including the types of RH. MEGAPHYLLUM, *Balf. f. et Forrest*, and RH. REGALE, *Balf. f. et Ward.*

Collector.	Locality.	Lat. N.	Long. E.	Date.
Farrer				
873	Hpimaw Pass.	..	..	May 1919
Forrest				
8990	Shweli—Salwin divide.	25° 20′	98° 50′	Aug. 1912
12078	,, ,,	25° 30′	98° 40′	June 1913
12109	,, ,,	25° 30′	98° 50′	Dec. 1913
15764	,, ,, ...	..	..	June 1917
16002	,, ,, ...	..	..	Nov. 1917
16036	,, ,, ...	..	..	Nov. 1917
17650	,, ,,	25° 30′		June 1918
17678	,, ,,	25° 20′		June 1918
17691	,, ,, ...	..	..	May 1918
17739	,, ,, ...	..	..	Oct. 1918
17769	,, ,, ...	..	..	Oct. 1918
17771	,, ,, ...	..	..	Oct. 1918
17927	N'Maikha—Salwin divide.	26° 10′		April 1919
18052	Shweli—Salwin divide.	25° 40′		May 1919
18108	,, ,,	25° 40′		May 1919
18110	N'Maikha—Salwin divide.	26° 25′		May 1919
18116	Shweli—Salwin divide.	25° 40′		May/June 1919
18375	,, ,,	26° 40′		Aug. 1919
18529	N'Maikha—Salwin divide.	25° 50′		Sept. 1919
18568	,, ,,	26° 30′		Sept. 1919
18860	,, ,, ...	..	..	Nov. 1919
23282	Chienchuan—Mekong divide.	26° 40′	99° 40′	May 1923
23283	,, ,,	26° 30′	99° 40′	June 1923
23284	,, ,,	26° 30′	99° 40′	June 1923
23285	,, ,,	26° 20′	99° 40′	May 1923
24139	Shweli—Salwin divide.	25° 25′	98° 58′	May 1924
24215	,, ,,	25° 30′	98° 58′	May 1924
24225	,, ,,	25° 30′	98° 58′	May 1924
26100	N'Maikha—Salwin divide.	26°	98° 42′	Sept. 1924
26043	No locality given.	..	..	Nov. 1924
26081	,, ,, ...	..	..	Dec. 1924
26922	N'Maikha—Salwin divide.	26° 20′	98° 48′	June 1925
27413	Shweli—Salwin divide. ..	..	..	Oct. 1924
27459	=26922	..	..	Oct. 1925
27602	? N'Maikha—Salwin divide.	26° 30′	98° 48′	Nov. 1925
Ward				
1563	Htawgaw.	..	..	May 1914
1565	,, ...	..	..	May 1914

RH. BASILICUM is essentially a southern species of the Shweli—Salwin divide, and the frontier of north-eastern Burma at Hpimaw and Htawgaw in latitudes 25° to 26° N., in longitude about 98° 40′ to 98° 50′ E. In the same latitude

Forrest gathered specimens on the Chienchuan—Mekong divide in longitude 99° 40′ E. This is the most easterly record.

It is interesting to note that while the distribution of Rh. ARIZELUM runs from the same area northwards to south-eastern Tibet, Rh. BASILICUM appears to be confined to the southern area.

Rh. CORIACEUM, *Franch.*

Collector.	Locality.	Lat. N.	Long. E.	Date.
Forrest				
15044	Mekong—Salwin divide.	28° 20′		Nov. 1917
16361	,, ,,	28° 12′		May 1918
16364	,, ,,	28°		June 1918
17412	,, ,,	28° 12′		Oct. 1918
17416	,, ,,	28°		Oct. 1918
18189	,, ,,	26° 40′		July 1119
18245	,, ,,	26° 30′		July 1919
18625	,, ,,	26° 30′		July 1919
21818	Salwin—Mekong divide.	28° 14′	98° 40′	June 1922
21843	,, ,,	28° 14	98° 40′	June 1922
21899	Salwin—Kiu-chiang divide.	28° 18′	98° 27′	June 1922
22736				Oct. 1922
22737	=21843	..	..	Oct. 1922
22759	=21818	..	..	Oct. 1922
23301	Chienchuan—Mekong divide.	26° 30′	99° 30′	June 1923
25622	Salwin—Kiu-chiang divide.	27° 18′	98° 35′	July 1924
25630	,, ,,	27° 5′	98° 35′	July 1924
25784	=25630	..	..	Oct. 1924
25822	=25622	..	..	Oct. 1924
25872	No locality stated.	..	..	Sept. 1924
Monbeig				
6/1912	North-western Yunnan, Tseku. ..	..	..	Before 1912
Soulié				
1021	,, ,, ..	..	..	1893
1022	,, ,, ..	..	..	1893
1024	,, ,, ..	..	..	1893
Rock				
8747	Mountains above Tseku.	..	..	1923
9284	,, ,, ...	..	..	1923
10955	,, ,, ...	..	..	1923
11069	,, ,, ...	..	..	1923
11644	,, ,, ...	..	..	1923

Rh. CORIACEUM was discovered by Soulié in 1893 at Loukiang, near Tseku. Monbeig next collected it in the same neighbourhood. Forrest's collectings range from adjacent areas on the Mekong—Salwin and Salwin—Kiu-chiang divides, north-west of Tseku in latitudes 28° 20′ to 28° 12′ N., and southward to 27° 5′ N. on the western flank of the Salwin—Kiu-chiang divide. Three gatherings come from latitude 26° 20′ N.; two of these from the Mekong—Salwin divide,

and one from the Chienchuan—Mekong divide. This last is the most easterly record (longitude 99° 30′ E.).

All Rock's gatherings are from the mountains above Tseku and Tsehchung.

The species appears to be confined to south-eastern Tibet and north-western Yunnan, at altitudes ranging from 10,000 to 13,000 feet.

RH. FICTOLACTEUM, *Balf. f.*

Collector.	Locality.	Lat. N.	Long. E.	Date.
Delavay				
2214	Lang-kong region.	26° 20′		May 1886
May 1887	,, ,, ...	..	..	May 1887
Sept. 1888	,, ,, ...	..	..	Sept. 1888
Oct. 1887	,, ,, ...	..	..	Oct. 1887
Forrest				
501	Sung-Kwei—Lang-kong divide.	26° 15′	100° 10′	Dec. 1904
2159	Sung-Kwei Pass.	26° 15′		April 1906
5843	,, ,,	26° 12′		May 1910
6649	Hoching—Lang-kong divide.	26° 30′		Sept. 1910
10974	N.E. of the Yangtze Bend.	27° 45′		Aug. 1913
11167	N.W. flank Lichiang Range.	27° 40′		Sept. 1913
11733	Chungtien plateau.	27° 55′		Sept. 1913
11740	,, ,,	27° 55′		Nov. 1913
12476	,, ,,	27° 30		April 1914
12948	Mekong—Yangtze divide.	27° 40′		Aug. 1917
13582	No locality given.	..	..	.. 1917
14063	Mekong—Salwin divide.	28° 20′		June 1917
14231	,, ,,	28° 12′		July 1917
15006	No locality given.	..	..	Oct. 1917
15168	Lei-lung Shan.	28° 10′		Aug. 1917
15966	No locality given.	..	..	Nov. 1917
15977	,, ,,			
16655	Mu-Li Mountains.	28° 12′	101° 0′	Aug. 1918
17205	No locality given.	..	..	Nov. 1918
19415	E. flank of the Tali Shan.	25° 40′	100° 12′	May 1921
19555	Mekong—Salwin divide.	27° 54	99° 50′	June 1921
19741	,, ,,	27° 30′	98° 56′	July 1921
20498	Mountains E. of Yungning.	27° 50′	100° 56′	July 1921
20684	E. flank of the Tali Range.	25° 40′	100° 8′	May 1921
21446	Mountains S.E. of Yungning.	27° 40′	100° 48′	July 1922
21539	Chienchuan—Mekong divide.	26° 30′	99° 40′	July 1922
21584	Mountains N.E. of Mu-Li.	28° 24′	101° 6′	June 1922
21771	Salwin—Kiu-chiang divide.	28° 40′	98° 18′	June 1922
22020	Chienchuan—Mekong divide.	26° 36′	99° 40′	Aug. 1922
22888	Salwin—Kiu-chiang divide.	28° 48′	98° 15′	Oct. 1922
23298	Chienchuan—Mekong divide.	26° 20′	99° 40′	June 1923
23299	,, ,,	26° 30′	99° 30′	June 1923
23300	,, ,,	26° 30′	99° 30′	June 1923

Collector.	Locality.	Lat. N.	Long. E.	Date.
Forrest				
23302	Chienchuan—Mekong divide.	26° 20′	99° 30′	June 1923
23303	,, ,,	26° 30′	99° 40′	June 1923
23399	,, ,,	26° 40′	99° 30′	June 1923
25512	Mekong—Yangtze divide.	27° 25′	99° 18′	June 1924
25719	,, ,,	27° 5′	99° 35′	June 1924
25896	=25512.			
Ward				
4509	Mu-Li (see note in comments on distribution).	28° 10′	100° 50′	July 1921
5018	Kua-la-po.	26° 30′	100° 0′	March 1922
5112	Yungning.	27° 40′	100° 40′	May 1922
5296	Kari Pass.	28° 15′	99° 15′	July 1922
5297	,,	28° 15′	99° 15′	July 1922

A numerical list of the specimens of Rh. FICTOLACTEUM collected by Mr. J. F. Rock :—

No. 3499	No. 8282	No. 8763	No. 9776
,, 3509	,, 8288	,, 8938	,, 9781
,, 4234	,, 8308	,, 8963	,, 9784
,, 4282	,, 8310	,, 9073	,, 10921
,, 5487	,, 8394	,, 9076	,, 11043
,, 5590	,, 8396	,, 9107	,, 11223
,, 6295	,, 8398	,, 9360	,, 11242
,, 6309	,, 8420	,, 9366	,, 11244
,, 6831	,, 8439	,, 9371	,, 11286
,, 8258	,, 8449	,, 9532	,, 11290
,, 8271	,, 8451	,, 9564	,, 11378
,, 8272	,, 8453	,, 9567	,, 11397
,, 8273	,, 8580	,, 9676	,, 11452
,, 8274			

Rh. FICTOLACTEUM in its many forms varies much in size and shape of leaf and in the colour of the indumentum. The species is very widely distributed, and the leaf variations are correlated with geographical distribution.

The many gatherings fall into several sets, from definite geographical areas.

1. The southern gatherings are from west of Tali-Fu (on the way to Yung-Chang) on the eastern flank of the Tali Range, 25° 40′ N., 100° 8′ E. Twenty gatherings come from the hills south of Lichiang and north of the Tali lake in the regions of the Lang-kong—Hoching and Sung-Kwei Passes ; latitude 26° 20′ to 30′ N., longitude 100° 10′ to 20′ E. From this region Delavay gathered the type specimens. These gatherings with those from the neighbourhood of Tali-Fu constitute the southern form, to which the description of the type applies. The leaves are obovate to oblanceolate, occasionally almost elliptic-oval ; the apex is rounded or very bluntly obtuse. The broadest part is a little nearer the apex than the middle of the lamina, and from the broadest part the leaf tapers gradually to a rounded or cordulate base ; never does it taper cuneately to the

petiole. The average length of lamina is 15·8 cm.; the average breadth 6·1 cm. The indumentum colour is cinnamon to rusty brown.

2. To the north-west of this area many gatherings have been made west of Chienchuan on the Chienchuan—Mekong divide (lat. 26° 20′ to 30′ N., long. 99° 30′ E.), and south-west of the Yangtze Bend at Shih-ku. These in the main agree in leaf shape and indumentum colour with those from the north of the Tali lake, but the leaves in most gatherings are somewhat narrow for their length, and among these gatherings are a few with rose or pinkish-tinted flowers.

3. Directly north of Hoching, gatherings have been made in the neighbourhood of Lichiang, and northward on the eastern and western slopes of the Lichiang Snow Range.

4. West and north-west of this range, over the gorge of the Yangtze, several gatherings by Forrest come from the mountains of the Chungtien Plateau, in latitude 27° 30′ N. Compared with the Tali area gatherings, the leaves are relatively long (averaging 21·1 cm. long, 6·4 cm. broad).

5. Other gatherings take us north-east of the Lichiang Range to the vicinity of Yungning and northward to the Leilung-shan (lat. 27° 40′ to 50′ N. and long. 100° 30′ to 50′ E.), and north-east to Mu-Li (lat. 28° 24′ N. and long. 101° 6′ E.). The last is the most north-easterly gathering in the herbarium. Compared with the type forms from the Tali area the leaves are very long, oblanceolate with the broadest part much nearer the leaf apex, and the latter less obtuse and never rounded. One gathering from this area, viz. Ward 4509, I include in my list with reservations. The dried material is scanty, but plants in cultivation under the number look very different from growing plants of Rh. FICTOLACTEUM.

6. A north-western distribution is represented by many gatherings from the Mekong—Salwin and Salwin—Kiu-chiang divides, running in longitudes 98° 15′ to 56′ E., from latitude 27° 20′ to 28° 48′ N., with a few eastern outliers from the Kari Pass. The gatherings from the north-west are all characterised by small and narrow leaves, narrow-oblanceolate with tapered cuneate base. The average length is 12·4 cm., and the average breadth is 3·8 cm. The indumentum colour is much paler than in the Tali form, and the cup-hairs forming the indumentum are smaller. These northern forms from south-east Tibet and north-west Yunnan constitute a distinct geographical variety or micro-species.

Rh. GALACTINUM, *Balf. f.*

All the specimens of this species are from cultivated plants raised from seed collected by Wilson in west Szechuan in the woods of Pan-lan-shan, under the number, Wilson 4254.

October 1910.

Rh. PREPTUM, *Balf. f. et Forrest.*

			Lat. N.	Long. E.	Date.
Forrest	18034	N'Maikha—Salwin divide.	26° 20′		May 1919
,,	25064	Hpimaw Pass.	26°	98° 40′	Sept. 1924
,,	25598	Salwin—Kiu-chiang divide.	27° 5′	98° 38′	July 1924

Rh. PREPTUM is recorded only from the Burmese—Yunnan borders in the neighbourhood of Hpimaw, at 11,000 to 12,000 feet.

RH. REX, *Levl.*

Maire		North-east Yunnan, Mount Io-shan.	May 1911
,,	30/1914	North-east Yunnan, Mount Ta-pe-lou.	No date
Handel-Mazzettii	921	South-west Szechuan.	March 1914
,,	1394	,, ,,	April 1914
,,	1472	,, ,,	1914

RH. REX is a north-east representative of the Series, recorded only from the borders of Yunnan and south-west Szechuan.

RH. SINO-FALCONERI, *Balf. f.*

			Lat. N.	Long. E.	Date.
Henry	9448	South-east Yunnan, Mountains north of Mengtze.	23° 20′	103° 40′	Near 1898

RH. SINO-FALCONERI is the most southerly recorded species. The single gathering comes from south-east Yunnan at an altitude of 9000 feet.

