THE RHODODENDRON YEAR BOOK 1946

THE ROYAL HORTICULTURAL SOCIETY

Acknowledgements

to this online edition

The volumes of the *Rhododendron Year Book* issued between 1946 and 1953 could not have been published online without the generosity of others.

The Rhododendron, Camellia & Magnolia Group extend their thanks to the descendants of the contributing authors, and others who are now responsible for the copyright, for permitting those words to be reproduced in this format.

Despite our diligence in seeking the current copyright holders, there may be authors whose work is still in copyright who we were unable to trace, for which we apologise. The Group's 'Takedown Policy' may apply in this case; please visit
http://www.rhodogroup-rhs.org/takedown-policy
for details.

2024

RHS
Rhododendron, Camellia & Magnolia Group

[*Frontispiece*

LIONEL DE ROTHSCHILD

THE RHODODENDRON YEAR BOOK 1946

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

PUBLISHED NOVEMBER 1946

PRINTED BY SPOTTISWOODE, BALLANTYNE & CO. LTD.
LONDON AND COLCHESTER

Contents

List of Illustrations

Lionel de Rothschild

THE death of LIONEL DE ROTHSCHILD, who founded the Rhododendron Association and its *Year Book*, deprived the gardening world of an outstanding figure.

In creating a garden like that at Exbury in little over twenty years, his inexhaustible energy, great power of concentration and admirable taste had full scope. There was hardly a shrub or tree that could be grown in that mild New Forest climate that was not to be found in his great woodland garden—but pre-eminent among them all were Rhododendrons.

Nor was he only content to collect and arrange plants—he loved to create them. His hybrids of Rhododendrons and Azaleas and indoors of Cymbidiums and other Orchids and of Amaryllis and Nerine were numbered by the hundred, and were the outcome of careful thought, experiment and knowledge. The plants so raised proved to be of the highest standard and of the greatest beauty, as those know who have seen the fine groups he showed at Westminster and Chelsea.

No garden is ever finished, but in twenty years no garden is even matured. It is sad that LIONEL DE ROTHSCHILD could not have spent yet further years in developing to maturity and to even greater beauty the work that he had carried on through all its earlier stages.

In gardening as in other matters, his kindness and generosity were markedly displayed. He was always ready to support any project where help was wanted. None of his good plants did he ever wish to keep to himself, indeed the more widely these were shared the better he was pleased. Nor were his country interests confined to gardening—he loved the sea and yachting ; the robins in the wood which he trained to feed from his hand were a great delight to him. Indeed he was many-sided in his hobbies. He knew much of pictures and works of art. He played a good hand at cards. Cooking he considered a fine art and studied accordingly ; and though most abstemious himself he saw to it that his guests had dishes prepared with the most consummate skill.

It was always his endeavour to share with his many friends and guests the good things that lay in his path. Throughout, whether host or colleague, whatever his company, whatever the task in which he was engaged, his was the dominating personality.

His loss has been keenly felt by a very large number of gardening friends ; and it is felt deeply in the numerous activities in which he was engaged.

Among those activities there were few to which he devoted more time and thought than to the affairs of the Rhododendron Association. He was not only its founder, but its inspiration. His articles in the *Year Book* and his close attention to the accuracy of its contents can never be replaced.

ABERCONWAY.

The Rhododendron Association and the Formation of the Rhododendron Group

THE Rhododendron Society was founded in 1915 and continued for about twelve years, during a period remarkable for an enormous increase in the number of Rhododendron species in cultivation resulting from the expeditions of FORREST, ROCK and KINGDON WARD. It is not surprising that during these years enthusiasm for Rhododendrons began to be felt in ever-widening horticultural circles.

The first Show, organized by the Society in 1926, filled the R.H.S. Hall in Vincent Square, and from every point of view was considered a very successful venture. It was repeated the following year, but the second Show scarcely attained the high standard of the first; for in 1927 flower-production was poor over a large part of the country, and a widespread and severe frost three days before the Show proved a great trial to exhibitors. The Rhododendron Show had, however, established itself, and became an annual event in the horticultural calendar until the sequence was disturbed by the war.

Another important activity of the Society was the publication of *The Rhododendron Society Notes*, in annual parts of about 64 quarto pages each, forming in all three volumes containing a considerable amount of information both horticultural and botanical.

On May 3, 1927, a meeting was held in the Royal Horticultural Society's Lecture Room to form the Rhododendron Association. The late Mr. LIONEL DE ROTHSCHILD, who presided, referred to the existing Society, composed of some twenty-five members, and suggested that the time had come to invite a larger number of interested persons to take part in organizing the Shows and to promote the cultivation of Rhododendrons. A committee was formed at once, and at a meeting two months later, the first Council was elected; Mr. DE ROTHSCHILD became President, Admiral WALKER-HENEAGE-VIVIAN Vice-President, and Mr. J. B. STEVENSON Honorary Treasurer, and the other members were Mr. J. J. CROSFIELD, The MARQUESS OF HEADFORT, Mr. G. W. E. LODER, The HON. H. D. MCLAREN, Mr. PETER VEITCH, Mr. F. GOMER WATERER, Mr. E. H. WILDING, and Mr. P. D. WILLIAMS.

The Association's activities are well known. The *Year Books*, published annually from 1929 to 1939, and containing annotated lists of species, hybrids and expedition numbers, in addition to the Stud Book of Rhododendron hybrids, form an invaluable source of information. The trials of hardy hybrids, begun at Exbury and later transferred to Wisley, enable the judging committee to make recommendations in

respect of those most suitable for garden decoration, and the annual exhibitions, with their varied competitive classes, have been interesting and instructive both to members and the general public.

In 1945 a suggestion was put forward that it would be advantageous to wind up the Association and to form in its place a Group of the Royal Horticultural Society on the lines of the existing Lily Group. The idea found general acceptance, a meeting of the Association held in September, 1945, passed a resolution to this effect, and the new Group came into being. The many members of the Association who were also Fellows of the R.H.S., became members of the Group, other Fellows of the R.H.S. being eligible for membership.

The Joint Committee, which has regularly met to adjudicate upon exhibits at the meetings of the R.H.S., has become one of the Society's Standing Committees and has undertaken, in addition to its ordinary duties, management of the affairs of the Group. The Committee will thus arrange the Group's annual programmes, make recommendations regarding Rhododendron competitions, and supervise the production of the *Year Books* or other publications.

N. K. G.

Exbury Rhododendrons

By Francis Hanger
(Curator, R.H.S. Gardens, Wisley. Formerly Head Gardener at Exbury.)

THE mere mention of Exbury Rhododendrons naturally brings to mind their creator, the late Lionel de Rothschild, the founder of the Rhododendron Association—its first President and Editor of its intricate *Year Book*. With the help of others Mr. de Rothschild soon made the *Year Book* an authority on Rhododendrons generally, and it was not long before it became known as the " Rhododendron Bible " amongst horticulturists and gardeners who studied and cultivated Rhododendrons. These offices he retained until his lamented death on January 28, 1942.

Gardening was the great work of his life, and his love of it started, I am told, when as a child he preferred attending to his little garden at his father's home at Ascott, Bucks., rather than visiting the stables with their many hunters and racing horses.

Years later when this love and work had created and matured Exbury, he was escorting some friends through his woodland paths, flanked with blazes of glorious colours, when one of his friends exclaimed to him, " We know now that your work is here and therefore your ' New Court ' business must be your hobby."

Amongst his youthful recreations was yachting. This brought him to the Solent—the strip of water lying between the Isle of Wight and the county of Hampshire. It was on those visits that he first became acquainted with Exbury, a warm, favourably-situated gardening spot on the south coast of Hampshire overlooking the Isle of Wight. The mild climate is due to the maritime influences of the surrounding sea, the Southampton Water, the Solent and the Beaulieu River lying to the east, south and west respectively, forming a peninsula with the beautiful New Forest to the north. With these advantages, Exbury is not quite as warm as Cornwall, yet compares very favourably with it.

Having graduated in horticulture with the growing of Rhododendrons at Gunnersbury Park, in Middlesex, and during 1914–1918 by making a garden at Inchmery on the Exbury estates, he purchased Exbury in 1918 from the late Lord Forster of Lepe, with the object of still furthering his development of Rhododendrons by hybridization. He at once commenced planning the development of the lovely well-timbered woods, studded with oak and pine and sloping westward and southward to the tidal water called the Beaulieu River.

Although he was a collector of all kinds of trees, shrubs and plants,

I believe I am correct in writing that his favourite genus was the Rhododendron, and at Exbury he had ample room to exploit his ideas with enthusiasm. This he did and, with his creative mind and unbounded zest, set about the hybridization and cultivation of the genus Rhododendron on a scale perhaps larger than ever before attempted.

Everything he set himself to do he did extremely well, therefore it is not strange that all his hybrid Rhododendron crosses were the subject of much thought ; nothing was ever done haphazardly or in a makeshift manner.

No trouble seemed too great for him in the creation of some new Rhododendron hybrid to get the best possible form of the species obtainable. For example, in creating Rhododendron ' Burning Bush ' (*R. haematodes* × *R. dichroanthum*) Mr. LIONEL motored from London to Exbury (93 miles), instead of travelling by train, with the set purpose of calling at Sunningdale Nurseries to obtain from the late HARRY WHITE pollen from his better form of *R. dichroanthum* to put on the Exbury best form of *R. haematodes* rather than use the Exbury *R. dichroanthum*, which was an inferior form.

It is not surprising, therefore, that such abundant enthusiasm, coupled with an energy which was dynamic, should be justly rewarded, and his garden at Exbury became filled with Rhododendron hybrids of the highest order, many of which are yet to flower. Amongst these are many *lacteum*, *Wardii*, orange *caloxanthum* and *dichroanthum* crosses, which I feel sure will enrich our gardens with glorious true yellow and orange Rhododendrons, the longed-for luxury of the Rhododendron enthusiast.

Perhaps before we journey off to the garden and woodlands to see and admire the thousands of plants, trees, and shrubs, it is only fair to mention that in Mr. DE ROTHSCHILD's early gardening days he, like all of us, made many mistakes ; but his good Cornish friends, together with Kew and Edinburgh botanical authorities, found a willing pupil, only too eager to learn all and spend money in exploiting their theories.

Amongst the many early gardening letters sent to Mr. LIONEL which I have been privileged to read are many from the late Mr. J. C. WILLIAMS, the late Mr. JOHN MILLAIS, Mr. W. J. BEAN, and Dr. J. HUTCHINSON of Kew, Professor Sir W. WRIGHT SMITH, and Dr. COWAN of Edinburgh, and also the late Mr. GOMER WATERER.

The late Mr. J. C. WILLIAMS writes thus : " I see no harm in your getting a few grafted Rhododendrons, they are an abomination to me and only produce bad language if you live long enough with them." Referring of course to the perpetual sucker nuisance of grafted plants. There are numerous references of pollen sent from Caerhays and Lanarth, together with advice as to " mating " the different species. Again from the late Mr. J. C. WILLIAMS : " I have sent you a plant of *Maddenii* × *Roylei* which has lovely flowers. The old man who looks

after my Daffodil hybrids had never seen one before, he is as hard to please as G. HOLFORD, but for once he had to give vent to his feelings." All Rhododendron enthusiasts know the outcome of this present. Mr. DE ROTHSCHILD hybridized *R. Maddenii* × *R. Roylei* (' Royal Flush ') with *R. cinnabarinum* and produced that unique Rhododendron ' Lady Chamberlain,' with hanging terra-cotta to orange Lapageria-like flowers. Perhaps it is safe to say that this cross and its sister cross ' Lady Rosebery ' (the pink form), both of which have received the Royal Horticultural Society's First Class Certificate, are the most noted of all the Exbury hybrids, and I believe the one which gave the owner the most personal satisfaction.

It is interesting to note that, when the late Mr. J. C. WILLIAMS sent the first *R. Griersonianum* to Exbury, he thought it on the very tender side as he recommended planting it in the large Rhododendron house.

Mr. LIONEL DE ROTHSCHILD's hybrid Rhododendron crosses reached one thousand two hundred and ten in number, the last thirty or so being gathered by myself during my late employer's illness in London. The very last one in the stud book reads L.R.1210 *Wardii* × *Fortunei* and the first L.R.1 *lacteum* × *sutchuenense* which, after approximately fifteen years of waiting, proved very disappointing and were all discarded as being no improvement on the parents.

THE RHODODENDRON HOUSE

This large house, 100 feet long by 50 feet wide, was built to shelter those species of Rhododendrons and their hybrids which were not quite hardy in the open, and during early spring when Jack Frost had been busy much pleasure was derived from seeing the various plants in bloom. During later years the house was used intensively for hybridizing. Plants of various species were lifted from the open in the autumn, planted in baskets or tubs to be forced into flower at given times.

When *R. Griersonianum* was all the craze as a parent plant, I received an order to have a *R. Griersonianum* plant in bloom from early March onwards. Thus we read L.R.1183 *barbatum* × *Griersonianum* which has yet to flower. *R. discolor* was also used in a like manner, while other species had to be retarded as much as possible to enable them to be used on the latest varieties. A telephone message would be received from London to gather perhaps a dozen different Rhododendron blooms with pollen to be ready for Mr. LIONEL's first morning at Exbury, and before the day's tour a plant of *R. discolor* in a basket would be married to all those flowers. At the time the Rhododendron House was being planted, FORREST, Capt. KINGDON WARD, ROCK and FARRER were, or had been, busy on plant expeditions, therefore there was ample material to raise for planting.

Most of the plants grew well, and many received recognition from

the Royal Horticultural Society. The following received the highest award (First Class Certificate):

FORREST 26618, *R. bullatum* (Edgeworthii series). A very fine tender form with a much puckered leaf and an almost golden-brown indumentum, pure white flowers with chocolate-coloured anthers.

KINGDON WARD 3776, *R. pachypodum* a Maddenii with large, rather starry, white flowers.

FORREST 27687, *R. taronense* (Maddenii subseries Ciliicalyx) a beautiful flattish round flower, yellow blotched at the base of the lobes.

ROCK 59557, an enormous flower, almost identical with the huge trumpet-shaped blossoms of *R. Nuttallii* itself, yet having a variation of leaf. This Rhododendron was never named as far as my memory serves me.

The other Rhododendron to receive a First Class Certificate from the Exbury Rhododendron House was *R. rhabdotum* (Maddenii subseries Megacalyx). This plant was first shown, I believe, from " Bodnant," when it received an Award of Merit. However, it fully deserved the higher award with its peculiar red markings on the outside of the cream and white lobes.

Rhododendrons grown in this house given the Award of Merit were many, chief among them were:

K.W.6333, *R. Nuttalli* var. *stellulatum* with smaller blooms than the type and having an apple-green starry calyx.

R. mishmiense, sent home by KINGDON WARD, a deep yellow Boothii.

R. pectinatum, a Stamineum with a large truss of small white flowers and a yellow blotch and very fragrant.

The pink form of *R. Lindleyi*, whose lovely trumpet-shaped flowers make it one of the best Rhododendrons of the Maddenii series.

R. stenaulum, another of the Stamineum series, with purplish-rose flowers.

R. auritum, a very good 4 to 5 foot plant inside, just missing being hardy, with pale yellow flowers, a colour very constantly occurring in the Boothii series.

Large plants of such lovely species of Rhododendron as Blood Red *arboreum*, *Delavayi*, *eriogynum*, *Griffithianum*, *Kyawi*, *Hookeri*, *megacalyx*, *Dalhousiae*, and the true *Nuttallii* all helped to make a brave show, producing material for hybridization and incidentally helping to beautify the many miles of woodland paths, with their various offsprings.

HOME WOOD

We leave the Rhododendron House now spoilt and ruined by Hitler's bombing, and travel back to the mansion overlooking the Solent with the Isle of Wight in the distance, almost due south. Stand-

ing here the " Home Wood " runs south-west on a gradual decline to the Beaulieu River, and with its little St. Mary's Streamlet, ponds, oaks and Scotch pines it forms an ideal home for Rhododendrons, choice trees and shrubs. This wood was the first of the Exbury woods to be tackled by Mr. DE ROTHSCHILD, and this being the early days of his gardening career, few of his own hybrids were then large enough for woodland display. Here we shall find numerous species together with many hardy nurserymen's hybrids intermixed with fine specimen plants purchased from Leonardslee, and also many which were gifts from friends.

Due west from the terrace steps at the south of Exbury House, are some magnificent Cedar trees which add dignity to the grass glade immediately behind. At the far end the original plant of 'J. G. Millais,' now nearly 20 feet high, has a majestic setting against its background of conifers, and its scarlet and red flowers always give a grand display. The glade is flanked on each side with bold plantings of ' Christmas Cheer,' ' Ascot Brilliant,' ' Earl of Athlone,' ' Mrs. G. W. Leak,' 'Britannia,' ' Doncaster,' ' Mother of Pearl,' ' Helen Schiffner,' ' Mrs. P. D. Williams,' and such like hardy Rhododendrons (Fig. 2).

R. arboreum, pyramidal in its habit, together with *R. Bodartianum*, mingled with the various Magnolias, Prunus and Pyrus, make a good background, and give a brave show for approximately the first six months of the year.

We now pass through into the wood and the huge plants of *R. Loderi* in various varieties cannot fail to impress, as does one of the original specimens of *R. auriculatum*, at its best about the end of July, when it flowers profusely. After which it has the bad habit of becoming almost deciduous only to redress immediately with its new fresh foliage. I do not think this failing is general with *R. auriculatum*.