RHODODENDRONS OF THE FULVUM SERIES.

An enumeration of the specimens in the Herbarium of the Royal Botanic Garden, Edinburgh, with notes on the distribution of the species.

RH. FULVUM, *Balf. f. et W. W. Sm.*

Number.	Locality.	Alt.	Lat. N.	Long. E.	Date.
Forrest					
8989	Shweli—Salwin divide.	10-11,000 ft.	25° 20′	98° 25′	Aug. 1912
9001	Western flank of the Shweli—Salwin divide.	10-11,000 ft.	25° 20′	98° 15′	
11842	Shweli—Salwin divide.	9000 ft.	25° 30′	98° 25′	May 1913
11940	,, ,,	10,000 ft.	25° 30′	98° 25′	
12115	,, ,,	10,000 ft.	25° 30′	98° 25′	Dec. 1913
15660	,, ,,		25° 30′	98° 25′	1917
15777	.. .. ..	..	..	..	.. 1917
17502	Shweli—Salwin divide.	11-11,500 ft.	25° 20′	98° 25′	June 1918
17636	,, ,,	11,000 ft.	25° 20′	98° 25′	June 1918
17671	,, ,,	11,000 ft.	25° 30′	98° 25′	May 1918
17681	,, ,,	11,000 ft.	25° 30′	98° 25′	June 1918
17730	.. .. ..	..	..	..	Oct. 1918
17854	Eastern flank of the N'Maikha—Salwin div.	11,000 ft.	26°	98° 10′	April 1919
17940	Yang-tzow-shan, Shweli—Salwin divide.	10,000 ft.	25° 10′	98° 45′	June 1919
17952	,, ,,	11,000 ft.	25° 10′	98° 45′	May 1919
17965	,, ,,	10,000 ft.	25° 10′	98° 45′	May 1919
18079	Shweli—Salwin divide.	10,000 ft.	25° 40′	98° 25′	June 1919
18207	Mekong—Salwin divide.	10-11,000 ft.	26° 40′	98° 45′	July 1919
18267	N'Maikha—Salwin divide.	10-11,000 ft.	26° 40′	98° 45′	Aug. 1919

RH. FULVUM, *Balf. f. et W. W. Sm.* (continued).

Number.	Locality.	Alt.	Lat. N.	Long. E.	Date.
Forrest					
18310	Shweli—Salwin divide.	10-11,000 ft.	25° 40′	98° 25′	Aug. 1919
18364	N'Maikha—Salwin divide.	10-11,000 ft.	26° 30′	98° 45′	Aug. 1919
18369	Shweli—Salwin divide.	10,000 ft.	25° 40′	98° 25′	Aug. 1919
18756	.. .. ..	..	..	..	Nov. 1919
18819	.. .. ..	..	..	..	Nov. 1919
18828	.. .. ..	..	..	..	Nov. 1919
24110	Shweli—Salwin divide.	10-11,000 ft.	25° 25′	98° 25′	May 1924
24124	,, ,,	10-11,000 ft.	25° 25′	98° 25′	May 1924
24135	,, ,,	11,000 ft.	25° 25′	98° 25′	May 1924
24314	,, ,,	11,000 ft.	25° 45′	98° 25′	June 1924
24623	,, ,,	8000 ft.	25° 40′	98° 25′	June 1924
25020	Western flank of the Chimili, N'Maikha—Salwin divide.	11,000 ft.	26° 23′	98° 35′	Sept. 1924
25076	Hpimaw, N'Maikha—Salwin divide.	12,000 ft.	26°	98° 40′	Sept. 1924
26039	No locality given.				Nov. 1924
26360	Shweli—Salwin divide.	11-12,000 ft.	25° 30′	98° 25′	May 1925
26451	Western flank of the N'Maikha—Salwin divide, near Pan-ti-ho.	10-11,000 ft.	26° 20′	98° 25′	April 1925
Farrer					
874	Hpimaw Pass.	10,700 ft.	26° 10′	98° 40′	May 1919
Ward					
1564	Hpimaw.	10-11,000 ft.	26° 10′	98° 40′	May 1914
Rock					
7662	Shweli—Salwin divide, east of Tengyueh.				
7665	,,				
7998	Tengyueh.				

RH. FULVOIDES, *Balf. f. et Forrest.*

Number.	Locality.	Alt.	Lat. N.	Long. E.	Date.
Forrest					
12967	Kari Pass, Mekong—Yangtze divide.		28° 15′	99° 10′	Aug. 1914
13029	,,	12,000 ft.	27° 40′	99° 10′	Aug. 1914
13400	Mekong—Salwin divide.	11,000 ft.	28° 18′	98° 15′	Sept. 1914
13556	,, ,,	11,000 ft.	28° 10′	98° 15′	Oct. 1914
13952	Li-ti-ping, Mekong—Yangtze divide.	11,000 ft.	27° 12′	99° 25′	June 1917
14499	Ka-gwr-pu, Mekong—Salwin divide.	12,000 ft.	28° 25′	98° 15′	July 1917
14988	,, ,,	12-13,000 ft.	28° 35′	98° 15′	Oct. 1917
15278	Tsarong, S.E. Tibet.		28° 40′	98° 15′	Nov. 1917

Number.	Locality.	Alt.	Lat. N.	Long. E.	Date.
Forrest					
16140	Tsarong, S.E. Tibet. ..	..	..	..	Nov. 1917
16515	Mnts. N.E. of Chungtien, Mekong—Yangtze div.	13,000 ft.	28°	99° 45′	July 1918
16516	Doka-la, Mekong—Salwin divide.	12-13,000 ft.	28° 25′	98° 20′	June 1918
16720	Ka-gwr-pu, Mekong—Salwin divide.	12,000 ft.	28° 40′	98° 15′	July 1918
16721	Tsarong, S.E. Tibet.		28° 40′	98° 15′	Aug. 1918
17426	Yunnan, West China.		..	..	Oct. 1918
18628	Tsarong, S.E. Tibet.		28° 40′	98° 15′	1917
19192	Tsarong, Salwin—Kiu-chiang divide.		28° 40′	98° 15′	Oct. 1919
20020	Salwin—Kiu-chiang div.	12,000 ft.	28° 24′	98° 10′	Aug. 1921
20075	,, ,,	12,000 ft.	28° 24′	98° 24′	Aug. 1921
20363	,, ,,	12-13,000 ft.	28° 24′	98° 24′	Sept. 1921
20816	,, ,,	12-13,000 ft.	28° 24′	98° 24′	Sept. 1921
21810	,, ,,	11,000 ft.	27° 48′	98° 33′	June 1922
21814	,, ,,	12-13,000 ft.	28° 45′	98° 18′	June 1922
21815	,, ,,	13,000 ft.	28° 45′	98° 18′	June 1922
21820	Salwin—Kiu-chiang div. west of Chamatong.	12-13,000 ft.	28° 18′	98° 27′	June 1922
21896	N.W. of Si-chi-to, Salwin—Kiu-chiang divide.	14,500 ft.	28° 50′	98° 15′	June 1922
21897	Salwin—Kiu-chiang div. west of Si-K'ai.	12-13,000 ft.	27° 45′	98° 33′	June 1922
21898	N.W. of Si-chi-to, Salwin—Kiu-chiang divide.	14,000 ft.	28° 50′	98° 15′	June 1922
22768	Tsarong, S.E. Tibet		28° 40′	98° 15′	Oct. 1922
22902	.. .. ..	..	..	..	Oct. 1922
22903	.. .. ..	..	..	..	Oct. 1922
22917	.. .. ..	..	..	..	Oct. 1922
22918	.. .. ..	..	..	..	Oct. 1922
22943	Tsarong.		28° 40′	98° 15′	Oct. 1922
23293	Chienchuan — Mekong divide.	12,000 ft.	26° 20′	99° 30′	June 1923
25483	Mekong—Yangtze divide, N. of Pien-tien-go.	11,000 ft.	27° 30′	99° 30′	June 1924
25726	Mekong—Yangtze divide.	12,000 ft.	27° 35′	99° 30′	July 1924
25727	Chao-ii Shan, Mekong—Yangtze divide.	13,000 ft.	27° 5′	99° 35′	July 1924
25744	Mekong—Yangtze divide, Pien-tien-go.	13,000 ft.	27° 30′	99° 30′	July 1924
25745	,,	12,000 ft.	27° 30′	99° 30′	July 1924
25936	.. .. ..	..	..	..	Oct. 1924
25944	Mekong—Yangtze divide, Pien-tien-go.	12,000 ft.	27° 30′	99° 30′	Sept. 1924
25958	,,	12,000 ft.	27° 30′	99° 30′	Sept. 1924

RH. FULVOIDES, *Balf. f. et Forrest* (continued).

Number.	Locality.	Alt.	Lat. N.	Long. E.	Date.
Rock					
8146	Chienchuan and Li-kiang-fu.	..	..	..	1923
8738	Tseku and Tsehchung.	..	..	..	1923
8760	,, ,,	..	..	..	1923
8790	,, ,,	..	..	..	1923
8883	Londjre and Mekong—Salwin divide.	..	..	..	1923
9119	Tseku and Tsehchung.	..	..	..	1923
9222	,, ,,	..	..	..	1923
9223	,, ,,	..	..	..	1923
10214	Chamatong.	..	..	..	1923
10931	Londjre, Mekong—Salwin divide.	..	..	..	1923
11016	Tseku and Tsehchung.	..	..	..	1923
11023	,, ,,	..	..	..	1923
11034	,, ,,	..	..	..	1923
11044	,, ,,	..	..	..	1923
11048	,, ,,	..	..	..	1923
11168	Chamatong.	..	..	..	1923
11225	,,	..	..	..	1923
11351	Londjre.	..	..	..	1923

RH. FULVUM is essentially a plant of south-west Yunnan and the marches of north-east Burma, with a maximum development, as far as frequency of gatherings indicates, on the Shweli—Salwin divide in latitude 25° to 26° N. and longitude 98° 15′ to 98° 45′ E.

RH. FULVOIDES is most frequently recorded from the Mekong—Salwin divide and Salwin—Kiu-chiang divide in latitudes between 27° 48′ N. (F. 21810) and 28° 50′ N. (F. 21898). Gatherings south and east of this area come from the Kari Pass, Li-ti-ping, and the Mekong—Yangtze divide (27° 30′ N.) to as far south and east as the Chienchuan—Mekong divide in latitude 26° 20′ N., longitude 99° 30′ E. A single gathering (F. 16515) of what is probably this species comes from the mountains north-east of Chungtien in latitude 28° N., but some seventy miles east of the Mekong—Salwin area, longitude 99° 45′ E. This is the most easterly gathering.

DETERMINATIONS OF RHODODENDRONS OF THE SUBSERIES HAEMATODES.

RH. AEMULORUM, *Balf. f.*

Farrer No. 815 Forrest No. 18354
Forrest ,, 17853 ,, ,, 18813
,, ,, 17995 ,, ,, 25067 Forrest No. 25964

RH. CATACOSMUM, *Balf. f. in MS.*

Forrest	No.	20078	Forrest	No.	21727 (type)
,,	,,	20895	,,	,,	22910
,,	,,	20908	,,	,,	22915

RH. CHAETOMALLUM, *Balf. f. et Forrest.*

The many gatherings of RH. CHAETOMALLUM show great variation in leaf size, indumentum characters, and in flower colour. Many of these merit varietal names. In the meantime I group the specimens in the following categories :—

1. TYPE SPECIMENS AND OTHERS AGREEING WITH THE TYPE.

Farrer	No.	1669	Forrest	No.	20215	Forrest	No.	22658
,,	,,	1683	,,	,,	20299	,,	,,	22688
Forrest	,,	14987	,,	,,	20333	,,	,,	22857
,,	,,	16691	,,	,,	20737	,,	,,	22900
,,	,,	17329	,,	,,	20902	,,	,,	25559
,,	,,	17330	,,	,,	20909	,,	,,	25590
,,	,,	18917	,,	,,	20913	,,	,,	25597
,,	,,	19021	,,	,,	20914	,,	,,	25601
,,	,,	19191	,,	,,	20915	,,	,,	25602
,,	,,	19503	,,	,,	20958	,,	,,	25753
,,	,,	19549	,,	,,	21710	,,	,,	25755
,,	,,	19911	,,	,,	21758	,,	,,	25756
,,	,,	19924	,,	,,	21826	,,	,,	25786
,,	,,	19955	,,	,,	21872	,,	,,	25856
,,	,,	19959	,,	,,	21872A	,,	,,	25862
,,	,,	19978	,,	,,	21873	,,	,,	25867
,,	,,	20015	,,	,,	22629	,,	,,	25877
,,	,,	20025	,,	,,	22657	Ward	,,	5431
,,	,,	20026						

2. SPECIMENS WITH LARGE CALYX, AND WITH YELLOW OR ORANGE IN THE FLOWER.

Forrest	No.	21725	Forrest	No.	21848	Forrest	No.	22859
,,	,,	21729	,,	,,	21849	,,	,,	22860
,,	,,	21730	,,	,,	22649	,,	,,	22863
,,	,,	21731	,,	,,	22656	,,	,,	25558
,,	,,	21745	,,	,,	22665	,,	,,	25565
,,	,,	21785	,,	,,	22847	,,	,,	25600

3. SPECIMENS WITH ROSE TO LIGHT CRIMSON FLOWERS, LEAVES SMALL AND THIN INDUMENTUM.

Forrest	No.	21736	Forrest	No.	21858	Forrest	No.	22691
,,	,,	21742	,,	,,	21912	,,	,,	22692
,,	,,	21850	,,	,,	21913	,,	,,	22693
,,	,,	21857	,,	,,	22690			

RH. CHAETOMALLUM, *Balf. f. et Forrest* (continued).

4. SPECIMENS WITH ROSE TO CRIMSON FLOWERS, LEAVES LARGE AND THIN INDUMENTUM.

Forrest No. 21906	Forrest No. 21911	Forrest No. 22731
,, ,, 21908	,, ,, 22671	,, ,, 23105

5. SPECIMENS WITH FLOWERS ROSE TO CRIMSON, INDUMENTUM THICK, LIGHT-COLOURED.

Forrest No. 21753	Forrest No. 21853	Forrest No. 22862
,, ,, 21759	,, ,, 22670	

6. SPECIMEN WITH GLAUCOUS FOLIAGE.

Forrest No. 25607

7. SPECIMENS OF THE RH. CHAETOMALLUM-CATACOSMUM ALLIANCES IN FOLIAGE ONLY.

Forrest No. 20886	Forrest No. 22663	Forrest No. 22858
,, ,, 20907	,, ,, 22664	,, ,, 22883
,, ,, 20957	,, ,, 22799	,, ,, 25840
,, ,, 21831	,, ,, 22816	

RH. COELICUM, *Balf. f. et Farrer.*

Farrer No. 1548	Forrest No. 25625	Forrest No. 25870
Forrest ,, 21830	,, ,, 25647	Ward ,, 3274
,, ,, 22911	,, ,, 25834	

RH. HAEMATODES, *Franch.*

Delavay No. 298	Forrest No. 4130	Forrest No. 11610
,, June 1886	,, ,, 4161	,, ,, 15521
,, 1887	,, ,, 6773	,, ,, 19408

RH. HEMIDARTUM, *Balf. f. in MS.*

Forrest No. 20028	Forrest No. 21709	Forrest No. 22941
,, ,, 20920	,, ,, 22886	

RH. MALLOTUM, *Balf. f. et Ward.*

Ward No. 1567

RH. POCOPHORUM, *Balf. f. in MS.*

Forrest	No.	18916	Forrest	No.	21711	Forrest	No.	22909
,,	,,	19977	,,	,,	21712	,,	,,	22912
,,	,,	19983	,,	,,	21713	,,	,,	22913
,,	,,	20019	,,	,,	21713A	,,	,,	22914
,,	,,	20344	,,	,,	21720	,,	,,	22916
,,	,,	20890	,,	,,	21828	Ward	,,	5484
,,	,,	20898	,,	,,	22894			
,,	,,	20919	,,	,,	22907			

DETERMINATIONS OF RHODODENDRONS OF THE SCABRIFOLIUM SERIES.