The " Augustinii Walk," with its scores of plants some 15 feet in height, makes a wonderful sight when in bloom. Of various shades of lavender to what we like to call blue in colour, perhaps the " bluest " is a plant grown from a layer sent to Exbury by the late Mr. J. C. WILLIAMS. Alas ! The bluer the type the more tender seems the plant. Mr. DE ROTHSCHILD chose the green-eyed forms and crossed them together to produce a patch of *R. Augustinii* which did seem hardier. *R.* ' Electra ' (*Augustinii* × *chasmanthum*) is definitely a better blue than either parent, and *R.* ' Electra ' crossed again with *R. Augustinii* flowered for the first time this year and will need much seeding and more profuse blooming before judgment is passed (Fig. 3).

Fine specimens of *R. calophytum* are very cunningly planted beneath the Scotch Pines, which often save the blooms from destruction during the spring frosts. One word of warning—planted thus they are gluttons for water during dry summer spells, as are *R. sutchuenense* and *R. praevernum*, planted in a like position.

The large colony of *R. mucronulatum* with its purplish flowers, interplanted with the *Hamamelis mollis*, are always admired when in bloom, during mild seasons. The New Year's shooting party usually had the unexpected pleasure of its full beauty. *Hamamelis mollis* always outlasted *R. mucronulatum*, but a few *R. praecox* carried on the combination of yellow and purplish colouring.

A large planting of the beautiful Exbury hybrid *R.* ' Day Dream ' (' Lady Bessborough ' × *Griersonianum*) commencing with the pale pink buds and becoming a real biscuit colour when fully expanded, has a background of noble 20-foot plants of *R. barbatum* and *R. Shilsonii* (*Thomsonii* × *barbatum*). These give a glorious display about the end of March, quite six weeks before the delicate *R.* ' Day Dream, ' to be followed later by that beautiful medium growing " Bodnant " cross *R.* ' Fabia ' (*dichroanthum* × *Griersonianum*).

Close by we find a background of *R. discolor* and as its companion below *R.* ' Mohamet ' (*dichroanthum* × ' Tally Ho '), approximately of the same habit as *R.* ' Fabia,' but later flowering and more orange in colour.

As we journey downwards towards the Nymphaeas, in the ponds, we begin to notice that more of the Exbury hybrid Rhododendrons have subsidized the original plantings and a bank covered with *R.* ' Romany Chai ' (' Moser's Maroon ' × *Griersonianum*), deep red, looks extremely effective towards the middle of June, while during late April and early May the planting of *R.* ' May Day ' (Exbury var.) towards the front with its edging of white ' Palestrina ' is gay with blooms for some little time.

The wood now becomes more open and Azaleas predominate, mostly of Exbury hybrids, but of these more later. We pass along by the *R.* ' Cornish Cross,' and *R.* ' A. Gilbert,' with its edging of that most conspicuous Rhododendron ' Bengal Fire ' (*obtusum* var. *Kaempferi* × *Oldhamii*), so rightly named with its flame red flowers smothering every leaf of the plant. This, together with the pale cream *R.* ' A. Gilbert, ' forms another happy combination.

We are now further down towards the tidal river, and the maritime influences enable *R. Falconeri*, *R. sinogrande*, *R. basilicum*, *R. eximium* and *R. Macabeanum* to flourish. The ample shelter provides these large-leaf Rhododendrons with just the correct conditions, and when fully grown they should be " a joy to behold." Leaving these aristocrats of Rhododendrons to flourish, we pass by the large collection of Camellias and approach the Winter Garden.

Winter Garden

This part of the garden was developed more recently, being established about 1936. The formation of the Winter Garden enabled the owner to collect together all those plants, trees and shrubs which normally

bloom during the first three months of the year. There being many Rhododendrons with this weakness of precocity, we shall find in our stroll many species and hybrids to interest us.

The garden is situated in the warmest part of Exbury, *i.e.* right on the edge of the tidal Beaulieu River. Although in some seasons disappointments are experienced, there are periods during February and March when the sight of this garden in bloom (with its various genera of plants) becomes a surprise and revelation to most visitors.

The wisdom of establishing this garden in such a sheltered spot has been amply rewarded, as many plants have received recognition from the Royal Horticultural Society from this winter garden alone. Two species and three Exbury hybrids have been honoured with a First Class Certificate, while eight hybrids and three species have won the Award of Merit. Of the species to receive the F.C.C. are that lovely dwarf *R. leucaspis* which, being bud tender, needs the best sheltered positions, and *R. lutescens* Exbury var., an Exbury production, being the result of crossing a selection of the best two *R. lutescens* available.

Of the three hybrids to be so honoured, *R.* ' Fortune ' (*Falconeri* × *sinogrande*) must take pride of place and surely it would rank as one of the best achievements of the late Mr. Lionel de Rothschild. The flowers of the F.C.C. variety are rich yellow and with such noble foliage it almost qualifies for an award for foliage also. Not easy to propagate with no low branches for layering, it is to be hoped that extra special steps will be taken for its perpetuation. Several other plants of the cross are good, but nothing to compare with the F.C.C. form, while many plants of the cross are pink in flower.

The other two hybrids to receive the F.C.C. were *R.* ' Aries ' (*Thomsonii* × *neriiflorum*), a beautiful crimson Rhododendron of medium growth, and *R.* ' Avalanche, ' a superb hybrid created by crossing *R. Loderi* with *R. calophytum.* The huge perfect trusses of flowers are pure white with a dark blotch at the base of the bloom. *R.* ' Avalanche ' var. ' Alpine Glow ' also received an Award of Merit. This variety makes the same handsome tree or shrub with long leaves, but differs from ' Avalanche ' F.C.C. by having a distinct mauvish colouring in the white lobes, with less pronounced blotch at the base.

As this part of the garden is devoted to the early-flowering Rhododendrons, it is natural to expect a large percentage of the early red species, including *R. Thomsonii*, *R. Hookeri. R. arboreum* (blood red), *R. barbatum* and *R. Delavayi*, together with their many hybrids. Of this host of intense colours, pride of place goes to *R.* ' Alix ' A.M. var. This hybrid of *R. barbatum* × *R. Hookeri* has them all beaten for colour. I have personally gathered together one flower from each of the species, together with their hybrids, and *R.* ' Alix ' easily wins. Alas ! Having *R. Hookeri* blood it gains in colour but loses in hardiness. This fine hybrid is only just hardy at Exbury.

Another good red of Exbury origin is *R.* ' Adelaide ' A.M. var. (' Aurora ' × *Thomsonii*), being much hardier, which cannot be said of *R.* ' Abbot ' (*Thomsonii* × *Delavayi*).

The hybrid produced by crossing *R.* ' Cornubia ' with *R. calophytum* is a glowing pink named *R.* ' Amalfi,' with a fine large truss, to which an Award of Merit has been given.

The same honour has been bestowed on the two hybrids of *R. moupinense* which, crossed with *lutescens*, gives *R.* ' Bo-peep,' the award form being a deep cream in colour and very free flowering, and hybridized with *R. leucaspis* produced *R.* ' Bric-a-brac ' a really neat, front row or edging type of plant, with white flattish flowers and chocolate-coloured anthers.

Before we leave the Winter Garden perhaps mention should be made of *R.* ' Eleanore ' (*desquamatum* × *Augustinii*) A.M. This free-flowering *triflorum* hybrid commences to flower at an early age and its mauve and blue flowers are equally as large as those of *R. Augustinii*, but it is quite a month earlier than the latter to bloom.

We now retrace our steps over the little stone bridge back through a part of the " Home Wood " by " View Point " where we catch a glorious glimpse of the Beaulieu River winding its way through the woody countryside, and so to " Witchers Wood."

Witchers Wood

We are now amongst legions of Rhododendron hybrids, and in this brief account of Exbury Rhododendrons mention can only be made of the most important ones with the writer conscious of his limitations to do justice to so vast a subject. As we enter " Witchers " we pass *R. chasmanthum* F.C.C. and so to ' Lady Chamberlain ' walk with the many varieties of ' Lady Chamberlain ' and ' Lady Rosebery.' I have already mentioned and given details of this unique hybrid, but suffice it to say that, wherever these beautiful hybrid Rhododendrons are grown or exhibited, the name of the creator, Mr. Lionel de Rothschild, will be ever prominent.

A lovely bed of *R.* ' Fusilier ' F.C.C. (*R. Elliottii* × *Griersonianum*), so very rightly named, at its very best about the middle of May, has no peers in its own colour, while close at hand, and flowering nearly a month later, is *R.* ' Grenadier ' F.C.C. This hybrid of *R.* ' Moser's Maroon ' × *Elliottii* is a dark crimson in colour without being too dark, and has a full truss of flowers, of the finest proportions. *R. Bibiani* (' Moser's Maroon ' × *arboreum*) also received an Award of Merit, and makes a good woodland shrub, but somehow lacks quality as a cut flower, being, I think, a little too dark a crimson. This criticism could also be levelled at *R.* ' Impi ' A.M. (*didymum* × ' Moser's Maroon ') with loose, hanging clusters of almost black, bell-shaped flowers which need the sun to liven them up.

To face p. 12.

Photo (copyright), "Country Life."]

FIG. 1.—EXBURY HOUSE

Photo (copyright), "Country Life."]

FIG. 2.—EXBURY, THE HOME WOOD

(See p. 9.)

Perhaps the very finest scarlet crimson Rhododendron raised by Mr. L. DE ROTHSCHILD is ' Romany Chal ' F.C.C. (' Moser's Maroon ' × *eriogynum*). This plant has the fullest of trusses carried erect on the shrub and has the added advantage of not blooming until the middle of June.

In " Witchers Wood " most of the larger specimen plants are Lowinsky hybrids, purchased by Mr. ROTHSCHILD some twenty years ago. The three large *R. lacteum* from Werrington Park have dwindled to one. What a shame it is that this Rhododendron (perhaps the finest of the species), is so hard to cultivate. I am given to understand that even at Werrington Park, the home of British *lacteums*, this species is giving cause for anxiety. In most cases the same must be said of *R. lacteum* progeny and I wonder if we are wise in using it as a parent of new hybrids ? I have handled many hundreds of seedling hybrids of this fine species and in most cases they are " sticky " or bad doers. There are exceptions of course, and the best of all the *R. lacteum* hybrids at Exbury is *R.* ' Mariloo ' (*lacteum* × ' Dr. Stocker '). This plant does grow well and Mr. ROTHSCHILD, a very good judge of a good Rhododendron, named it ' Mariloo ' after his wife, Mrs. L. DE ROTHSCHILD. This is first rate, but flowers of the better forms have not to date been exhibited. The var. ' Gilbury ' received an Award of Merit when shown in April 1943, but this plant received an E. label when classified, which means it was rated about fifth. The A. plant, which is *R.* ' Mariloo,' has a huge branch of funnel-shaped blooms which form a complete truss of pure yellow flowers.

Personally the B. plant of the cross holds my admiration ; true it is not so unique a yellow as *R.* ' Mariloo,' but the extra large perfect trusses outshine most Rhododendrons I know for quality and size, rivalling *R. Loderi*. This plant has not been given a varietal name, but as it is so distinct, having a large dark blotch at the base of the lobes, it will undoubtedly receive one in due course.

R. lacteum × *arboreum album* makes ' Endeavour,' a good woodland plant with typical *arboreum* habit. The better forms have cream and white flowers, but the majority poor pink shades which need weeding out.

R. ' Jocelyne ' (*lacteum* × *calophytum*) flowers during April, has dense white blooms of good substance borne in an erect truss prominently displayed, and will make a good plant for favoured gardens.

R. lacteum × orange *caloxanthum* is *R.* ' Joanita,' and the orange flowers, fading to rich yellow, are nearly perfect, but need another generation to add those extra two or three blooms to " top up " the truss and give us perfection.

R. ' Penjerrick ' × *lacteum* gives us *R.* ' Jason,' another yellow with flowers of more tubular form, but to date the plants seem woefully slow, and fastidious.

While we are on the subject of *R. lacteum*, I should like to mention that a fine young batch of this species about 4 to 5 feet high, with a perfect *lacteum* leaf, flowered for the first time last season, and I am sorry to record that none proved yellow, not even a creamy white, but a miserable dirty pink.

Before I pass along to *R.* ' Lady Bessborough ' we must mention *R. gymnocarpum*, a beautiful species which received an Award of Merit when shown, and also received first prize at the recent Rhododendron Show in the class for a vase of " Any other species." This plant has deep crimson flowers which hang in abundance and is a great favourite of the writer.

R. ' Lady Bessborough ' (*discolor* × *campylocarpum* var. *elatum*) is a well known, excellent Rhododendron, and must rate very high in the list of Exbury hybrid Rhododendrons. The First Class Certificate form has rich stone cream flowers with a reddish marking at the base. The var. ' Roberta ' also received the highest award from the Royal Horticultural Society, but this has pinkish flowers.

R. ' Lady Bessborough ' was used by Mr. DE ROTHSCHILD extensively for hybridizing with happy results, perhaps the most successful being the ' Hawk ' cross, *R.* ' Lady Bessborough ' × *Wardii*. Many forms of this cross have been shown at Vincent Square, but the flowers from the best plant have yet to be exhibited. This has rich, yellow, saucer-shaped flowers, grown on a medium ideally-formed plant which carried the trusses most prominently. Many plants of this cross have flowers less flat in shape with a chocolate-coloured blotch; this type is known as var. ' Jervis Bay.' *R.* ' Lady Bessborough ' × *Griersonianum* is *R* ' Day Dream.' This Rhododendron we met earlier on in the " Home Wood." However, *R.* ' Lady Bessborough ' × *dichroanthum* gives us *R.* ' Jasper,' a later-flowering Rhododendron with good yellow, rather tubular flowers, and again with *R. Souliei* we have *R.* ' Halcyone,' another fine medium-growing woodland plant which does not cut to the best advantage, and is one of those trusses of flowers which need the whole colony on the plant for its value to be appreciated. The cream-coloured varieties are mostly admired, but some of the soft pink shades are rather exquisite, and are worthy of varietal names. There are many more hybrids of *R.* ' Lady Bessborough,' but we must pass on and come to *R.* ' Naomi,' a fine hardy plant named after Mr. DE ROTHSCHILD's youngest daughter. This *R.* ' Aurora ' × *Fortunei* hybrid always makes a fine show in the woodland during the whole of May. Several varieties of this cross have been honoured by the R.H.S., var. ' Stella Maris,' a good pink, was awarded the F.C.C., but there are two other forms I prefer. First and foremost Exbury var. A.M. This cream to biscuit colour Rhododendron has a fine full truss, is most free in flowering, with good foliage, and everything which makes a first-rate Rhododendron. Next in order I would place var. ' Nautilus ' A.M., this has

the same qualities regarding habit, but the colouring of the flower is totally different, being a soft shade of pink with some luminous pale mauve running through it.

R. ' Naomi ' Exbury var. has also helped to fill the Exbury stud-book of Rhododendrons. Crossed with *R. lacteum* it has imparted some " blood "which has really made a good healthy batch of plants nearly 6 feet high with true *lacteum*-like leaves, but to date no flowers ; however this pleasure is shortly to come, I hope.

Hybridized with *R. Wardii* it gives us *R.* ' Idealist ' A.M., another plant of ideal habit, it appears that all the *R. Wardii* crosses more or less give us a nice compact type of shrub. This Rhododendron has pale cream flattish flowers of good size forming a very pleasing truss.

R. ' Naomi ' Exbury var. × *campylocarpum* makes *R.* ' Carita ' A.M. ; the best forms of the hybrid are pale lemon in colour, while other varieties of the cross vary considerably into pinks.

Near by the *R.* ' Carita ' we have *R.* ' Ibex ' (*pocophorum* × *Griersonianum*), a good red, but one which somehow " just misses the bus " ; this is not the case with the extra fine blood red *R.* ' Gaul ' (*Shilsonii* × *Elliottii*), for in substance and trueness of colour this Rhododendron is hard to beat.

R. ' Ivanhoe ' (' Chanticleer ' × *Griersonianum*) has received the Award of Merit, an honour bestowed on *R.* ' Gaul ' also, but *R.* ' Ivanhoe ' is more scarlet and later in blooming. We pass the huge plants of *R. chasmanthum* F.C.C. interplanted with *R. bauhiniiflorum*, both blooming together, mauve and yellow, and so out of " Witchers Wood," leaving hundreds of Rhododendrons not mentioned, but time and space is limited and we travel over the large stone bridge into " Yard Wood," so called as in ancient times the Monks came to this wood where the Yew trees grow so well to get a Yard (rod) to make their bows with. One very old Yew tree still survives which is reputed to be mentioned in the Domesday book.

Shortly after crossing the bridge we come upon a large planting of *R.* ' Eddie ' A.M. (*Kaempferi* × ' Apollo '), named after the present owner ; this fine brick-red dwarf plant needs a shady spot to prevent the sun from scorching its flowers.

Away on our right are many young hybrid crosses planted out awaiting the time to bloom, *R.* ' Major ' (*Thomsonii* × *haematodes*) flowered last year and is most promising. *R.* ' Hermes ' (*apodectum* × ' Lady Bessborough ') a good yellow, *R.* ' Moonglow ' (*Loderi* ' Venus ' × ' Lady Bessborough ') a lovely well-named Rhododendron, and *R.* ' Memory ' (' King George ' × *haematodes*). Another good red medium-growing plant is *R.* ' Mandalay ' (*haematodes* × *venator*) : this free-blooming shrub is not more than 2½ to 3 feet in height, and makes a wonderfully good edging plant for the woodland paths.