Specimens of RH. SUBEROSUM, *Balf. f. et Forrest*, collected by Mr. George Forrest, 1924-25:

No. 24618	No. 26596
,, 25417	,, 27402
,, 26463	,, 27404
,, 26486	,, 27405
,, 26529	,, 27745

The list of the gatherings of RH. SUBEROSUM, *Balf. f. et Forrest*, made by Mr. Forrest in 1924-25, records an interesting re-discovery by him. He obtained the type in 1919 on the eastern flank of the N'Maikha—Salwin divide (Forrest 18000). Another gathering in the same year (Forrest 18737) is in foliage only, and is probably the same, but Sir Isaac Bayley Balfour did not name it.

Since then nothing identical has been found until recently Mr. Forrest obtained fine flowering specimens in the same area, the Yunnan—Burmese frontier in latitude 25°-26°. The list continues the determinations of the SCABRIFOLIUM series begun in Vol. II. p. 244.

H. F. TAGG.

EDINBURGH, 1926.

THE LATE LT.-COL. SIR GEORGE LINDSAY HOLFORD, K.C.V.O., C.I.E., C.B.E., AND WESTONBIRT.

To the members of the Rhododendron Society the news of Sir George Holford's death at Westonbirt on September 11 has brought a deep and special sense of loss. In him has passed away one of the most distinguished of English gardeners, and certainly one of the most courtly of English gentlemen.

He was born in 1860, and was an only son. After leaving Eton he joined the 1st Life Guards in 1880, and ultimately commanded their Reserve Regiment during the Great War.

He served for twenty years till 1921 on the Council of the Royal Horticultural Society. His pre-eminence as an orchid-grower was well known; I suppose no one ever gained more renown in that especial field of horticulture. To some of us the memory of long afternoons spent with him in his woods will be an even more vivid and delightful recollection than the Sunday inspections of the wonders of his many houses of Cymbidiums, Cattleyas, and Cypripediums, though to the initiated and uninitiated alike that was an unforgettable experience.

Of the arboretum at Westonbirt those members of our Society who have not seen it will wish to hear. Though, alas! Sir George could never be prevailed upon to write a description for our *Notes*, it is fitting that they should contain some record of a collection so unique.

Professor Sargent and other tree authorities regarded it as the finest assemblage of trees and shrubs in Great Britain. Sir George's father, Mr. R. S. Holford, began planting in 1829, and subsequently laid out the great arboretum of 114 acres, and planted innumerable rare trees down the wide rides of Silkwood, 400 acres in extent, with a truly remarkable foresight, taste, and good judgment. It is indeed rare to find trees grouped and avenues laid out by one who undoubtedly must have visualised the landscape when they were to be mature specimens. The arboretum of Westonbirt is pre-eminent in these respects, as it also is in the amazing number of species of broad-leaved and coniferous trees to be seen there in the greatest perfection of growth and setting.

In the first half of the nineteenth century Mr. R. S. Holford, with Lord Somers and Sir Philip Egerton, were enthusiastic pioneers in arboriculture, and it was largely owing to their friendship and inspiration that the third Earl of Ducie began his famous collection at Tortworth, also in Gloucestershire, and the only rival to Westonbirt, to which he devoted his time and knowledge from the year of his succession in 1853 to that of his death at the age of ninety-three in 1921.

Mr. H. J. Elwes, a not distant neighbour of Sir George Holford, used to give advice to visitors from abroad, when asked what were the best starting centres in Great Britain for seeing the finest trees, that within twenty miles of Gloucester and Perth there were more remarkable collections than elsewhere in the island.

Sir George Holford succeeded his father in the ownership of the Gloucestershire and Wiltshire estates in 1892. For the last twenty years, and still more so

when the death of King Edward relieved him of his duties at Court, did his garden and arboretum become the greatest interest in his life. He procured plants of all the more recently introduced species, or raised them from seed, and gave much thoughtful care to the positions they were to occupy. The result to-day is seen at its best in the autumn weeks, when groups and individual specimens of Maples, *Parrotia*, *liquidamber*, *cercidiphyllum*, *sumach*, and *berberis* of every kind, produce a blaze of crimson and yellow at Westonbirt more brilliant than can be described, the like of which can only be seen in the New England states in their "Indian summer." It was at this season that Sir George and Lady Holford especially loved to have their gardening friends with them.

It is impossible to do more than indicate by a few names the astonishing number of species to be seen in perfection at Westonbirt. The *Cedrus atlantica* near the house is the oldest in cultivation, having been planted in 1847 from seed obtained two years earlier by Lord Somers; it is now 92 feet high by 11 feet 8 inches girth. The *Cedrus deodara* close to it was planted in 1832, and was probably one of the first batch of seedlings raised in this country; it had reached in 1920 a height of 91 feet and girth of 9 feet 10 inches. The tallest *Pinus Ayacahuite* in the arboretum is 70 feet high, and from the seed of this and other fruiting trees many young pines of the second generation are planted out. Of the several well-grown specimens of *Libocedrus decurrens* the tallest is 76 feet high.

Of broad-leaved trees the *Betula Ermanni* on one of the main rides is an unforgettable specimen; planted in 1875, and now 62 feet high, its creamy trunk and branches are conspicuous against the dark background of a very tall *Pinus insignis*. The Maples at Westonbirt are legion, and in mid-October, when they have taken on their autumn magnificence, they contribute more largely than any other genus to this great pageant of colour. Two trees of *Acer cissifolium* fruit freely, and Professor Sargent in 1907 thought them larger than any he had seen in Japan. Of other Maples, *Acer japonicum* and *A. palmatum* in all their varieties, *A. griseum*, *A. Henryi*, *A. diabolicum* (46 feet high and almost certainly the largest in Britain), *A. Davidii*, *A. syriacum* (an old tree), *A. rufinerve* var. *albo-limbatum* (a variety introduced before the species), are all especially worthy of mention. The charm of Westonbirt, however, lies not so much in the number of species or the symmetry and size of individual trees, as in the supreme skill with which groups have been arranged, often with the native Yew and Box or other evergreens as background to form an unsurpassed setting.

In one part of the arboretum known as the Down Covert, and in a corner of Silkwood, Sir George during the last twelve years has grown a collection of Rhododendrons which is well worthy of comparison with any in the country. The settings for great plants of Rh. FALCONERI, BARBATUM, EXIMEUM, FULGENS, CALOPHYTUM, SUTCHUENENSE, LODERI, and many more, were chosen by him with the same care that he devoted to the grouping of his other shrubs; the background of Cypresses and Yews shows them off to the greatest possible advantage. The specimens of Rh. SHILSONII are especially remarkable. Had he lived he would have made even greater use of the pockets of sandy soil suitable for Ericaceous plants, which occur but sparingly on the Oölitic formation of Westonbirt. He has raised thousands of young Rhododendrons from the

seeds of Forrest, Farrer, Kingdon Ward, and Rock, which in recent years have been arriving in such bewildering profusion.

The cultivation of these seedlings at Westonbirt reached a higher standard of perfection than elsewhere, doubtless owing to the orchid tradition which permeated the place. Like every good gardener, he was generous of his plants, and there are many of us who will remember the supremely careful manner in which consignments from Westonbirt were packed for transit by rail.

One glass-house was devoted to the cultivation of Rh. javanicum. Sir George bought his original plants from Messrs. Veitch of Chelsea, and by hybridisation had developed varieties showing every shade of flower from deep crimson through bright salmon and pink to yellow and white. At the time of his death there were hundreds of seedlingvarietiesof this beautiful tropical species.

It is a gratification to know that a complete and descriptive catalogue of the trees at Westonbirt has been in preparation by Mr. A. Bruce Jackson, A.L.S., and this splendid volume, illustrated by sixty-six photographs of the best specimens, will be published by the Oxford University Press this winter. The collaboration in this work with Mr. Bruce Jackson and his cousin and agent, Mr. David Lindsay, during the last six years has been an unfailing delight to Sir George, who, alas! will not see the book as a finished whole. It will be a fitting memorial to a great tree-lover.

Sir George served on the small consultative committee of four which is called together from time to time to assist the Office of Works in regard to the planting, ornamental and otherwise, in Windsor Great Park. He took a leading part in our deliberations, and the anxious thought he devoted to this work was characteristic of him. He was a keen member of this and the Garden Societies, and we all remember how he welcomed us at Dorchester House for our annual meetings.

The collection at Westonbirt, let us hope, will live long to commemorate a father and son whose enthusiasm for arboriculture was equal to their achievement.

The grace of character and person of that *preux chevalier* their host will be a vivid and lasting memory to the many of us who have enjoyed the hospitality of Westonbirt and the charm of Sir George's friendship.

F. R. S. BALFOUR.

Dawyck, 1926.

NOTES ON RHODODENDRONS AT BORDE HILL, 1926.

A very favourable March had induced many species to flower early, and the beds were quite gay with flowers, when, on the 20th, there was a heavy gale from the north-east and seven degrees of frost. It was interesting to see the different effect of this on various species and varieties. THOMSONII, as often happens here, had its flowers smashed, SUTCHUENENSE the same, and NERIIFLORUM suffered badly, and also all varieties of ARBOREUM that were in bloom except CINNAMOMEUM, which was unhurt, as were BARBATUM SMITHII and, to my surprise, QUEEN WILHELMINA; the flowers on IRRORATUM were very slightly marked, but the young growth was badly cut.

About this time I saw that several Rhododendrons that had been moved in the autumn were dying, and on enquiry I found that the top spit of a bed of bog peat, that had been long used with good results, having been exhausted, the second spit had been wrought in; and when I heard that the men who had dug it said that it rusted their spades, the result to the unhappy Rhododendrons seemed hardly surprising

After this disastrous storm we had a good flowering season, the blossoms being abundant and I thought unusually highly coloured.

In the middle of the summer several young plants that had been put in a bed perhaps too closely guarded from the wind, and with too much overhead shade, were attacked by a fungus. This commenced as far as was visible with a black mould that frequently appeared first on the base of the petioles; in this case the leaves dropped off at once and the plant died in a day or two. But sometimes the mould appeared first on the top of a leaf or of leaves; in these cases, by cutting off the affected part, and by using a fungicide and at once removing the plant to another bed, we were able to save perhaps a third of those thus attacked. I noticed that a few square feet of ground adjoining the bed appeared "squashy." I had this dug out, and found a large and very rotten tree-stump under the soil. Whether there was any connection between this and the disease I am unable to say; but I had never had any plants attacked in this way before. I sent some of the affected plants to Mr. Cotton, who has kindly written to me that he believes losses have occurred among seedlings at Kew from the same fungus; and friends tell me that it has also occurred in Cornwall.

Losses also occurred among some BARBATUMS that had been planted with ARBOREUMS and PONTICUMS in a wood several years ago, due to rabbits; they had in no case touched either of the other species, but had eaten the bark and killed perhaps half the BARBATUMS. I did not know previously that this species would ever be destroyed by them.

I found great benefit from the application of best-quality Peruvian guano to two clumps of CYNTHIA and PONTICUM "Royal purple" that had been planted some years ago in soil apparently too heavy for them. These plants were not merely improved by its application; their appearance was completely transformed,

they are now looking models of health. I feel rather shy about confessing to having used this guano, as I fear that manuring Rhododendrons is hardly considered "cricket."

GRIERSONIANUM (which had no guano) is increasing the size of its trusses with age; a plant here had 24 trusses this season, some of which carried 8 pips.

STEPHENSON R. CLARKE.

BORDE HILL, 1926.

RHODODENDRON INSIGNE.

The plants of this fine species raised from Wilson's Seed No. 1339 must now be beginning to flower in many places. Owners who wish to increase their stock by sowing seed should remember that the seed ripens unusually early. On a plant which bloomed here for the first time last summer I gathered ripe seed before the end of September. The stout capsules had already opened and shed a good deal of their seed.

This species is one of the few that were not injured by the devastating frosts of last May. These frosts cut back the young growth on a great many Chinese species here, including hardy things like RH. OREODOXA, RH. PACHYTRICHUM, etc., as well as any of the Himalayan species which had begun their growth.

JOHN STIRLING-MAXWELL.

POLLOK, 1926.

MEMOIR OF SIR JOHN ROSS OF BLADENSBURG.

The members of the Rhododendron Society who knew the late Sir John Ross of Bladensburg will be able to appreciate the very serious loss which the Society, in common with Irish horticulture, has sustained by his death. To those who had not this privilege it is hoped that this short record of his life and collection of plants may be of interest.

Sir John Ross was born in 1848, and was the second son of David Ross of Bladensburg, Rostrevor, who married Harriet, eldest daughter of the tenth Viscount Massarene and Ferrard. He was grandson of Major-General Robert Ross, who in 1814 commanded an expeditionary force of 4500 men against the United States; on August 24, 1814, he routed a superior force of American troops at Bladensburg, and, marching on to Washington, took the city by surprise, destroyed the public buildings, and returned unmolested to his ships. This battle was particularly memorable from the fact that it was the only victory gained by the British forces in the unfortunate and ill-advised American War. A month later Ross was killed in an attack on Baltimore, and to commemorate his loyalty, ability, and valour his widow and descendants were granted the suffix "of Bladensburg," with an addition to his coat-of-arms of a right hand holding a broken flagstaff, to which was attached the flag of the United States of America.

Sir John was educated at Radley and at the Royal Military Academy, Woolwich, in which he gained a gold medal. He commenced his military career in the Royal Artillery, but in a short time was transferred to the Coldstream Guards, with which he served in the Suakim campaign, and gained a medal and clasp and the Khedive's Star. In 1878-9 he served on the International Boundary Commission as Assistant British Commissioner in Turkey. In 1881 he acted as Secretary to the Right Hon. R. Bourke (Lord Connemara), Financial Commission, Constantinople. In 1881-2 Sir John was Assistant Private Secretary to Mr. Forster, then Chief Secretary for Ireland. He served on the staff of two Lords-Lieutenant of Ireland—Earl Spencer and the Earl of Carnarvon. He was Secretary to two British Missions to the Holy See (Duke of Norfolk's, 1887, and Sir Lintorn Simmons's, 1889-90). In 1896 he became a Lieutenant-Colonel of the Coldstream Guards, was created a K.C.B. in 1903, and a K.C.V.O. in 1911.

From 1901 to 1914 he was Chief Commissioner of the Dublin Metropolitan Police.

Sir John was a man of considerable literary ability, and was the author of *The Marquess of Hastings, K.G.* (in the "Rulers of India" series). He also wrote a history of the Coldstream Guards from 1815 to 1885, and a further record of that famous regiment during the Great War (just published), to which he devoted the greater part of his energy during the latter years of his life, "a labour of love."

There could be no more delightful experience than to spend a few days with Sir John Ross at Rostrevor House going through his collection of plants and

enjoying his company. The versatility of the man, his wide knowledge, his astounding memory, and his love of his plants was an experience to be cherished and never to be forgotten.

His collection of hardy, half-hardy, and very tender shrubs, trees, and, to a lesser extent, herbaceous plants, was certainly the best in Ireland, if not in the United Kingdom. He published a comprehensive list of plants at Rostrevor in 1911. Rostrevor House is ideally situated for growing tender plants. It is on Carlingford Lough, separated from the sea by a hill some 300 feet or so high, the sunny slope of which is protected from sea winds; the soil light, shaly, not deep, moist in places where there are natural streams; and it is astonishing what plants are hardy there which cannot be grown elsewhere.

He first began to give attention to plants when his mother died and the place was handed over to him by his elder brother, who had inherited it, but, being a member of a religious order, was prevented from living there. When Sir John was appointed Chief Commissioner of the Dublin Metropolitan Police he made frequent visits to Rostrevor according as his duties would allow, and started the development of the hillside, which he christened "Fairyland." As his work progressed he discovered that although the climatic conditions were most favourable he had great difficulties to contend with in the soil, which, owing to its shaly nature, was very porous, and his plants therefore suffered severely in drought. He considered that many of his early failures were due to not having recognised this fact, which he afterward remedied by preparing good holes for planting. Rostrevor was interesting to all his garden visitors because of the great variety of plants cultivated. There was interest for every specialist. As visitors ascended to Fairyland their attention was arrested by certain groups, but probably the most striking group of all, and one which left a lasting impression, consisted of two tall species of Eucalyptus—*E. Mulleri* and *E. coccifera*, planted in 1894 (see *Rhod. Soc. Notes*, vol. ii. part ii., p. 80), a fine specimen of *Pinus Montezumae*, *Cupressus sempervirens*, *Drimys Winteri*, *Cordyline indivisa*, and *Tricuspidaria lanceolata*. These seven plants were left by Sir John to fight for the survival of the fittest; he could not harden his heart to remove any of them.

A little higher up on the hill a shady, moist spot contained another remarkable group consisting of *Vaccinium arctostaphylos* (about 10 feet high), which was covered this autumn with clusters of purple grape-like fruits; *Eucryphia pinnatifolia*, probably the largest plant in Ireland; a very fine *Stuartia pseudocamellia*; *Restio sub-verticillatus* (about 12 feet spread); Rh. Royllei with exceptional glaucous foliage; and other plants of interest.

Continuing the upward climb, we came upon a little dell in which young Rhododendrons were establishing. Here was one of the most remarkable plants of *Gaultheria Veitchiana* in cultivation, which never failed to produce an abundant crop of its large, pale-blue fruits every autumn.

Beside this was one of Sir John's treasures, a large healthy plant of Rh. Griffithianum, a peculiarly fine variety with large white flowers.

One other group well worthy of mention consisted of some very fine specimens of Olearia species, growing amongst which were many natural hybrids of this genus, of considerable garden value, some of which were evidently crosses between *O. macrodonta* and *O. argophylla*.

Where the collection is so great it is manifestly impossible to enumerate even a selection of the more interesting plants without making this article unduly long. In a future year it is hoped to give a more exhaustive detailed description of plants of special interest.

In conclusion, members of the Rhododendron Society will be glad to know that Sir John's niece, Miss Ross of Bladensburg (the present owner), is maintaining the garden, with the assistance and under the supervision of John Rodgers, who had been trained for many years by the late Sir John.

NOTE.—Members of the Rhododendron Society can always see the collection by applying for a permit to Mr. John Rodgers, Rostrevor House, Rostrevor, County Down.

HEADFORT.
F. W. MOORE.

1926.

THE EFFECT OF TREE-STUMPS UPON RHODODENDRONS.

In reading again the back numbers of the transactions of the Society, there seems to be no direct reference to the effect on Rhododendrons planted in close proximity to old tree-stumps. This being to some of us, perhaps, a matter of considerable importance, I have tried on a previous occasion to construct a contribution on the subject for inclusion in our *Notes*. Realising, however, during the course of preparation, that my experience might not be general, or coincide with that of other people, I commenced making enquiries amongst my friends, with the consequence that I have had to entirely reconstruct my notes; and the result is now submitted, not with any view to finality (who in writing of Rhododendrons does aim at finality !) or of laying down any proven rule of thumb, but in the hope that it may result in the appearance in future publications of our *Notes* of other people's views and experiences, and so at some future time enable some conclusion to be reached which shall be helpful to those who contemplate planting Rhododendrons in woodland clearings.

I am well aware that certain species are "epiphytic" to the extent that they may be found growing on trees, but this is far from meaning that these epiphytic species extract their food solely from the branches of the trees on which they grow; and even if it were so proved, enquiry would have to be made as to whether the subjects on which these plants grow are in all cases alive, dead, or decomposing.

This, however, is a different problem from that which I have under consideration, because the plants to which these notes refer are, practically speaking, none of them "epiphytes," and because in all cases they are planted, and will grow, in soil. Moreover, it has proved impossible to find any case where the death of a Rhododendron has been definitely proved to have resulted from contact with dead wood lying on the surface within reach of the root system of the plant; indeed, it is not many years ago that a friend, experienced in growing Rhododendrons, negatived my suggestion that buried roots might be deleterious in their effect on the organism of living plants in their vicinity, for the reason that no ill effect was observed from dead and decaying branches of trees lying on the top of the roots of living, and flourishing, Rhododendrons. My friend is, I believe, now of the same opinion as myself.

On the other hand, I have been told by one entitled to rank amongst the originators of Indian Rhododendrons in this country that he became so convinced of the ill effect of rotting wood in contact with the roots of his Rhododendrons that previous to planting he would have every little stick removed from the soil in which he intended to plant.

My experience does not carry me quite so far as this; indeed, when a living tree has been cut down I have found that Rhododendrons may be planted, temporarily, quite close to the stump with impunity—of course, giving due consideration to the extent of the exhaustion of the soil round the root system of the old tree—and may be left there for several years. Ultimately, however, the tree-stump will rot, and when this decay has advanced to a certain stage it will

certainly kill any Rhododendron coming in contact with it. Not only so, but the death will be as sudden as it is assured, and seems to affect the whole plant, even layers being difficult to save.

Having had to deal with several cases, I have dug out a considerable number of stumps which have reached this stage of decay, which might be called "the poisonous stage," and in all cases I have found that the underground roots are reduced to something which resembles an evil-smelling pulp.

It will be seen that to carry out any detailed experiments on these lines necessitates a considerable number of years, especially since experience supports the view that it is only roots well beneath the surface that "rot" in this manner, while those in close contact with the air decay, in a sense, by attrition, and therefore by a dry process which does not seem to harm the Rhododendron, and may even be beneficial to it.

We have all of us lifted plants, and especially tender seedlings, which have to all appearance fixed on small pieces of wood from which they appear to be drawing nourishment.

That stumps decayed to the extent I have described would kill anything the roots of which came in contact with them, there can be no diversity of opinion; and I have of late considered the possibility of the sudden blackening and shrivelling of isolated branches of large and old plants of Rhododendron being explained by the roots which conduct nutriment to these particular branches having come in contact with small bits of wood decayed to this "poisonous" state. This, however, is a question requiring much more experience than can at present be brought to bear upon it.

Having got thus far with my notes on the subject, I approached some one in another part of the country with the theory, and was not a little surprised to hear from him that not only does he not consider old roots inimical to the growing plants, but that he considers them even of benefit, and would not hesitate to plant Rhododendrons quite close to tree-stumps which have been cut off many years ago. Further enquiry elicited the information that tree-stumps in his soil do not rot to "sponge" as they do with me, but that they remain quite "dry" even after many years' cutting.

Here, then, would seem to be some explanation, especially since the soil where my friend lives is a gravelly sand below the surface, which certainly does not retain the moisture to the same extent as the clayey loam with which I am more directly concerned.

Now, it would be interesting to collect the experiences of others who have dug up old stumps on ground where they propose to plant, and to know from them as far as possible the length of time that has elapsed between the cutting of the tree and the digging of the stump, as well as the state of the larger roots when dug.

The length of time required to kill Rhododendrons by planting close to old stumps depends probably on several factors, such as the size of the Rhododendron planted, the size of the old stump—for of course the larger this is, the longer will

it be before it rots—for how long the tree has been cut down, and several other considerations which will no doubt occur to any one interested in the subject; thus, it may well be that the species of tree-stump has a considerable bearing in the case of some soils, while proportionately less in others. For instance, if a large tree is cut and a Rhododendron planted immediately close to the stump, the evidence will take longer to collect than in the case of a Rhododendron planted close to the stump of a tree cut down some years previously and already started to decay.

It may be of interest to give one very clear instance which has come to my knowledge where a large Beech tree was cut down in 1906 and in the spring of the following year a small plant of ARBOREUM (hybrid) was planted about 10 feet away from the centre of the stump. The ARBOREUM flourished and soon grew to a very respectable size. In 1920 it was much admired by some friends who came to see the garden, one of whom asked for layers, which were accordingly put down. In 1921, however, the whole of the ARBOREUM died, except one of the layers which was coaxed to recovery. Another plant of the same hybrid and of equal age, growing perhaps fifty yards away, remains in excellent health. This plant is, and has always been, very close to a large living Ash tree.

The stump was then dug out and the site replanted, with apparent good result; but as several chips of the stump were left in the soil, it is possible that some further evidence will be obtainable here some day.

Doubtless the first question I should be asked by any reader of these notes would be as to whether any difference in effect has been noticed between the stumps of different species of tree. The reply would be that here the greatest damage has been noticed in the proximity of Conifer stumps. As related above, the Beech has been proved guilty, but all are suspect; and though Conifers head the list at present, this may well be because here Rhododendrons have been planted more often in the vicinity of Spruce stumps than those of any other species of tree. Again, the tendency would certainly be for these to rot fairly quickly because most of them had "died on their legs" before being cut down.

If asked to give the length of time that must elapse before one may expect to see the effect of planting close to a large stump which at the time of planting the Rhododendron has not commenced to decay, I should be inclined to say a minimum of ten to fifteen years, adding again the qualification that the process would be controlled by many factors, some obvious, and some abstruse.

There are in my garden still several stumps which will in time have to be dug out; and although I have been forced to realise that these are removed more easily and with less pain (both mental and physical) before they poison the Rhododendrons in their vicinity, it is probable that some will be left to confirm an opinion which several painful recollections had already ripened to conviction.

GEORGE W. JOHNSTONE.

TREWITHEN, 1926.

The Rhododendron Society Notes.

NOTES FROM WAKEHURST.

The year 1926 will surely be long remembered as a great "vintage" year for Rhododendrons. In all parts of the country they flowered in great profusion. Nor was this the only unusual feature, for the flowering season was quite a month earlier than the normal time. This is all the more remarkable as there was nothing in the weather during the preceding autumn or winter to account for such behaviour, and we may have to go back to the summer of 1925 to find a cause. In any case, opinions differ; and it is probable that if it were in the power of man to ordain the conditions necessary to produce a good flowering season, a wide diversity of views would be expressed.

As a matter of fact, the summer of 1925 was not abnormal, nor did the weather in the autumn depart in any marked degree from what is usually experienced. For a few weeks in January there was some very cold weather and a severe winter seemed to be setting in, but nothing of the kind happened: February was the mildest on record, and this was followed by an exceptionally dry March.

In Sussex the NOBLEANUMS were in flower soon after the New Year, and although they were checked by the frosts of January, they recovered, and were very good at the end of the month. Thereon followed the usual succession; but, as already stated, quite a month before the accustomed time. The SUTCHUENENSE section were exceptionally good, and CALOPHYTUM, which does not flower very regularly, bore a wealth of trusses on every plant.

Of the Rhododendrons which flowered for the first time at Wakehurst, one was IXEUTICUM. This, according to Mr. Wilding's list, belongs to the TALIENSE series, but is now, I believe, referred to the BARBATUM group. It is a nice compact plant with correspondingly compact trusses of nearly white flowers, though in Mr. Wilding's list they are described as "reddish-brown." The leaves are somewhat stiff and corrugated. Another to flower for the first time was WILTONII, already well known in Cornwall. It is a slow grower, but its delicate pink flowers are well worth waiting for. Later in the spring ERIOGYNUM produced a few trusses for the first time. Whether this and FACETUM are the same remains to be seen, but there can be no doubt that ERIOGYNUM is a very striking and beautiful species, although probably tender. The trusses are compact and not very large, the flowers fleshy and of a deep rich crimson, reminiscent of KINGIANUM. It remains in flower for a considerable time. The thick brown tomentum on the young leaves is very remarkable.

I must also mention the flowering of INSIGNE. Wilson describes this as "an exceedingly distinct and very striking species." It was found by Henry and Pratt, as well as by Wilson, but all in the same locality, namely, Mt. Wa in Szechuan, at 2000-3000 feet elevation. Hemsley described it as aff. IRRORATUM, but it is now placed in the NIVEUM series, though it does not bear much resemblance to it. My plant is slow-growing but sturdy; the leaves are very coriaceous and stiff, shiny green above, with a dense glossy felt below. The flowers are

broadly campanulate, and seem to run from pink to white. Its truss is not large. This species is said to develop a salmon-coloured trunk.

To return to the cold weather of January, it was very interesting to observe the behaviour of various species in respect of their leaves. The larger-leaved species, such as FALCONERI, merely deflexed their leaves without curling them. The leaves of the FARGESII and DAVIDII group showed a marked tendency to curl very promptly during frost, as they also do in dry weather; but in AURICULATUM, and in a still more pronounced degree in CALOPHYTUM, the leaves rolled up so tightly as to become no larger than a pencil.

It was appropriate that this *annus mirabilis* should happen to have been chosen by the Rhododendron Society for holding its first Show under the auspices of the Royal Horticultural Society at Vincent Square. The date chosen—April 27—caused some anxiety as the spring advanced, and fears were expressed that the precocious flowering would leave nothing for the Show. These apprehensions, however, were happily not realised, and the display on April 27 could hardly have been finer.

Never before have Rhododendrons in such profusion been exhibited under one roof. It is not my purpose here to embark on a description of the various exhibits, which were fully dealt with at the time in the horticultural press, but I must express the gratitude which I am sure is felt by all members of the Society to Mr. Lionel de Rothschild and his Committee for the excellence of the arrangements and the pains taken to make the Show a success.