We journey along the main road by the large batch of *R.* ' Cornish

Cross ' Exbury var. into the dell beyond, with banks of Azalea hybrids on either side and with a background of *Acer palmatum* and its varieties *atropurpureum*, *septemlobum*, *sanguineum*, etc. These Azaleas are mostly, if not all, Exbury hybrids of fine quality, size and colour. Outstanding varieties are ' Balzac,' ' Basilisk,' and ' Brazil,' all more or less bright orange ; ' Berryrose,' a good large pink, ' Hotspur ' and ' Knighthood ' of rich crimson. All the forementioned Azaleas have received the Award of Merit. Other varieties of note are ' Fawley ' and ' Klondyke,' yellow, ' Gilbury ' and ' Kathleen,' pink, ' Royal Lodge ' and ' Kipps,' orange red, and ' Scarlet Pimpernel ' the best dark crimson. I believe it would be wise here to give a little history of the origin of these hybrids as records of their early ancestry seem very vague. Mr. ANTHONY WATERER, of Knaphill, a great pioneer in the early days of Rhododendron hybridization, was very fond of Azaleas, and got together a fine batch of Azalea hybrids. There is little doubt that he purchased a consignment of Azalea hybrids from Holland. They were then known as ' sinensis,' and ' mollis ' hybrids. We all know that ' sinensis ' and ' mollis ' should now read *molle* and *japonicum* respectively. Then he commenced to hybridize to improve their quality, and during this operation he probably added a touch of the American Azaleas *calendulaceum* and *occidentale*, as he was so partial to these plants.

Mr. DE ROTHSCHILD was fortunate enough to persuade Mr. ANTHONY WATERER to sell him a few choice ones. Amongst them was a very good yellow of fine substance named ' George Reynolds.' This was used very intensively together with the species *molle* (true) to further improve the Knaphill strain. Since then, by carefully selecting the best pinks to cross together, and likewise the other colours, and by keeping the colours together and not mixing them when hybridizing, the Exbury strain of Azaleas has become very famous and the plants are well worth a visit when in flower.

Passing the large rock garden on our right (which we will visit later) we admire large groups of *R.* ' Albatross ' F.C.C. (*Loderi* × *discolor*) which is at its best in late May and the early part of June. This Rhododendron, with its huge trusses of white, pink-flushed flowers, is one of the best of the Exbury crosses.

R. ' Albatross ' is a strong grower and needs plenty of room ; this also applies to *R.* ' Angelo ' A.M. (*Griffithianum* × *discolor*). Its varieties ' Solent Swan ' and ' Solent Queen ' A.M. differ only in the colours of the markings at the base of the flowers. This part of the garden contains many *discolor* hybrids, all of which make a grand show during early June. One of the most showy is *R.* ' Antonio ' A.M. (' Gill's Triumph ' × *discolor*), rather late to open its real rich pink flowers. *R.* ' Avocet ' (*discolor* × *Fortunei*) has a bad flower for cutting, but is a first-rate hardy Rhododendron, with sweet-scented, white blooms.

Before we leave the *discolor* hybrids, mention should be made of

R. ' Bonito ' A.M. (*discolor* × *Luscombei*). This very stately, large-growing plant carries well built-up trusses of white flowers heavily marked with pink.

Last of this group, *R.* ' Sir Frederick Moore ' F.C.C. (*discolor* × ' St. Keverne ') is placed last but is in no way least of this fine group of hybrids. Both the F.C.C. form and its variety ' Coronation,' with deeper pink flowers, make handsome shrubs for gardens with abundant space.

Turning left from the main drive, the large group of *R. cinnabarinum* catches the eye, and as we pass the little neat-growing *R.* ' Abalone ' (*campylocarpum* × *callimorphum*) with their many shades of white to cream and all kinds of dainty pinks, we come face to face with the " Blue and Yellow " corner, with its many large plants of *R. Augustinii* interplanted with fine specimens of *R. campylocarpum*, and towering above them the stately 100 feet Silver Firs, *Abies pectinata.*

Near by are quite a group of recent hybrids, with *R.* ' Golden Horn ' (so badly named) outstanding. This *dichroanthum* × *Elliottii* hybrid is a general favourite, and surprisingly hardy. A garden in north Shropshire with many of the Exbury creations suffered severely a winter or two ago, but *R.* ' Golden Horn ' came through unscalded. Its waxy orange-red, bell-shaped flowers last on the plant over a considerable time. When shown in London last year it was given an Award of Merit together with *R.* ' Grosclaude,' a really fine red hybrid of *R. haematodes* × *eriogynum.*

We are now approaching the summer garden with many *auriculatum* crosses, many of which are very disappointing. Perhaps the best two descendants from this very late flowering Rhododendron are *R.* ' Polar Bear ' and *R.* ' Isabella,' creations of Tower Court and Leonardslee respectively. These are both well represented, and form the background for many smaller plants. However, two of Mr. Lionel de Rothschild's crosses from this Rhododendron should be mentioned. Crossed with *R. eriogynum* we get *R.* ' Dragonfly,' a handsome foliage plant with fine many-flowered trusses of deep rose bloom. Hybridized with *R.* ' Penjerrick ' it has produced *R.* ' Bustard,' which Mr. de Rothschild thought so highly of that he used it with *R. dichroanthum* and in turn we had *R.* ' Kingcup ' A.M., a beautiful late yellow Rhododendron.

This summer garden was established to help its owner to realize an ambition with Rhododendron culture, which was to have Rhododendrons of some sort in flower the whole year round.

R. ' Europa ' (*Ungernii* × *Kywai*) brought the achievement of that ambition one step nearer, and *R.* ' Exburiense ' (*didymum* × *Kyawi*), flowering right into August, helped yet again. The last-mentioned Rhododendron is certainly a fine colour, and marvellously late, but to me it always seems unworthy of the name it owned.

Numerous late Rhododendrons, especially *R. Kyawi* crosses, have yet to flower ; many are excellent foliage plants, especially *R. auricu-*

latum × *Kyawi*, a beautiful pink-flowered plant as yet unnamed. We will leave these late Rhododendrons to grow and mature, and travel back to the rock garden (Fig. 4).

Here we look down into what was once a huge long gravel pit. Much work in the laying of stones, the irrigation of the whole place, even to underground pipes to moisten the roots of *R. repens*, was carried out, yet, somehow, it was not the success hoped for. Fine masses of Triflorums, mostly *R. yunnanense*, fringe the edge of the pit and look extremely well, as did generous batches of *R. scintillans* F.C.C., Rock No. 29583. *R. bullatum* grew well against the rocks as did *R. repens*, but I should have appreciated a little more bloom from this plant. This was not the case with *R.* ' Carmen ' (*repens* × *didymum*), for this compact little grower flowers profusely. Far too many mauves and blues were first planted, but recently an attempt was made to relieve the monotony with plants of *R.* ' Yellow Hammer,' white *primulinum*, the white *R. lapponicum*, *R. microleucum*, *R. leucaspis* (needing shelter), *R. pemakoense*, *R. chryseum*, etc. Exbury cannot claim to have worked much on the hybridization of these dwarf or alpine Rhododendrons, and as this article is entitled " Exbury Rhododendrons," meaning more or less Exbury Hybrid Rhododendrons, we will not tarry longer amongst the sandstones and dwarf shrublets.

Before I finish this note it is only fitting to report that the Royal Horticultural Society have fully appreciated the amount of work done by awarding about thirty First Class Certificates, and well over one hundred Awards of Merit to Rhododendrons shown from the Exbury Gardens. In addition, groups of Rhododendrons and Azaleas have won many R.H.S. Gold Medals, together with the Jubilee Cup, Coronation Cup, Cain Cup several times, and the Rhododendron Cup many times.

I am afraid my space in the first *Rhododendron Year Book* of the Royal Horticultural Society is now more or less exhausted, and I feel deeply that I have only rendered a very poor account of the great work my late esteemed employer endeavoured to carry out.

The praise of hundreds of his hybrids remains unsung, but one would need to write a whole book to approach in any way perfection in this account of Exbury Rhododendrons.

As already recorded, the late Mr. Lionel de Rothschild's greatest ambition was to create Rhododendrons which would bloom during every month of the year, but failing this, to prolong substantially their flowering period well into the autumn of the season.

Great is the pity that an untimely death robbed him of the pleasure of retiring from his London business, to enjoy in leisure the fruits of his untiring efforts ; and that, alas, he was not spared the evening of his life to enjoy the culmination of his work and to witness in his beloved woodlands the flowering of some of his most beautiful later hybrids.