During the year the new house at Kew, which had been constructed for the reception of the more tender Rhododendrons, was completed, and here we may hope to see them flourish in a manner which cannot be expected in the open.

During the year Mr. Forrest returned from his sixth expedition to China, and is once more at home assisting in the determination of his numerous introductions. Mr. Kingdon Ward set out on his ninth expedition, this time to collect plants on the borders of Upper Burmah and Assam.

G. W. E. LODER.

WAKEHURST, 1926.

LIST OF RHODODENDRON HYBRIDS THAT HAVE FLOWERED AND HAVE BEEN NAMED, AND OF WHICH THE PARENTAGE CAN BE TRACED BACK TO SPECIES ON BOTH SIDES.

In the first column of the following list is recorded in each case the first name given to each cross. Synonyms are also recorded in this column, with a reference to the first-given name.

In the second column are recorded names subsequently given, synonyms, and names of varieties.

It should be noted that in many cases the secondary names are so established by usage that they practically rank as original names—*e.g.* in the case of Rh. Loderi, which is of the same parentage as Rh. Kewense, and in the case of Rh. Beauty of Tremough, which is of the same parentage as Rh. John Tremayne.

In this list are included neither hybrids of the Javanico-jasminiflorum group nor hybrid Azaleas.

HENRY D. M'LAREN.
1926. E. H. WILDING.

Name.	Synonyms or Varieties.	Parentage.	Raiser.	Notes.
A. Gilbert .		discolor × campylocarpum	T. H. Lowinsky	
Amkeys . .		ambiguum × Keysii	E. J. P. Magor (Lamellen)	
Arbad . .		arboreum album × adenogynum	E. J. P. Magor (Lamellen)	
Argenteum rubrum		argenteum × arboreum rubrum	Ludeike	
Atalanta . .		Werei × Thomsonii	E. J. P. Magor (Lamellen)	
Altaclarense .		catawbiense × ponticum-arboreum blood-red	Lord Carnarvon	
Aphrodite (see Duke of Cornwall)				
Aurora . .		Thomsonii × Kewense	R. Gill (Tremough)	Named by L. de Rothschild. A.M. at R.H.S. 1922
Barclayi . .		Glory of Penjerrick × Thomsonii	S. Smith, gardener to R. Barclay Fox of Penjerrick	Raised in 1913
	var. Robert Fox			A.M. at R.H.S. 1921
	var. avice			
	var. Helen Fox			

Name.	Synonyms or Varieties.	Parentage.	Raiser.	Notes.
Batemannii				(See *Bot. Mag.*, vol. lxxxix. p. 5387)
Beauty of Tremough (see JohnTremayne)				
Bodartianum or Boddaertianum	Smith's album	campanulatum × arboreum album	Smith of Norbiton, or possibly of continental origin	In Noble's catalogue of 1863 the name is spelt Boddaertianum
	Mrs. Gill	campanulatum × arboreum	R. Gill	
Brachbooth		brachyanthum × Boothii	E. J. P. Magor	
Campbut		campylocarpum × Fortunei var. Mrs. Butler	E. J. P. Magor	
Campkew		campylocarpum × Kewense	E. J. P. Magor	
Caubut		caucasicum var. stramineum × Fortunei var. Mrs. Butler	E. J. P. Magor	
Carlyon's Hybrid (see John Tremayne)				
Cartoni		nudiflorum × catawbiense		
Cilbooth		ciliatum × Boothii	E. J. P. Magor	
Cinnmadd		cinnabarinum × Maddenii	H. Mangles J. C. Williams E. J. P. Magor	Named by E. J. P. Magor. Individual examples of this cross raised by H.Mangles were named by him—Rose Mangles, Primrose Queen Peach Queen, Souvenir de Littleworth
Cinnkeys		cinnabarinum × Keysii	E. J. P. Magor	
Cirrus		Smirnowi × arboreum	Reuthe	
Colonel Rogers		Falconeri × niveum	Rogers, Riverhill	A natural hybrid also at Clyne Castle
Cornish Cross (see Pengaer)				
Cornish Red (see Rundle's Scarlet)				
Cornsutch	var. Almondtime	Cornubia × Sutchuenense	E. J. P. Magor	A variety named Almondtime was shown by Col. S. R.Clarke, A.M. at R.H.S.

Name.	Synonyms or Varieties.	Parentage.	Raiser.	Notes.
Cornubia . .		arboreum blood-red × Shilsonii	S. Smith, gardener to R. Barclay Fox, Penjerrick	Named by Messrs. Gill
	syn. Liliani		"	The name Liliani was given subsequently by the raiser when one of this cross shown by him at Truro in 1911 was awarded 1st prize
Countess of Haddington		ciliatum × Dalhousiae		
Cupid . .		Griffithianum × Luscombei	G. H. Johnston	A.M. at R.H.S.
Damaris . .		Dr. Stocker × campylocarpum	E. J. P. Magor	The same cross raised and shown by K. M'Douall recd. A.M. at R.H.S. 1925
Dr. Stocker .		caucasicum × Griffithianum	Abbey, gardener to the late Col. North	
Dorothea . .		decorum × Aucklandii roseum superbum	T. H. Lowinsky	
Duchess of Cornwall (see Duke of Cornwall)				
Duke of Cornwall		arboreum blood-red × barbatum	Gill	
	Aphrodite			
	Barbatum var. carneum	arboreum × barbatum		
	Duchess of Cornwall	barbatum × arboreum	Gill	
	Shepherdii	arboreum × barbotum		
	Werei	arboreum album × barbatum	S. Smith	
Elsae . .		grande × Hodgsonii (probably)	Raised by the Hon. John Boscawen and given to G. Carlyon of Tregrehan	A.M. 1925 at R.H.S.
Elisabethae .		Falconeri × argenteum rubrum	J. C. Williams Reuthe	
Ernest Gill .		Fortunei × arboreum blood red	Gill	A.M. at R.H.S.
Exoniense .		ciliatum × Veitchianum		
Exminster .		Thomsonii grandiflorum × campylocarpum	S. Smith	Named by Veitch of Exeter

Name.	Synonyms or Varieties.	Parentage.	Raiser.	Notes.
Fasthip		fastigiatum × hippophaeoides	E. J. P. Magor	
Gauntletti (see Halopeanum)				
Gill's Triumph (see John Tremayne)				
Gill's Goliath (see John Tremayne)				
Gillii (see John Tremayne)				
Glory of Leonardslee (see John Tremayne)				
Glory of Penjerrick (see John Tremayne)				
Goldsworth Yellow		campylocarpum × caucasicum stramineum	George Harrow, of Veitch of Chelsea	A.M. at R.H.S. 1925
Gowenianum	roseum odoratum	nudiflorum × (ponticum × catawbiense)		
Griffithii (see Kewense)				
Halopeanum	Gauntletti White Pearl	Griffithianum × maximum	Mons. Halope	
Harrisii		arboreum × Thomsonii	Harris, Clyne Castle, circa 1880	Also by J. C. Williams (an exceptionally fine variety) and by Gill
	Tregedna		S. Smith	
Henryanum		Dalhousiae × formosum	Anderson Henry	
Hipsal		hippophaeoides × saluenense	E. J. P. Magor	
Hodgoneri		Hodgsonii × Falconeri	Reuthe	
Ione		"Countess of Haddington" × bullatum	E. J. P. Magor	
Jacksonii		caucasicum × Nobleanum		
	var. album			
John Tremayne		arboreum blood-red × Griffithianum	J. Tremayne of Heligan	
	Mrs. Babbington	" "	" "	
	Beauty of Tremough			
	Gill's Triumph			
	Glory of Leonardslee			
	Glory of Penjerrick	" "	R. Gill	
	Trebah Gem			
	Trebianum			
	Gillii, A.M. 1919			
	Gill's Goliath			

Name.	Synonyms or Varieties.	Parentage.	Raiser.	Notes.
	Carlyon's Hybrid	arboreum blood-red × Griffithianum	G. Carlyon of Tregrehan	
	Scorrier Pink	" "	G. Williams of Scorrier	About 1880
	Mrs. Greet		P. D. Williams	
Kewense		Fortunei × Griffithianum	Kew	1874
	Loderi		Sir E. Loder	1901-1907: a far finer plant than the type, itself having many varieties, of which 2 have received F.C.C.
	Griffithii			Not to be confused with the species Griffithianum
	Mrs. L. R. Russell	Fortunei × Griffithianum	Shown by Russell	
Koenig Carola	Koenig Albert	Falconeri × ponticum	Ludiecke	
Koenigdis		"Koenig Carola" × discolor	E. J. P. Magor	
Lamorran red (see Rundle's Scarlet)				
Lady Eleanor Cathcart		maximum × arboreum	John Waterer	Original plant sent to Highclere and returned to Bagshot
Lepidoboothii		lepidotum × Boothii	E. J. P. Magor	A. M. at R.H.S. 1919
Liliani (see Cornubia)				
Lindbull		Lindleyi × bullatum	E. J. P. Magor	
Loderi (see Kewense)				
Luscombei		Fortunei × Thomsonii	Luscombe	1890. Named by Kew
	Leonardslee variety		Sir E. Loder	
Mansellii		Falconeri × grande	Downie	1875
Mrs. Randall Davidson		Griffithianum × campylocarpum		
	Penjerrick	" "	S. Smith	A. M. at R.H.S. for yellow var.
	Mrs. Kingsmill	" "	H. Mangles; also at Kew and Leonardslee	and A.M. at R.H.S. for pink var.
Mrs. Gill (see Bodartianum)				
Mrs. Kingsmill (see Mrs. Randall Davidson)				
Multiflorum		ciliatum × virgatum	Mansell	

Name.	Synonyms or Varieties.	Parentage.	Raiser.	Notes.
Nobleanum		caucasicum × arboreum	Waterer of Knaphill	
	N. album	caucasicum × arboreum album		
	pulcherrimum	arboreum × caucasicum	Waterer of Knaphill	1832. Lindl., *Bot. Reg.* 1820, f. 2
	sulphureum	caucasicum × arboreum album		
	venustum		W. Smith of Kingston, 1829	
Oreocinn		oreotrephes × cinnabarium	E. J. P. Magor	
Pengaer		Griffithianum × Thomsonii	Sir J. Llewelyn	
	Cornish Cross	Thomsonii × Griffithianum	S. Smith	A.M. at R.H.S.
	William Dallimore	,, ,,	Kew	
Penjerrick (see Mrs. Randall Davidson)				
Princess Alice		ciliatum × Edgeworthii	Davies (?)	
Praecox		ciliatum × dauricum	Davies	1860
Prostsal		prostratum × saluenense	E. J. P. Magor	
Prostigiatum		prostratum × fastigiatum	E. J. P. Magor	A.M. at R.H.S. 1924
Red Argenteum		grande × arboreum	(unknown)	At Caerhays
Russellianum		catawbiense × arboreum		
,,	var. album	catawbiense × arboreum album		
	Sherwoodianum	,, ,,		
Roseum odoratum (see Gowenianum)				
Rosy Bell		ciliatum × glaucum	Davies	
Rovellianum		dauricum semperverens × ferrugineum	Rovelli	
Rundle's Scarlet		ponticum × arboreum	Unknown, but later at Red Lodge Nurseries, Southampton	
	Cornish red Smith's red Lamorran red			
Scorrier Pink (see John Tremayne)				
Sesterianum		ciliatum × Edgeworthii		
Shepherdii (see Duchess of Cornwall)				
Sherwoodianum (see Russellianum)				

Name.	Synonyms or Varieties.	Parentage.	Raiser.	Notes.
Shilsonii		barbatum × Thomsonii	Gill, 1890	Sir E. Loder raised the reverse cross
Smith's Album (see Bodartianum)				
Smith's Red (see Rundle'sScarlet)				
Soulbut . .		Souliei × Fortunei var. Mrs. Butler	E. J. P. Magor	
Soulkew . .		Souliei × Kewense	E. J. P. Magor	
Soulking . .		Souliei × Kingianum	E. J. P. Magor	
	syn. Kingsoul	Kingianum × Souliei	E. J. P. Magor	
Spinulosum .		spinuliferum × racemosum	Kew	
Spinlut . .		spinuliferum × lutescens	J. C. Williams	
Stanwellianum		caucasicum × catawbiense	Methven & Son	
St. Keverne .		Kingianum × Griffithianum	P. D. Williams	A.M. at R.H.S. 1924
Trebah Gem (see John Tremayne)				
Trebianum (see John Tremayne)				
Tregedna (see Harrisii)				
Venustum (see Nobleanum)				
Werei (see Duchess of Cornwall)				
White Peach (see Halopeanum)				
William Dallimore (see Pengaer)				
Xenia . .		Aucklandii roseum superbum × Fortunei var. Mrs. Butler	T. H. Lowinsky	

NOTES FROM LAMELLEN.

The frost in November killed my two plants of Rh. PROPHANTUM, and proved that Rh. MEGACALYX was very much hardier than was supposed. February and March were mild, and produced many new flowers.

Rh. "CAMPIRR" (CAMPYLOCARPUM × 5851F IRRORATUM forma) was one of the first, and rather favoured IRRORATUM in colour and size of flower, but there was a little yellow in the blush-white, and more substance and fewer flowers to the truss than in the best forms of IRRORATUM. It was, however, frosted when half out, and may be better another year. Rh. "ADENARB" (ADENOGYNUM × ARBOREUM ALBUM), which has a thick tomentum beneath the leaves, favouring sometimes one parent and sometimes the other, had white flowers, 9 to the truss, shaded pink on the exterior and boldly spotted with crimson on the upper segments, with a blotch of the same colour at the base. As to size, $2\frac{1}{2} \times 2\frac{7}{10}$ inches, filaments white, stamens 10 bright brown, style and stigma yellowish. Quite a nice flower. The habit of the plant is good, stocky, well clad, and rather spreading. Rh. 21375F flowered profusely at 6-9 inches high, in groups of three in the axils of the leaves, violet-rose in colour. This is Rh. CUNEATUM. Rh. 21339F and 22092F, which has smaller, narrower leaves than Rh. RACEMOSUM and smaller flowers, is Rh. HEMITRICHOTUM.

A seedling received from the R.H.S. labelled 240, No. 28, is Rh. INTRICATUM forma. It is lavender-blue in colour, and is peculiar in having but 4 lobes to the corolla, which is larger than the type. A seedling raised from my old plant of Rh. FITTIANUM had very pretty little flowers coloured rose Neyron red 2nd shade, and proved to be a natural hybrid with Rh. GLAUCUM, several plants of which are growing near its parent.

Rh. No. 822 "HIPSAL" (HIPPOPHAEOIDES × SALUENENSE), a dwarf branching plant, had 11 flowers to the truss, purplish-mauve (*Rép. de Col.*), $1 \times 1\frac{1}{2}$ inch, openly campanulate. Filaments same colour as corolla, stamens 10 brown, style and stigma red. A very nice flower, and quite a large truss for so small a plant.

Rh. THYODICUM flowered for the first time, and is white, and to the ordinary gardener looks near to Rh. CEPHALANTHOIDES, but has larger flowers and a few more to the truss.

Rh. K.W. 3097 BRACHYSTYLUM had one flower, and that of a much darker yellow than Rh. TRICHOCLADUM, in which series it comes, darker even than that of Rh. SULFUREUM.

Rh. No. 446 "SOULARB" (SOULIEI × BLOOD-RED ARBOREUM) was another newcomer, 17 bells to a well-shaped truss, deep cerise 3rd shade, paler towards the base, which itself is much darker, unspotted, $1\frac{7}{10} \times 2\frac{3}{10}$ inches campanulate, style and filaments paler, stigma reddish, stamens 10 brown. A pretty flower.

Rh. No. 447 "XENARB" (XENOSPORUM × BLOOD-RED ARBOREUM), 11 in truss, also deep cerise but rather paler than the above, and usually with a few faint

spots; 2×2½ inches, campanulate, filaments and style almost white, stigma reddish, stamens 11 or 12 dark brown.

Rh. 4248 Wilson HUNNEWELLIANUM bloomed at last, 10 to truss, blush-white with faintest tinge of yellow and pink spotting on upper segments; 5-lobed, campanulate, 2⅛×3 inches, filaments white, style tinged pink, stigma pale red, stamens 10 dark brown. With this flower and the white underleaf it is a pretty shrub in the wood.

First week in April, Rh. K.W. 4023. A little truss of about 7 flowers, pale yellow, 5-lobed, lobes very deeply cut, and crimped at their edges, almost salver-shaped, ⅛×1½ inch, filaments same colour as corolla, stamens 10 brown, style reddish turning quite red with age, stigma brownish-red. An upright-growing LAPPONICUM which promises to be a very pretty thing. Sent to Edinburgh and pronounced to be Rh. MULIENSE.

Rh. FULVUM, 17 to the truss, pale violet-rose with deep crimson blotch at base, campanulate, 1½×2 inches, 5-lobed, calyx minute, filaments and style white, stamens 10 dark brown, stigma greenish. So that the flower hardly comes up to the beautiful foliage.

Rh. NIPHARGUM had about 20 flowers to the truss, blush heavily spotted with crimson on the upper lobes, 5-lobed, campanulate, 1½×2 inches, filaments white, stamens 10 brown, style tinged pink, stigma greenish-pink. Another rather disappointing flower; but it came out during inclement weather, and may be better another time.

Rh. MORII, 11 to the truss, white with a blotch breaking into a heavy spotting of crimson, 5-lobed, campanulate, 2×2½ inches, filaments white, stamens 11 or 12 very light brown, style and stigma greenish. A most pleasing flower, and the plant, which seems quite hardy, was very floriferous.

For a while after this, time and opportunity were lacking, and several first flowers, which merited mention, were omitted; chiefly perhaps those on four self-sown seedlings I dug up in the wood. These were large, white or pale yellow with red spots, and came in for some admiration at the Society's Show in London, when several friends asked me to put down layers for them. This I confess I have not yet had time to do. The plants may be a natural hybrid between CAMPYLOCARPUM and KEWENSE.

The first and second weeks in June produced long-delayed flowers on Rh. No. 124 (MAXIMUM × DISCOLOR), 17 to the truss, pale lilac-rose with a dense spotting of yellow-green on the upper lobe, 5-lobed, rarely 6, campanulate, 2½×3½ inches, style and filaments paler than corolla, stigma reddish. A really good flower, and valuable for its lateness. *N.B.*—The drop of honey at the base is pink, which has a curious effect on the green spotting.

Rh. SALUENENSE was in full flower again this month.

Also in June Rh. MEGACALYX had its first blooms, out of doors and unprotected. A very fine thing indeed, and well worthy of the xxx in Mr. Forrest's *Field Notes*. White, sweet-scented, and very large, with a curious protuberant lower lobe, reminding one of a labiate. I may say that I crossed this with Rh. ROYLEI var. MAGNIFICUM, and four fat pods of seed resulted.

Rh. K.W. 3776 (in part) was another newcomer. Five or six in the truss, white with a yellow blotch and not very large. I sent it to Edinburgh, where it is thought to be Rh. PACHYPODUM.

Some old plants, 5 feet high, which I had thought to be Rh. SCOTTIANUM, flowered, white, 3 in a truss, and not nearly so fine as that sp. These have been identified as Rh. SUPRANUBIUM. Apparently all the SCOTTIANUM have been killed except one pot plant, and this I have planted out under a north wall.

Some small seedlings flowered, were sent to Edinburgh, and named as follows: Rh. 20648F is STEREOPHYLLUM; Rh. 21344F, probably HIPPOPHAEOIDES forma, with short style and flowers smaller than the type—this may be due to starvation; and Rh. 21487F is SCINTILLANS.

I asked last year for the name of, and help in coping with, the white brown-headed grub which gets into one's boxes of Rhododendron seedlings and eats the roots. No response being forthcoming, I sent specimens to the *Gardeners' Chronicle*, and was told that the grub was that of a weevil, probably belonging to the genus *Otiorhyncus*. One or two species are common in greenhouses, and, being night feeders, usually escape notice. The adult insects should be searched for at night with a lantern and caught in a tin containing paraffin. Secondly, vaporite might be mixed with the soil, which must not be used for a week or two afterwards.

Now, this is not really very helpful advice: can any one better it? My experience this year has been that if the damage is noticed early enough, the seedlings may be saved by being taken out of the box and replanted, when all the grubs can be killed. Moreover, in the course of transplanting I have once or twice found that plants have been attacked, possibly by only one or two grubs, and have recovered by themselves, though of course considerably checked. The moral of the whole thing is that seedlings should not be left too long in the boxes; and although this always happens here from lack of labour, other gardens are probably more happily situated. We had very hard frost at the end of October, one of the ponds being frozen over, and many of my seedlings were badly cut.

E. J. P. MAGOR.

LAMELLEN, 1926.

ON ARRANGEMENT AND GROUPING.

The following reflections on planting Rhododendrons so as to display them to the fullest advantage will have little or no interest for members of the Society, who no doubt have given close attention to the subject for many years, and stand in no need of suggestion from one of their number. But whereas it has now been arranged that the *Notes* of our Society can be obtained by others than members, and whereas interest in the cultivation of Rhododendrons has been very greatly stimulated by the recent introduction of a vast number of new Asiatic species, and, I may add, by the Society's exhibition in the spring of 1926, it may be that, if one who in the past has been guilty of many blunders in planting makes confession of some of them, it may serve to enable other enthusiasts to avoid them.

Among the hundreds of newly discovered species of Rhododendron, a considerable number have already disclosed their decorative qualities as superb, good, middling, or poor. Assuming that a selection has been made from what are considered the more desirable species (there can be few persons with command of space to grow all kinds to mature development), assuming also that soil, exposure, and other cultural conditions are satisfactory and that it is intended that every plant shall have full opportunity of displaying its quality, the chief evil to be provided against is ultimate congestion. Many years ago a foremost pioneer in the cultivation of Rhododendrons gave me a bit of counsel about planting any choice species. "Place it," said he, "so that you may be able to ride round it thirty years hence!"

I was asked once by a wealthy man to inspect a fine place which he had lately bought in one of the southern counties, and advise with him about the garden and grounds. I saw at once that the conditions were all that could be desired for Rhododendrons. That showy hybrid Pink Pearl had just made its debut, had created much sensation, and was selling at a high price. I mentioned it to him, recommending him to get one or two. "Oh, I know it," he replied; "I have fifty plants of it in a bed down there"! Fifty! in a space sufficient for the right development of no more than three. It is true that, owing to their compact and shallow root system, Rhododendrons may be safely transplanted at any age; but the mischief is that in too many cases they are not moved in time. Many instances occur to mind of what might have become splendid specimens becoming defaced and obscured by overcrowding. In attempting to remedy such congestion, excruciating problems present themselves. If imagination, as Disraeli maintained, is essential in a statesman, assuredly it is so in one who would deal successfully with Rhododendrons. He must be able to foresee the ultimate dimensions of the two-foot seedling he is handling, in its future relation to neighbouring growths.

Let me illustrate this by reciting one of my own many blunders, although the plants concerned belong to different genera. Thirty years ago or thereby I set *Tricuspidaria lanceolata* and *Eucryphia pinnatifolia*, each barely two feet high, at twelve feet apart, failing to foresee that they would ever interfere with

each other. Each is now over eighteen feet high, and, having burgeoned broadly, they are sadly marring each other's symmetry, fighting for elbow room.

It may be objected that if Rhododendrons are planted so far apart as never to interfere with each other, half a lifetime will have sped before the ground is agreeably clad. Even supposing that a start has to be made on a bare tract and not in open woodland, which is the ideal stage for the larger species, there are plenty of attractive things that may occupy the intervals and be cleared away as occasion arises—such shrubs as the commoner hybrid Rhododendrons and Azaleas, *Spiraea*, *Viburnum*, *Philadelphus*, *Syringa*, *Rosa*, *Ribes*, *Senecio*, etc., or lowlier growths such as *Kniphofia*, *Lilium*, *Aconitum*, *Lavatera*, etc. If the ground is bare of herbage a charming effect may be ensured by scattering over it seeds of white Foxglove, Willow Gentian (*G. asclepiadea*), and, where rabbits come not, *Oenothera biennis*.

Far more thoughtful consideration is due to the grouping and general arrangement of the finer natural species than is called for in planting artificial hybrids. While some of the latter are of exceeding beauty, deserving special treatment, the majority lend themselves aptly to more or less formality in design. But the aristocrats of the race are children of the wild and should never be arranged in a manner suggestive of bedding out. Some of them, no doubt, spread broad mantles of fire or snow on their native mountain-sides; but British parks and pleasure-grounds are not laid out on that heroic scale. Resort must be had to artifice to secure the best effect from the finest species. Such may be accounted as achieved when a winding woodland path reveals a lofty Rh. Falconeri or a broad-limbed Rh. calophytum in solitary grandeur; a group of Rh. arboreum or Rh. decorum mantling a glade; a glen dim with the blue mist of Rh. Augustinii or the rosy haze of Rh. Schlippenbachii.

Let me wind up this discursive note by repeating what I wrote in beginning it, namely, that it is not meant for the attention of experienced cultivators, but as suggestion for the increasing number of persons who have recently been attracted by the fascinating genus Rhododendron.

HERBERT MAXWELL.

Monreith, 1926.

THE LEONARDSLEE RHODODENDRONS.

In this short article I propose to give a brief account of the successful hybrid Rhododendrons raised by the late Sir Edmund Loder during his lifetime, at Leonardslee in Sussex. When Sir Edmund first purchased the estate from his wife's father, Mr. Hubbard, he, with a love for all natural objects, such as birds, mammals, and plants, saw its suitability as a home for flowering shrubs. After a study of Sir Joseph Hooker's monograph on Rhododendrons he went to India in 1879 and there enjoyed the sight of the great species in their own home. Meanwhile, Luscombe had done much to improve hybrids from Indian species, and Mangles a great deal more, and with this incentive Sir E. Loder soon got together a representative collection of all the best species and hybrids on which to work his own experiments in hybridisation. At first—like most amateurs—he made many mistakes in choosing to mate either undesirable parents, such as those with PONTICUM strain, which are always inclined to throw back to magenta, or in crossing species such as RH. FALCONERI or RH. EDGWORTHII with other species far removed in character or habit.

He found by experience—as others have since done—that the greatest successes were those obtained by mating species or hybrids that were near one another in specific character and habit. Sir Edmund was always ready to admit that even then a *great* hybrid was somewhat in the nature of a "fluke," but that success was more or less certain in the case where a "dominant" species, such as RH. GRIFFITHIANUM, RH. THOMSONII, RH. FORTUNEI, RH. BARBATUM, or RH. CAUCASICUM, was used in conjunction with another species closely allied—such as those of a similar series—or with a vigorous hybrid that did not contain a strain of an undesirable species. He found, too, that certain hybrids, which were in themselves apparently good, often had a tendency in the second or third generation to throw up some bad strain which in the plant itself was hidden, and which only appeared as the result of hybridisation.

Some species were always a mystery to him, RH. CAMPYLOCARPUM for instance. With this lovely yellow Rhododendron he made numerous hybrids, but with the exception of the cross with RH. GRIFFITHIANUM, when he achieved a hybrid exactly similar to Mr. Smith's RH. PENJERRICK, he had little success. One or two of his crosses were just fair, such as some examples of RH. CAMPYLOCARPUM × RH. THOMSONII; but without doubt his best in this line is RH. ARBOREUM var. ALBUM and RH. CAMPYLOCARPUM, certainly one of the best hybrid Rhododendrons we possess. Other breeders, such as the Dutchmen, M. Koster & Sons, have done much better than Sir E. Loder with this fine species, although they have not used the species with the care or perseverance of Sir E. Loder.

Since our space is so limited, it seems that the reader must be satisfied with a brief list of the actual successes made by Sir Edmund Loder, and that it will be best to divide them into two departments:

(1) Those which flowered during the lifetime of the worker; and
(2) Those that have proved themselves of value since his death.

In the first group I will endeavour to place the plants in their individual

order of merit, though it must be remembered that such a list is merely an expression of individual taste.

Rh. Loderi. This splendid hybrid, which has no rival amongst modern shrubs to those possessing gardens of cold temperature, was raised in 1901 in three batches; twice Rh. Griffithianum was the male parent, and once Rh. Fortunei. Sixty to seventy per cent. were successful when the pollen of the former was used, and about twelve per cent. when the latter was the father. At least six other hybridisers have made the same cross without obtaining the grand size and quality of the flowers in Sir E. Loder's hybrid. The plant is now so well known, it requires no description. The best varieties of it are not necessarily those first named by Sir Edmund Loder, but are vars. King George (which carries 11 flowers often 7 inches across), Sir E. Loder (immense waxy flowers), Topaz (best pink), Fairyland, White Diamond, Sir J. Hooker, Pink Coral, Venus (now at Exbury), an example at Bodnant, and two unnamed at Leonardslee.

Sir Edmund made a few hybrids from Rh. Loderi, and of one of these he thought most highly, namely Rh. Loderi var. Pink Coral × Rh. arboreum (blood-red). Those that have flowered since his death have proved unsatisfactory as well as tender, though Dame Alice Godman has a fairly good one at South Lodge. (It may be of interest to our members to know that quite 80 per cent. of all Rhododendrons crossed with Rh. arboreum (blood-red) var. Kermisinum are tender, and in most cases more liable to frost injury than Kermisinum itself.)

A good many hybrids with Rh. Loderi have been made of recent years by some of our members, and some of these are likely to prove successful. Recently I saw a very handsome hybrid raised by Sir John Ramsden—Rh. Loderi × Rh. Doncaster. Rh. Doncaster seems to be a good breeder, as Lowinsky and others have proved.

Rh. Fortunei × Rh. Thomsonii. This improved Rh. Luscombeanum is an invaluable Rhododendron for all gardens. It flowers abundantly almost every year, possesses a large truss of waxy flowers, pale pearl-pink to deep red-pink, only a few showing purplish colour. This is a hybrid of the highest class, and is of the easiest culture. The reverse cross is not so fine in flower, but the foliage is better.