The Propagation of Rhododendrons

By F. P. KNIGHT

THE writing of this account of the methods I use for raising Rhododendrons coincides with my reading Mr. Cox's book *Plant Hunting in China.* In my own case I would not admit that I needed reminding of the debt owed to the great plant collectors who have introduced so many Rhododendrons from China ; but to anyone inclined to take their work for granted, I would strongly recommend reading Mr. Cox's account of the hardships endured by botanical explorers in collecting and sending back seeds to Britain.

It has been my particular good fortune to grow up among Rhododendrons, and since the age of thirteen I have worked among them and endeavoured to learn all I can about their cultural requirements. The thrill of helping to unpack consignments of seeds sent home by GEORGE FORREST is one that I have been most fortunate to experience, a thrill only to be eclipsed by knowing him and hearing him talk of finding, in the wild, such plants as *Rhododendron haematodes* and *R. Griersonianum* for the first time. It need only be added that my first employer was the late Mr. J. C. WILLIAMS, when it will be readily understood how proud I am to recall those years when seeds were coming in thick and fast from China, and to realise that the collectors' work in the field depended on the skill of the gardeners whose work it was to ensure that the seeds were given every chance of germinating, and the seedlings carefully grown on into flowering plants. I consider that this work should be regarded as of the highest importance, for even the slightest act of neglect can make all the difference between enjoying the sight of some wonderful new plant or merely reading a description of it in a collector's field notes.

Seed Collecting

The seeds of even the largest-growing Rhododendrons are very fine, particularly in comparison with other woody plants of similar stature, and for that reason they call for the utmost care and skill in handling in the initial stages. Although at present the collection of Rhododendron seeds in the wild is in abeyance, it is quite possible we may one day again enjoy handling these. Generally speaking, I would say that Rhododendron seeds have withstood the long journey from China much better than seeds of many other plants, and I would advocate, as I have done on previous occasions, the use of air transport so that the seeds reach us in the shortest possible time. I can foresee the overcoming of many

obstacles between the time of collecting and sowing the seeds which had they been surmounted before, would have made such a difference to FORREST, WILSON and KINGDON WARD. It has been my general experience that Rhododendron seeds received from the collectors in time for sowing during the first three or four months of the year, have always given much better results than those which have arrived during the summer and autumn months. In fact, in the latter cases, I have found it an advantage to retain part of the seeds for sowing in January or February, as the difficulties of getting seeds to germinate during the hot summer months and trying to nurse the seedlings through the winter have been almost insurmountable.

I have no exact knowledge of the length of time it is possible to keep Rhododendron seeds, although I have sometimes sown with success, during the second spring after collecting, those which I have saved myself. It would be interesting as a result of this article, to receive data from members of the Rhododendron Group regarding their experience of the longevity of Rhododendron seeds.

During the past twenty years I have written much on Plant Propagation, but even now I am never certain where exactly to cut in on the subject and to draw a line defining where precisely the propagator starts and finishes. Does he start with the packet of seeds handed to him, and finish with having created suitable conditions for their germination, and pricked off the seedlings? I feel there is more to it than this; I know in the main it is not possible to exercise control over the sowing of every packet of seeds handled, but with such a spate of Rhododendron hybridizing as existed immediately before the war, and which in modified form may soon recommence, I would like to stress that the most promising hybrid ever thought of can fail to be grown by reason of insufficient care being taken to ensure the collecting of the seeds at the right moment. Therefore I say that the propagator starting off with the packet of seeds may be handicapped without some knowledge of its history, and if he could ensure that the seeds were properly ripened and stored he would have more confidence in deciding by what method they should be handled. Then at the other end, I feel that the seedlings should not leave his care until they have been safely brought through the first year of their life.

Now as to sowing and storing the seeds, no general time-table can be set down, seeds of dwarf growing, early-flowering Rhododendrons such as *R. impeditum* will ripen much earlier than those of *R. discolor*. I keep a watchful eye on the seed vessels until I notice them changing from green to brown, and then leave them as late as possible, taking care to collect them before they split open at the top. They are saved during dry weather if possible, and placed in transparent packets for preference and stored in a cool, dry cupboard or box. The advantage of the transparent packet is that they can be watched, and when fully ripe, the fine seeds will fall out of the seed-vessels which split into sections to the base.

Not all the seeds will fall out, but those which fail to do so may be removed by using the pointed end of a stick or blunt knife. A useful tip is to do this cleaning without fear of being interrupted and to use a clean sheet of white paper so that the seeds are easily seen. Another most important point is that when dealing with several kinds in rotation, every care must be taken to ensure that all the seeds are thoroughly cleaned from the paper being used on the completion of each kind, this cannot be over emphasized where hybridizing is done, and an authentic stud-book is kept.

I have always been very meticulous about cleaning Rhododendron seeds, taking great care to separate as far as humanly possible the seeds and the debris formed by the breaking up of the seed vessels. This is perhaps more particularly necessary when dealing with the very fine seeds of the dwarf kinds. I attribute much of the trouble caused through damping off among very young seedlings through failing to observe this point. After cleaning the seeds are usually retained in packets until the right time for sowing. The actual packets should be of good quality to prevent the seeds escaping.

Seed Sowing

It may appear that I am taking a long time in getting down to the real subject of Rhododendron propagation, but my preliminary remarks should be regarded as important in that they constitute the underlying principles which make for success. I have had experience in raising Rhododendrons from seeds at Werrington Park in Devon, then at the Royal Botanic Gardens at Edinburgh and Kew, and on a commercial scale at Knaphill, and from the accumulation of such experience I would select from the last week in January until the end of February as the optimum period for sowing. It is taken for granted of course that suitable frames, etc., are available, but perhaps it will be best to describe the method in detail. A warm greenhouse is essential, and if this has been especially designed as a propagating house, so much the better. Generally speaking, this would consist of a central path which divides a warm frame on one side from a bench or stage on the other. The warm frame will be covered with well-fitting hinged lights and the bottom of the frame is usually of slate slabs overlying two hot-water pipes. The slate is covered by a sufficient depth of peat moss to ensure that the tops of the boxes, pans or pots in which the seeds are sown, are within a few inches of the glass lights. The peat moss should be of good quality and free from fungus. Mention has been made of boxes, pans or pots as forming the receptacles for receiving the seeds, but I would discriminate by using wooden seed-boxes only for raising quantities of the more common kinds of Rhododendrons, including what are popularly termed Azaleas. Good porous earthenware pans about three inches deep are ideal for considerable quantities of seeds of the more

difficult kinds, while pots about $3\frac{1}{2}$ inches in diameter are suitable for the general purpose of raising lesser quantities. In fact, when taking into account the quantity of seedlings it is possible to raise in a pot of the size stated, it will generally be found that boxes or pans are unnecessary except for commercial production. Whatever is used must be scrupulously clean and the use of glazed pots or pans avoided, I will talk only of the pot when describing the sowing, but would point out that there should be no difficulty in adapting what I describe for the raising of large quantities in pans or boxes.

The pot is well drained by carefully placing " crocks " in the bottom, taking care that the concave side of the lower and larger crocks is placed facing downwards, finishing off with smaller pieces until half of the pot is filled. The crocks are then covered with coarse peat moss, clean peat fibre or good moss, preferably the former. The soil which should be a mixture of first quality peat moss passed through a sieve having a mesh of about $\frac{1}{4}$ inch, with sufficient clean silver sand to keep this open and porous, with the addition of a small quantity of sandy loam so that the seedlings will not feel the change when pricked off. At Werrington Park we used to sterilize the loam, peat and sand, but I have not done this since, and would not now consider it necessary. The important thing is to obtain peat moss of the highest quality and of fine texture, a product equal to " Sorbex " in its finest texture is the one to aim at. I never use leaf mould or ordinary peat. The moisture content of the mixture should be such as to allow for moderate firming without " caking," and the pot should be filled practically to the level of the rim. This is important, as if the surface of the soil is even a quarter of an inch below the rim the effect is that of forming a sump in which air is stagnant and damping off becomes rife. A shallow layer of fine soil should be added to the surface and the seeds then sown, great care being taken to avoid thick sowing. I would advise an amateur who has never previously sown Rhododendron seeds to practise with a common variety before sowing a rare and valuable kind. The seeds are sown on the surface and not covered beyond just very quickly tapping a sieve of dry silver sand over the surface of the soil. I would repeat the need of care in ensuring that seeds do not become mixed, and are therefore not allowed to fall over the side on to soil which remains to be used.