Rh. arboreum album × Rh. campylocarpum. This hybrid possesses the tall habit of the female parent and in the best examples the lovely colour of the male. About 10 per cent. of the batch are very good, and 2 per cent. first-class.

Rh. Thomsonii × Rh. barbatum. This is the Leonardslee form of Rh. Shilsonii, a plant with splendid scarlet flowers in March and April, but without the dangerous fault of the Cornish hybrid which causes death or sickness after abundant flowering. A very even lot in which all are good.

Rh. Thomsonii × Rh. arboreum (blood-red). Very similar to Mr. J. C. Williams's hybrid of the same. It may be classed as the best early blood-red in existence, but flowers too early for the home counties, although the plant is quite hardy.

Rh. Ascot Brilliant × Rh. arboreum (blood-red). A very brilliant scarlet for April, with waxy flowers. Tender.

Rh. Ascot Brilliant × Rh. Thomsonii. Nearly as good as the last-named, and a great improvement on the old Rh. Ascot Brilliant; a fast grower and quite hardy. It flowers in April.

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Rh. May Queen (Rh. Fortunei hybrid). A very large truss of grand pink flowers in May. This is a hybrid of outstanding merit, although the habit and foliage are poor. There is only one large plant of this at Leonardslee, and a small one at Compton's Brow.

Rh. Luscombe's hybrid × Crimson Seedling. A plant of tall habit, which carries brilliant scarlet flowers in early May.

Rh. decorum × Rh. Griffithianum. Most of these hybrids have 6 waxy white flowers of good size, but one or two examples have 9-11 flowers of great beauty. Unfortunately, like many decorum hybrids, whole branches are apt to die, and the plant is not easy to grow with success.

Hybrids created by Sir E. Loder that have flowered since his death :—

Rh. Leonardslee Gem (Rh. Gauntletti × Rh. Thomsonii). A very lovely hybrid, with rich red flowers of good size and substance. The leaves are large and well rounded. The original planter at Leonardslee and others of the same cross are all good, but none so fine as the named plant.

Rh. Snow Queen (Rh. Gauntletti × Rh. Loderi). This is, in my estimation, the finest pure white Rhododendron yet raised. It is an exceptional seedling out of the above-named cross. The flowers are nearly as large as Loderi, very thick and waxy and of a pure whiteness that even surpasses Rh. Duchess of Portland. Rh. Pink Queen (the same breeding) is nearly as good ; the flowers are the same size and shape, but rich pink in colour. About thirty of these seedlings were distributed, and all are good, but the two named varieties are of outstanding merit. They flower in late May, and never get their growth cut.

Rh. Standishi × Rh. Griffithianum. One or two examples of this cross have very large conical trusses of beautiful white flowers. The best example is at Leonardslee.

Rh. ochroleucum × Rh. Griffithianum × Rh. Thomsonii. A charming Rhododendron with fine red-pink flowers.

Rh. Glory of Leonardslee × Rh. Thomsonii. This will, I fancy, be one of the best of the Leonardslee hybrids when we see it exhibited. I flowered the first example in early May 1926, but unfortunately it was cut by frost the day after it opened. However, I saw enough of it to estimate its high quality. It carried a large truss of waxy Thomsonii-like flowers nearly the size of those of Rh. Glory of Leonardslee. The plant is quite hardy and vigorous.

Although Sir Edmund raised many good hybrids, the foregoing embrace the pick of his successes. He achieved no outstanding hybrids amongst the dwarf or the large-leaved sections, and did not appreciate the Chinese species at their true value. In consequence, the collection at Leonardslee of the latter is only a small one, and he did not use them for hybridisation.

Considered as a whole, Sir Edmund Loder achieved a high percentage of successes by his efforts, and gardeners will always owe him a great debt for the series of splendid hybrids he has given us to enrich our gardens.

J. G. MILLAIS

Compton's Brow, 1926.

THE SERIES LAPPONICUM.

A contribution on the series TRIFLORUM in the last issue of *Notes* provides a natural opening for one on what might be termed the sister series LAPPONICUM, for the members of the two series form admirable associates in practical garden arrangements, and may well be considered indispensable horticultural companions.

In the matter of appropriate grouping, wherever TRIFLORUMS are found, there also should LAPPONICUMS be, to furnish the groundwork and frame the foreground.

In nature their main respective areas may be strictly defined, but as we absorb such decorative introductions into our gardens it is well for us to dispose of them, both pictorially and culturally, to the utmost advantage.

The members of this group are essentially alpine and found in varied situations, covering vast expanses of moorland, in meadows and grassy slopes, on the margins of thickets and conifer forests at 9000 to 10,000 feet altitude, and rising to the barren, wind-swept screes at 16,000 to 17,000 feet, where in extreme exposure they form rounded cushions massed with sessile blooms, at all points in almost endless profusion.

Reproductions of such Chinese alpine displays are not a matter of practical garden politics in the homeland, but, within the comparatively restricted limits at our disposal, a telling picture may be painted where the gleanings of the wild blend happily together and compose a scene well worthy of British gardens.

The general adaptability of the species to our conditions is unquestionable, and provided certain obvious essentials are observed the average cultivator may dive headlong into the " Lapponicum Sea " with the utmost confidence.

In illustration of the adaptability of the group the case of RH. HIPPOPHAEOIDES, a universally popular species, may be quoted. In nature, at its lowest altitude, 10,000 to 11,000 feet, it is found on the one hand luxuriating in boggy meadows, often partially flooded, and again at 13,000 to 14,000 feet, in open and comparatively dry conifer forests, in each case equally profuse and floriferous, though naturally of a distinctly dwarfer habit at the higher altitudes.

In our gardens a desirable position can almost invariably be found, and choice may well be made of a site comparatively sunny and exposed, yet sheltered from cutting winds, preferably sloping irregularly to the south, and furnished on the outskirts by the lighter trees and shrubs. Sloping ground is recommended as being more generally effective and appropriate to a full display of characteristics varying between those of dense prostrate cushions and upright twiggy bushes. But the cultivator has need to differentiate between the sun-baked, wind-swept bank impervious to moisture, and the natural slope capable of being developed into a series of irregular terraces, level of surface, where rainfall percolates naturally to the roots.

To LAPPONICUMS drought is as detrimental as to members of the genus generally, and should as far as possible be guarded against by adaptation of the ground to conserve essential moisture. In this direction much may be done by artificial terracing, by the excavation of level beds or borders, and, where ample stone is available, by the creation of pockets or moraine-like crevices.

Ideal positions can thus be provided where extensive groups will blend naturally together in association with the dwarfer Heaths, Azaleas, Genistas, Potentillas, and shrubs of similar character. The effectiveness of such a grouping will be greatly enhanced if the members of more than one series of Rhododendron, akin in character and cultural requirements, are brought together. Thus selected representatives of the series CEPHALANTHUM, FERRUGINEUM, SALUENENSE, SCABRIFOLIUM, and VIRGATUM, together with dwarf Azaleas, would provide species admirably adapted to mutual association, and add interest and variety to the general arrangement.

Here, as elsewhere in the genus, it should be carefully borne in mind that these are essentially social plants, seen at their best in mass formation, where they give mutual support to each other and create, as it were, their own atmosphere. Bold groups may be fittingly interplanted with members of the TRIFLORUM series to create irregularity of outline and provide just the degree of light and shade which assists the finest development of flower and foliage.

Culturally the LAPPONICUM group as a whole is easy to accommodate. Thorough drainage being ensured as an essential preliminary, a compost of sandy, lime-free loam and leaf-mould with a liberal admixture of grit will provide an admirable rooting medium; and as the plants develop, periodic top-dressings of similar material should be supplied. The main effect should be to provide a soil at once friable and porous, yet reasonably retentive of moisture.

Ease of cultivation and general hardiness of constitution are, however, thoroughly characteristic of the group, whilst their compactness of habit and extreme floriferousness entitle them to rank as ideal shrubs for the rock garden.

Plant collectors excite the imagination by glowing descriptions of scenes at the headquarters of the series in Western China, of "Rainbow Oceans," of acres of RH. CHRYSEUM resembling, at two miles range, a field of gorse, and of vast stretches of moorland carpeted with colour. Nature in such a mood brooks no imitation; but within his comparatively modest limits the alpine gardener has scope for many tasteful associations, and he who can appropriately mingle together such species as RH. CANTABILE, FLAVIDUM, and IMPEDITUM on the one hand, or SCINTILLANS, MULIENSE, and RUSSATUM on the other, or can even show a two-feet mound of F. ASTIGIATUMagainst a dull grey rock, will at least have made commendable use of his opportunities.

The varying shades of blue, purple, lavender, and yellow so conspicuously displayed by the LAPPONICUMS combine admirably, and obviate any fear of colour clash in garden association.

The species are essentially spring-flowering, and make their main display during March and April; but many will again be found in modified bloom through October and November where the current season's growths have made rapid development.

Propagation is easily effected by autumn cuttings of matured wood or by seed, and in the latter case seedlings of some species can be brought to the flowering stage within two years of sowing.

Alike, then, in general adaptability to home conditions, in hardiness of constitution, freedom of flower, and ease of propagation, it may safely be said that within the members of the LAPPONICUM series will be found dwarf-growing, hard-wooded shrubs comprising all the essential qualities of good garden plants.

So far some fifty species have been enumerated and described, and many others, as yet only under field numbers, are, doubtless, botanically "on the way." Of these probably thirty species are now in cultivation in the Edinburgh Botanic Garden, though perhaps not more than one-third are well represented even in the garden of the specialist.

RH. LAPPONICUM, the type species, of arctic origin, is considered not to be in cultivation. It is described as a prostrate, straggling, loosely branched shrub, with flowers of a washy, pale rose-purple, a plant of interest but of little beauty. Its place in gardens is usually taken by a local form, RH. PARVIFOLIUM, which develops into a rounded bushy shrub of 2-3 feet, with rosy-purple flowers.

The following twelve species have already proved their worth in British gardens, and may well be deemed indispensable to any representative collection of LAPPONICUMS :—

Rh. cantabile,	blue-purple.
,, chryseum,	yellow.
,, fastigiatum,	lavender-blue.
,, flavidum,	yellow.
,, hippophaeoides,	lavender-blue.
,, idoneum,	blue-purple.
,, impeditum,	blue-purple.
,, intricatum,	pale lavender-blue.
,, muliense,	yellow.
,, rupicolum,	plum-purple.
,, russatum,	purple-blue.
,, scintillans,	lavender-blue.

H. ARMYTAGE MOORE.

ROWALLANE, 1926.

TITTENHURST RHODODENDRONS.

For some time past it has been known that Mr. T. Lowinsky was anxious to sell Tittenhurst, and when this property passed into the hands of an American lady who was not particularly interested in Rhododendrons the collection was offered to me and was purchased by me together with Mr. Crosfield. The books have also passed into my hands; but as they are needed for the disposal of the plants, I have not yet been able to go through them properly.

I propose this year to give a short description of this famous collection as it was when I spent three whole days at Tittenhurst arranging for its dispersal, and in next year's *Notes* I will try to get together some information about the hybrids and their breeding.

During the war a considerable part of the garden was allowed to grow wild, and this has never been remedied. Considerable work was done amongst the Rhododendrons during the first few years after 1918, but since Mr. Lowinsky has given up residing at Tittenhurst these have not been moved, and show to a great extent signs of overcrowding.

The collection can be divided into three main parts:

1. The groups on the terrace and slope, together with the beds at the bottom;
2. The nurseries, both in the orchard and the old tennis-courts together with a considerable number of seedlings in frames; and
3. The pot plants.

It was Mr. Lowinsky's procedure, immediately any seedling showed signs of flowering, to lift it from the nurseries and pot it up; those worth keeping were either grown on in pots or eventually planted out. In addition there were in pots a certain number of species, including the newer Chinese ones, which enabled him to flower these at the earliest possible moment with the certainty that the weather would not spoil them.

The climate at Tittenhurst is very favourable to Rhododendrons, and Mr. Lowinsky was certainly able to grow in his garden a considerable number of the more tender varieties which are usually grown only along the sea-coast. Along the terrace were planted a considerable number of his own hybrids of the MRS. T. LOWINSKY cross, together with a great number of the hardier FORTUNEI hybrids in front. As one came to the slope there was a very fine row of CINNABARINUM. The bank here contained a large number of GILL'S TRIUMPH, GILLII, EDMONDI, BEAUTY OF TREMOUGH, IVORY'S SCARLET, and KEWENSE hybrids, all of them grown very much together but from 6 to 10 feet high, and some of them very fine specimens. At the end of the terrace were planted some Chinese specimens which showed signs of starvation and drought; they were under the shade of heavy foliage—SINOGRANDE in fair health, and certainly in better health than any other SINOGRANDE I have so far seen in inland districts. DUKE OF CORNWALL was thin and drawn-up.

Proceeding down the steps, there was a long belt running along a wall full of Rhododendrons in robust health—several LODERI with magnificent foliage, AURICULATUM, DAVIDII; and behind, a row of SIR CHARLES LEMON × AUCKLANDII (which in my opinion is a very doubtful cross, the AUCKLANDII strain being entirely absent—an immense quantity of these plants exist in the garden, and there must have been something like 100 in all). Amongst these were large numbers of his own hybrids, all growing well, together with some dozen of the finest SCHLIPPENBACHII I have seen in this country. Japanese Azaleas in good health were in front of this bed, and some fine plants of the better older hybrids were also amongst them, such as LUSCOMBEI, etc., three very fine original DISCOLOR, and an original AURICULATUM.

On the other side of the path were large quantities of his most successful hybrids, most of which have not yet flowered, but which, as all those taken from them that had flowered were good, he knew to be worth growing on, and so they were removed from the nursery and planted out. At the bottom was the large WIGHTII, a magnificent plant in good health, which flowered freely every year, but which unfortunately had all the seed-pods left on last year and therefore had not made much growth. A very large specimen of AUCKLANDII ROSEUM SUPERBUM was also in the border, and it is pleasing to think that this plant will find vigour and a fresh lease of life in the more congenial climate of Muncaster. The WIGHTII is going to Exbury.

In the beds at the bottom of the hill were specimen plants of DAPHNE DUFFARN, LADY VIOLET PAGET, a very large DR. STOCKER, SHILSONII, THOMSONII GRANDIFLORUM, and again more of his own hybrids; while in the walk called the "Cedar Belt" were large quantities of what he considered his finest hybrid, which he called the "Don" class, being DONCASTER × AUCKLANDII ROSEUM SUPERBUM. Behind these again were other of his own hybrids, together with many species—a very large white CAMPYLOCARPUM, two plants of the OREODOXA section some 9 feet high, which must have been original plants from Wilson's collection, a HOOKERI well protected, some of the ordinary yellow CAMPYLOCARPUM, LANATUM, etc., etc.; while planted in the grass were some magnificent FALCONERI and a fine THOMSONII, both of which he moved with such success from Tremough, as well as one of the finest BARBATUMS in the country.