Next comes the question of watering. I find this most easily achieved by using a shallow tank or trough containing rain-water warmed to the temperature of the propagating house. The pots are then stood in this, and very great care must be taken to make certain that the water does not rise too high as an increasing number of pots are placed in the tank, thereby causing the seeds to float off the surface of the soil. It is wise to err on the safe side and much easier to add water if required than to remove any surplus. Water quickly percolates to the top of the soil in the pots and these are then transferred to stand on the peat moss in

the propagating frame. They should be stood level and then covered inside the frame with sheets of newspaper. An alternative method is to soak the pots before sowing and allow these to drain. The temperature of the frame should be from 55° to 60° F. The ideal I always aim at is to make the initial watering serve until the seeds have germinated, this may take approximately from ten days to three weeks. The lights are closed down on completion of the work but are opened each morning for about an hour, and the heavy condensation which will be found is wiped from the glass with a chamois leather. The newspaper covering is changed each morning, but as a practical tip take care to wipe the moisture from the glass before doing this, otherwise the water drips on to the pots causing washing of the surface of the soil and dislodges the seeds. The tank of water should of course be kept handy, for it is certain that a few pots may require soaking. Rhododendron seeds usually germinate without difficulty, but the care required to handle them during the first fortnight after their tender white roots have pushed out from the seeds cannot be over-emphasized. It is not a question of general treatment, there is in my experience no such thing, every pot must be carefully scrutinized every morning. The slightest sign of damping off must be ruthlessly checked. I always keep a pair of tweezers handy and remove any infected seedlings, filling in the gap caused with dust-dry silver sand. The use of permanganate of potash in solution has been recommended for controlling damping off, but I must honestly state that although I have raised hundreds of thousands of Rhododendron seedlings I have never used any such preventive, and would have regarded the necessity for doing so as a reflection on my professional skill. If due care is taken during seed cleaning to remove all debris, the risk of damping is greatly reduced, as I have noticed that fungus or moulds usually develop first on any particles of the seed-vessels which are mixed with the seeds.

As the pots of tender seedlings develop their tiny leaves they are gradually segregated and removed to lighter conditions in another part of the propagating frame and air gradually admitted, first by placing a block under the light and then increasing the opening until the light can be hooked up. The pots must be shaded during bright sunlight, but this must not be overdone. The use of collectors' field notes is of great help to the propagator in dealing with treatment of the young seedlings, even information giving the series into which the Rhododendrons have been classified is better than nothing.

The transference of the pots from the place where they were first stood after sowing to lighter conditions is a gradual process, but in about a month all the seeds that will germinate will have been dealt with, leaving a few pots which have to be kept in the hope of a late germination, but I consider it is futile to keep the pots after, say, two to three months. One thing, however, I would like to say is that I have noticed some

seeds which have been received from a collector in the autumn months remain dormant and germinate as the days begin to lengthen in the New Year.

It will be seen from the programme described that by the end of March the pots of seedlings are standing in the open propagating frame or they may have been transferred to the bench opposite and stood on a bed of clean ashes. Pricking off may commence during April, taking the strongest looking kinds first and transferring these into well drained and durable boxes with soil similar to that described for sowing, except that the texture may be coarser and the sandy loam content increased. Care is needed in handling the seedlings to catch hold of the leaves and not the tender stems and aim at dealing with this work before the seedlings have started to become hard and woody, as once they stop growing freely it is difficult to induce further growth. Pricking off Rhododendrons is fine work, and the young seedlings must not be buried too deeply. I would advise keeping the soil level nearly up to the top of the boxes so that air may circulate among the young plants. The boxes are placed on the greenhouse stage, keeping the smaller growing species as near the glass as possible. Shading of course will be required. Watering may now be done with a can with a fine rose, an additional helpful measure is the provision of a small hand-sprayer which gives off a fine mist-like spray under pressure. This helps to freshen the seedlings when they are not actually in need of water at the roots. Rain-water should always be used. As the seedlings become established, they may be gradually hardened and during the summer the boxes transferred to cold frames which must be shaded. In the spring following sowing most of the plants may be planted out in prepared frames or nursery beds. At Werrington Park the frames were carefully made up by placing clean weathered clinkers in the bottom for drainage, then rough peat to keep the soil from filtering through, and finally a shallow layer of suitable soil. I do not advise deep soil in the frames, as we used to find by keeping this shallow, that the roots developed a mat-like formation just above the clinkers, and when removing the plants for their first positions in the open, the effect was one of peeling them off much like stripping turf and leaving the clinker drainage clean.

I am of the opinion that Rhododendron seedlings like company, and I particularly dislike seeing them transferred singly into pots. I was fortunate in being given a small quantity of seeds of *Rhododendron Ludlowii* which germinated and grew well while growing together but were mistakenly potted and the majority died, the reason being in my opinion, that in single pots they were subjected to extremes of wetting and drying. I feel sure that more than one failure in getting plants through a difficult stage in their youth can be traced to that extra watering which may be given by the week-end duty man on Saturday in order to ease the work on Sunday.

I am familiar with other methods of raising Rhododendrons from seed, there was a cult for a time which proved quite successful of sowing seeds in pots filled with living bun moss above the drainage. The seeds were sown in among the moss where they germinated without difficulty, but I found that the tender seedlings were inclined to be drawn and I had some trouble in transferring them from the moss to their first soil. I well remember, however, seeing a fine lot of seedlings raised in this way by the late Mr. GEORGE TAYLOR, of Bulstrode Park. I have seen most of the famous Rhododendron gardens in Britain and know of instances where Rhododendrons grow like weeds from self-grown seeds, e.g. *Rhododendron lutescens* at Caerhays Castle, but it must be appreciated that the methods I have described are intended for those who deliberately set out to raise Rhododendrons from seeds. Briefly, the ideal is to sow early in the year just as the days begin to lengthen and to keep the plants growing as long as possible into the following autumn. I have seen the vigorous-growing Knaphill hybrid Azaleas several inches high in November from seeds sown in early February.

The joy of germinating seeds of Rhododendrons received under a collector's number and watching these develop into plants and flower for the first time is in my opinion, one that can only be appreciated by those who have actually experienced it, and anyone who has seen the arrangement of *Rhododendron lacteum* and *R. Meddianum* at Werrington Park will know what I mean. In like manner transferring the pollen from one flower to another by one's own hand and then watching the development of the seed vessel and eventually saving and sowing the seeds and growing the young plants to flowering size provides a feeling of utter contentment quite beyond my descriptive powers.

Propagation by Layering

Increasing Rhododendrons by layering suitable branches has of late years gained in popularity, and I would recommend this method not only for the amateur, who is desirous of raising small quantities, but also to the commercial producer, who is of course primarily concerned with numbers. I stated in my lecture on Vegetative Propagation to the Royal Horticultural Society last September (see the *R.H.S. Journal* for November 1945) that the process of layering does not appear to be sufficiently understood by amateurs; let me say again that in my experience the most frequent fault I have noticed in Rhododendron collections is that of selecting and layering branches which are too large. The idea that the larger the branch used in the initial stages, the sooner a mature plant will be produced is erroneous. Long thick branches which do not bend easily take a long time to produce sufficient roots to enable them to be severed from the parent plant, and furthermore, even when roots are developed, the resultant plant usually resembles a rooted

branch rather than a well balanced shapely specimen. Now, no definite table of feet and inches can be prepared for this purpose, particularly when one considers the tremendous variation in growth between say *Rhododendron radicans* or *R. repens* and *R. Falconeri.*

First let us consider the amateur and try to give him sensible advice. It can be taken for granted in his case that no intention exists of sacrificing the whole of the parent plant for quantity, but rather that this remains *in situ*, and suitable branches developed near the ground will be used to provide a few more plants of a good form or desirable hybrid.

Taking the dwarfs first, and by this I think it best to have such an example as the Lapponicum series in mind, it is quite easy to peg down several of the branches on the outside of the plants without seriously interfering with the centre. Having selected the parent plant, I would prepare a bed of suitable soil, that is one which is of an acid nature, with some sharp sand added, but not sufficient to dry out. I would not mound up the bed except perhaps in areas where the rainfall is high ; for instance, on the west coast of Britain soil can be worked in among the branches with little fear of drying out and rooting takes place very quickly. But to mound up in dry conditions is not advisable, rather excavate a few inches and replace unsuitable soil with a mixture of peat, sandy loam and sand and make this firm, then bend the small branches and peg them down into this, or place stones on the branches in order to weigh them down. The object is to prevent movement of the buried portion of the stem which would hinder rooting. Only two or three inches need to be covered and this may consist of the two or three-year-old wood or even older. A sharp bend in the stem so that the portion which remains above ground is in an upright position is important. If this work is carried out in the autumn or early spring it will generally be found for all but the more stubborn kinds, that sufficient roots have been developed to enable the young plants to be severed from the parent plants and transplanted within a year of layering. For the larger growing species and hybrids a little more care and skill is required in putting down the layers and more patience must be exercised in awaiting results. The number of branches which can be used will not, of course, compare favourably with that of the dwarf kinds, but broadly speaking, the method is the same. Prepare a bed of suitable soil, taking care that this is not too spongy and select the growing tip of a branch about 12–15 inches long and remove any leaves from the portion to be buried. Then bend the end of the branch abruptly so that the shape of the portion to be layered resembles a bent elbow joint with the terminal bud in as near an upright position as possible. Then peg the branch down with a suitable peg, or make this firm without pegging, whichever method is most easy to work. I might add that I very seldom use pegs. The effect of the sharp bend in the stem is to check what would otherwise be an uninterrupted flow of sap to the growing point of the branch and

thus encourage rooting. Sometimes a sharp twist of the stem so that the bark is cracked is an advantage and experience will soon be gained of those kinds which require some such assistance. It is essential to make the soil firm round the layered branches, and it is prudent to examine the work after a spell of hard frost to reset any which may have been dislodged. A watchful eye too, should be kept for moles which have on more than one occasion upset a promising lot of layers.