It is worth recording here the numbers and parentage of the crosses he had already planted out in this section of his garden, and reference will be made to them later: they were, as already mentioned, DONCASTER × AUCKLANDII r.s., WHITE PEARL × AUCKLANDII r.s., H. M. ARDERNE × AUCKLANDII r.s., CYNTHIA × AUCKLANDII r.s., LUSCOMBIANUM × IVORY'S SCARLET, and HELEN SCHIFFNER × MRS. BUTLER.

The nurseries in the tennis-court and orchard showed considerable signs of neglect, the plants being too crowded together and it being quite clear that these should have been moved some years previously, though obviously more plants were raised than the place would hold; no attempt had been made to plant out any of the alpines or TRIFLORUM, which exist in large quantities. Mr. Lowinsky's own hybrids have been picked out whenever any flower buds were shown, but otherwise they were also too crowded together. An extraordinary number of DISCOLOR seedlings were there, a single plant which flowered freely three or

four years ago having been fertilised on every possible flower, some thirty different crosses having been made.

The frames were in a better state of cultivation, but a prodigious quantity of some of his own hybrids and certain numbers of Rock's seeds had been raised, and the plants were crowding one another.

When it came to the pot plants, these had deteriorated considerably during the two years that the property was for sale, many of them having a starved appearance. The labels had also become defaced, many had no label at all, while a considerable number had a description such as this, " Pink, good truss," or " Fine scarlet." Some of the best of the Dons had been kept growing on and were certainly in good condition, and the species, consisting of GRIERSONIANUM, HOOKERI, NUTTALLII, PROPHANTUM, FACETUM, SINOGRANDE, LACTEUM, CORIACEUM, MEGACALYX, HAEMALEUM, most of Farrer's numbers, and a certain number of Kingdon Ward's numbers, in good health.

It is certainly to be regretted that this collection has been broken up, and it is still more to be regretted that it should be in the lifetime of one who has spent so many hours of his life in growing and improving the Rhododendrons of this country. His failures were many—he himself has admitted to burning thousands; his most successful crosses were those in which he followed the Mendelian lines, which are now well known, of using a species for at least one parent —and yet one of these hybrids was a failure; his LODERI cross between AUCKLANDII r.s. and FORTUNEI produced nothing but plants which would not open their flower buds. So far his AUCKLANDII crosses have been supreme, though certain of his later THOMSONII crosses have shown good quality. His latest work has still to prove itself. My one aim in arranging for the distribution of these plants has been to allow some of the best of all his hybrids to be obtained by any one who was ready to seize the opportunity.

LIONEL DE ROTHSCHILD.

EXBURY, 1926.

HYBRID RHODODENDRONS IN 1855.

Through the kindness of Mr. Harry White I have two old catalogues of Messrs. Standish & Noble.

I think it might be of interest to put on record the opinion expressed by them in 1855 on the relative value of hardy hybrids compared with seedlings and first crosses of ARBOREUM.

The foreword of their catalogue is as follows :—

" A few months since a discussion was carried on, in the pages of the *Gardeners' Chronicle*, relative to the merits of certain races of Rhododendrons. The subject was, in a garden sense, an important one ; and we ventured, in taking part in the discussion, to advocate views which from experience we knew to be correct.

" The originator of the discussion, ' J. R.,' endeavoured to prove that grafted Rhododendrons were inferior, for garden decoration, to plants on their own roots ; and that seedlings from RH. ARBOREUM were much to be preferred to any of the numerous hardy hybrids now so generally cultivated.

" It appears to be worth while to reproduce here the substance of what we said in the *Gardeners' Chronicle* with reference to the advantages of really hardy hybrids over the numerous progeny so warmly eulogised by ' J. R.,' which indeed are but seedlings direct from, or but once removed from, RH. ARBOREUM ; and especially as the past severe winter has more than verified our opinion that such plants are worthless for outdoor culture. Very many cultivators have yet to learn what are the qualities which a Rhododendron should possess for successful cultivation in the open ground. We believe we shall be doing good service in giving that information.

" The hybrid Rhododendron now so generally grown are from crosses and intercrosses between the Indian ARBOREUM and some hardy kind, as PONTICUM, CATAWBIENSE, or CAUCASICUM ; with these materials the hybridiser has produced the greater part of our innumerable cultivated varieties, and which are every year being added to. Nor must it be supposed that the varieties which we already possess are merely augmented in number by such additions. On the contrary, some desirable quality, either in the shape or size of their flowers, or in the brilliancy of their colours, or plants that bloom at an earlier age and in greater abundance, are some of the advantages which are constantly being obtained, or a combination in the same plant of the qualities previously existing in separate ones, or perhaps a more hardy constitution is infused into a particular kind ; at all events, with each addition to the number of existing kinds the aim is to produce and perpetuate some desirable quality or qualities not previously obtained.

" We are frequently told as a piece of valuable information that in the garden of Mr. So-and-So there is a magnificent hardy Rhododendron with deep-red or crimson flowers, which is generally in full bloom in February or March.

Sometimes we hear of these prodigies in January when the season has been very mild ; and such information is usually followed by a hint that it would be much to our advantage to make interest with the fortunate possessor of such treasures for a plant or two of the kind. Sometimes we are induced to have a peep at the prodigies ; not for our own gratification, however, for we are always well prepared for the kind of exhibition that awaits us. The plants are generally surrounded by an ugly framework of poles and rods, with an addition in the shape of a collection of old mats, pieces of carpet, scraps of canvas, and a bundle or two of straw lying at hand in a convenient corner, to protect the plant with on frosty nights (and in the day too when cutting winds and pelting rains prevail), forming altogether by no means a gardenesque scene. But of course that is of little consequence ; doesn't the plant live in the open air and bloom in winter ?

" Now, we simply ask what are the advantages which these plants possess over hardy and free-blooming hybrids ? We confess not to perceive their superiority in any one particular. To enable the reader, however, to form a just conclusion of their respective merits, we will place their prominent characteristics side by side.

" *Seedlings direct from, or but once removed from, Rhododendron arboreum.*	" *Garden hybrids, the advantages of which we are advocating.*
" They never bloom till they are twenty years old, and then very sparingly.	" They bloom abundantly, and when not more than three or four years from seed.
" In the majority of seasons, and especially if the early part of the year is mild, the flowers, in consequence of being produced then, are destroyed or much damaged by wind, rain and frost which invariably follows.	" The flowers never get cut off by frost ; and from being produced after spring has fairly set in, they are not liable to damage from rough weather.
" The flowers are usually of a very rich colour.	" The various kinds produce flowers of the richest as well as the most delicate tints. Deep crimson and pure white, with all the intermediate shades, may be found among the plants in cultivation.
" In very severe weather like that of the past winter, the plants themselves are killed or damaged.	" The plants are not damaged by frost.

" It will thus be seen that these much-vaunted tender plants possess not a single desirable quality that is not participated in by the hardy hybrids, and that the latter have very many sterling merits peculiarly their own. As we have before observed, we confess that the flowers of these first hybrids are very beautiful, but we cannot yield our opinion that the plants are, for general cultivation, all but worthless.

" Bagshot. 1855."

The following prices may also be of interest :—

" Fitzroya patagonica	31s. 6d.
Rhodoleia championae	63s.
abies Kaempferii	63s.
azalea amœna	21s.
(This unique plant was exhibited at the London Horticultural Society Rooms this spring, and was awarded the Knightian Medal.)	
Rhododendron catawbiense	6d.
Rhododendron ponticum	3d.

" Bagshot, 1852."

E. H. WILDING.

Wexham Place. 1926.

A LIST OF SOME ENKIANTHUS BELIEVED TO BE IN CULTIVATION IN 1926.

Japan.

campanulatus. *Bot. Mag.*, vol. cxv., plate 7059.

Forms of Campanulatus.

latiflorus.
Palibinii. *Bot. Mag.*, vol. cxv., plate 7059.
pallidiflorus.
recurvus.
tectus.
cernuus.
cernuus rubens.
japonicus. *Bot. Mag.*, vol. xcvi., plate 5822.
subsessilis.

India.

himalaicus. *Bot. Mag.*, vol. civ., plate 6460.

China and Burmah.

deflexus 4336 } Wilson, 1911.
chinensis 4336 }

15786 Forrest, 1917, about 25° 20′.
19499 ,, 1921, 27° 54′, 98° 50′. 9-10,000 feet. 6-12 feet.
19561 ,, 1921, 28° 12′, 98° 40′ Londre Pass. At 9000 feet. 6-10 feet.
21656 ,, 1922, 28°, 98° 47′ =19561 at 13,000 feet. 6-9 feet.
25681 ,, 1924, 27°, 98° 35′. At 10-11,000 feet. 9-10 feet.
25692 ,, 1924, 27°, 98° 35′. At 12,000 feet. 7 feet.
26873 ,, 1925, 26° 24′, 98° 48′. At 10,000 feet. 10-15 feet.
27042 ,, 1925, 25° 55′, 98° 45′. At 10,000 feet. 6 feet.
27090 ,, 1925, 26° 17′, 98° 46′. At 9000 feet. 5-6 feet.

654 of Ward. 6-10 feet, from near Pemalo (say 29° 50′, 95° 20′).

Enkianthus quinqueflora. *Bot. Mag.*, vol. lxxxvii., plate 5223.

With this is a list of *Enkianthus*, all of which, except perhaps *himalaicus*, are, I believe, in cultivation in this country.

With regard to those from Japan, Mr. Bean has given us full information in his book, excepting those forms of *campanulatus* separated from it by Professor Craib, *Edinburgh Notes*, vol. xi.

Of these forms, I have seen *latiflorus*, *tectus*, and *pallidiflorus* in flower.

latiflorus has a flower of a very attractive colour, nearly that of the pink on a peach with its bloom untouched.

pallidiflorus is of a good white colour.

tectus was not grown well enough to do it justice.

campanulatus and its forms will, I think, bear much better cultivation than they sometimes receive. I should expect them to reach 15 feet, given the care bestowed on a good Rhododendron, and shelter from too much sun and wind.

But one species has come from India, as far as I know, namely, *himalaicus*.

It was once in cultivation at Edinburgh, but is not now. Mr. George Harrow tells me that the late Mr. Nicholson, of Kew, drew his attention to it at Coombe Wood.

Since Mr. Harrow told me this I have seen plants with Mr. H. White at the Sunningdale Nursery which he tells me came from the Coombe Wood sale.

I have one of them here from him which has not yet flowered, but certainly the foliage, as far as I have watched it in the last two years, seems to be unlike that of the other *Enkianthus* here; but we must wait until the flower and fruit come, to settle the point.

Such doubts as I had about it arose from Mr. Wilson having at one time used the name *E. himalaicus* for his 4336, which was also at Coombe Wood about 1912.

It has, I believe, received more than one name; but when he was with me not long ago, he pointed out two species under this number, *deflexus* and *chinensis*. As regards *chinensis* I can say little, as I moved them, and they are badly out of form as a result; but *deflexus*, as I see it, is a most robust shrub, and for those who care for the family is likely to be very satisfactory.

I have seen plants of *deflexus* up to 19 feet high, and in a batch of seedlings there is a considerable variety of colour which will need careful selection and propagating from cuttings.

Of the nine sets of Forrest's seedlings, those who have his *Field Notes* have all the information I have; but I do notice that the single plant of 15786, which was sown in 1918, may very likely be shortly passed in point of size and vigour by 25681 of 1924, because the former has not been cultivated and the latter has.

This family needs care and attention, and the selection of the best forms in a given species as regards colour. Then they will give much pleasure in a woodland garden.

Perhaps the most beautiful member of this family is *Enkianthus quinqueflora* or *reticulatus* from Hong-Kong—see *Bot. Mag.*, vol. xi., plate 1649, and Paxton, vol. v., plate 127. I have seen it live outside for two winters; but it declines to grow, so far.

J. C. WILLIAMS.

CAERHAYS CASTLE, 1926.

BOSAHAN.

Those who go to Cornwall to see Cornish gardens should not miss Bosahan, the seat of the Hon. Mrs. Colborne. The house was built by her father, Sir Arthur Pendarves Vivian, in 1884-1887, who at the same time planned and laid out the present shrub garden, which at that time did not exist. Sir Arthur was fortunate enough to live to the great age of ninety-two, and up to the very last he took the greatest interest in his fine collection of plants.

The house is admirably placed, and commands fine views of the entrance to Falmouth Harbour. The shrubberies lie in two valleys that run from the house to the mouth of the Helford river, where there is excellent anchorage for yachts. They are perfectly sheltered, and the climate here is so mild that the frost which reaches them is far less than is the case in most Cornish gardens. Taking the left-hand valley from the house, you find yourself in a deep glade in a wood, where the trees near the stream have been scooped out to form ideal conditions for many Rhododendrons. Passing through some fine specimens of Rh. NOBLEANUM, you come to the Himalayan species. The outstanding feature is a long extended group of about a dozen Rh. ARGENTEUM; these are very fine, and coming down the valley you look right into the tops of the plants. When they are in flower, with the sun shining through some Rh. BARBATUM in the foreground, and the blue sky beyond, they convey a most remarkable and unique effect. The path soon leads you to another aspect, and when you pass underneath them you realise what magnificent plants they are, averaging as they do some 20 feet in height. I measured several over 22 feet. The best form undoubtedly is the one that Van Houtte sent out about 1890 as LONGIFOLIUM. It has a very long, highly polished, dark-green leaf and very white flowers. Beyond the Rhododendrons you come upon a large plantation of Tree Ferns. There is nothing whatever artificial about this group (which is so often the case with tree ferns); they are perfectly placed, and harmonise so well with their surroundings that they might well be the natural fern of the place, an impression that is enhanced by the many self-sown seedlings.

The sea is now reached, and skirting the cliff for some 200 yards you turn up the other valley. Before reaching the home garden you pass through large numbers of Palms and another group of Tree Ferns in vigorous health. This garden is another perfectly sheltered pocket fully exposed to the sun, and containing many remarkable plants. Here are the two large *Magnolia Campbelli*, of which Sir Arthur was so justly proud, each carrying as it does some 500 flowers annually. Undoubtedly the most unusual plant is a broad-leafed, evergreen *Persea indica*, which I have not met elsewhere. This is a very handsome and distinguished plant quite 30 feet high. It is probably too tender in the early stages for most of us to establish, or it would certainly be widely grown. I believe it grows well in Madeira. There is a Loquat, a very fine specimen 22×18. It has on one occasion ripened fruit. *Hovenia dulcis* is 35 feet, but the two other outstanding plants are undoubtedly the *Drimys Winteri* and the *Clethra arborea*. The

former is a well-furnished, upright plant, which I estimated to be between 38 and 40 feet. It stands quite clear, and is the finest specimen I know. There are two specimens of *Clethra arborea*: one a broad, tapering plant of perfect form and 25 feet high; the other, which is hardly so good, is not excelled in any other garden I know.

There are, of course, very many other fine plants at Bosahan, but I have only mentioned those that seem to me to be the outstanding features in one of the most happily chosen garden sites in Cornwall.

P. D. WILLIAMS.

LANARTH, 1926.