The commercial grower must succeed in raising quantities quickly, and for that reason he is prepared to sacrifice whole plants for layering by planting the parent plants on their sides in order to bring every available branch down to ground level. To see a well-organized commercial stool bed of Rhododendrons, especially when these are in flower, is an impressive sight. The usual method is to select the plants to be layered in the early autumn and transplant these, arranging them in a double row. The balls of soil containing their roots are placed on their sides and the heads of branches face outwards in a horizontal position away from each other. This means that the majority either touch the ground or are near to it. The leaves are stripped from the portion to be layered and the stems are then bent sharply upwards and by using a builder's trowel which has had the point cut off they are very quickly buried in the ground, pegs are seldom used. Layering carried out in this fashion by an experienced man is an operation which is an education to watch. Care is always necessary to ensure that the balls of roots of the parent plants are thoroughly soaked before planting. In about eighteen months to two years, sufficient roots will have been developed to allow for transplanting and often the branches are severed in the autumn previous to moving in the spring, or severed in the spring for autumn transplanting. Strict grading is practised of the young plants as they have now become, and those of first quality are lined out in nursery beds, while others in the second and third grades are bedded up, spacing them in accordance with the amount of roots developed. It may be stressed that even the plants in the first grade are no more than about nine inches high and often they are cut back so as to ensure the production of bushy specimens. One point particularly noticeable is the straightness of the plants, the growing tips are in line with the ball and this is ensured by the abrupt bend of the branches when layering (Fig. 7).

Propagation by Cuttings

More attention is now being paid to the raising of Rhododendrons by inserting cuttings than was the case when I started gardening. I am convinced that we still have a lot to learn about this work. It is well known that the dwarf kinds respond more or less freely, while the ease with which the evergreen section of Azaleas can be raised from cuttings is generally known. What is not so readily appreciated by the majority of Rhododendron growers, however, is the fact that many of the larger-

leaved species and hybrids can be successfully increased from cuttings. I would like to see a large scale trial carried out on a very wide range of Rhododendrons, and by this I mean, continuing the work over several years under the direction of a first-class propagator who has ready access to fresh material. Much has been learned from Exbury, but I would say that Mr. HANGER, who conducted the experiments there, would freely admit that he was only at the beginning of the work when this was interrupted by the war (Fig. 6).

Some seventeen years ago I wrote an account in the *Gardeners' Chronicle* on the ease with which Rhododendrons having Caucasicum blood could be raised from cuttings, and this was based on the success with which I struck the variety ' Cunningham's White.' From that I went on to deal with ' Rosa Mundi,' *Nobleanum* and *N.* var. *venustum* among others, and results were excellent. It can be said now that not only have many so-called difficult species been successfully rooted, but also such hybrids as ' Cynthia.'

Taking the small-leaved Lapponicums once more as an example, I have raised these in quantity by making small cuttings about one to two inches long of the current year's wood with a heel in the autumn, and dibbling these in sandy peat under bell-glasses after the method used for Ericas. Some kinds root more freely if two-year-old wood is used. These produce plenty of roots by the following spring and can then either be pricked off into boxes or planted in prepared nursery beds. I have not found all the dwarf kinds rooting as successfully in the warm propagating frame, and have attributed this to the presence of an oily substance in the stems which in contact with the moist heat sets up a fermentation which rots the skin. This has been particularly noticeable in such plants as *R. crebreflorum* and *R. radinum* of the Cephalanthum series, and anyone who has handled these plants will be familiar with the rather pleasant pungent smell which is given off. Therefore the pointer is to take the cuttings fairly late in the autumn and not to line them out in the warm peat moss frame. On the other hand, if they are dibbled into pots and these half plunged into a warm frame they give good results. This method is admirably described by Mr. HANGER in the *R.H.S. Journal* for December 1945, and everyone interested in Rhododendrons should read his article. For the larger-leaved kinds the warm propagating frame is ideal. The construction of such a frame has been described under my notes dealing with seedlings, but for cuttings the peat moss placed over the slate bottom of the frame should be mixed with clean sharp silver sand. The depth of this mixture should be about 5–6 inches and it is an advantage to have the frame so constructed that the surface of the bed is within a few inches of the glass light which covers the frame. The temperature of the peat moss should be about 55°–60° F. The cuttings to be inserted in this are usually made of the current year's wood with a heel of the wood of the previous year, and

Photo (copyright), "Country Life."]

FIG. 3.—EXBURY, THE AUGUSTINII WALK

(See p. 9.)

[To face p. 28

Photo (copyright), "Country Life."

FIG. 4.—EXBURY, A PART OF THE ROCK GARDEN

(See p. 18.)

Photo, F. Hanger.]

FIG. 6.—SOFT-WOOD CUTTING OF LARGE-LEAFED RHODODENDRON ROOTED IN JULY. (See p. 28.)

Photo, N. K. Gould.]

FIG. 5.—SADDLE-GRAFT OF RHODODENDRON. (See p. 30.)

Photo, N. K. Gould.]

FIG. 7.—RHODODENDRON PLANT COMPLETELY LAYERED TO PROVIDE THE MAXIMUM NUMBER OF NEW PLANTS

(See p. 27.)

[To face p. 29.

although in the case of the Caucasicum set previously mentioned which were always inserted in the way of a catch crop to fill up what would probably have otherwise been empty frames in the winter months, experience has proved it is necessary to make and insert the cuttings of most of the larger-leaved kinds in the summer months, starting towards the end of June with those having the largest leaves and continuing on into the autumn with the smaller-leaved kinds. It is essential to pay strict attention to the daily care of these cuttings. They should be taken in a fresh condition, selecting short shoots of the current year's wood with a heel and must not be allowed to droop. The frames must be shaded during strong sunlight and each morning the lights should be opened for about an hour, and the stale moisture wiped from the glass. Fairly copious watering with warm rain-water will be necessary. It is not possible to generalize but rooting takes place in about six weeks and the young plants can then be potted or placed in boxes and gradually hardened off.

Mr. HANGER mentions promising results which he obtained by using bud cuttings, this is a method described in my account on Vegetative Propagation last September to the R.H.S. for Camellias. I have not tried this for Rhododendrons, but it should be borne in mind, and the possibilities attending its use for increasing a scarce plant should not require emphasizing, as the number of buds available in comparison with cuttings or grafts is of course considerably higher.

We have, nowadays, nearly all been educated to appreciate that the popular separation of the deciduous members of the genus Rhododendron under the name of Azalea has no real botanical standing, yet the propagator knows a decided difference when trying to raise these from cuttings. I have rooted thousands of cuttings of deciduous Azaleas by taking these in June in a soft to half-ripe condition with a heel, and placing them in the warm propagating frame, but the percentage alive after the first winter was not encouraging. It is most difficult to get the plants to start growing again after they have cast their leaves, and the majority will develop a flower-bud which seems to constitute a hindrance. I have tried pinching these out in the hope that the growth buds will start growing early, but with no appreciable success, yet it is particularly noticeable that the type species *R. occidentale* gives good results and also hybrids of this provided the occidentale parentage is dominant. The hybrid *viscosepalum* also proved particularly responsive and so did *R. viscosum* var. *roseum*. It must be said that the low percentage of the deciduous kinds which have survived the first winter can be grown on into healthy vigorous plants, and it is suggested that someone with material available and time to give strict attention to this matter would bestow a great benefit to Rhododendron growers if they could discover a treatment which would result in a more satisfactory percentage of rooted cuttings being brought through the difficult winter months.

Propagation by Grafting

Despite the success which attends the vegetative propagation of Rhododendrons by the methods already described, it is still necessary to rely on grafting to increase many hybrid Rhododendrons in commercial quantities. I would ask those who are inclined to decry the art of grafting trees and shrubs, including Rhododendrons, to reflect before making trite remarks, for it must be obvious to anyone giving the matter serious thought that our gardens and woodlands would be very much poorer if grafting had never been practised. I am a nurseryman and have no hesitation in saying that in common with my fellows, great pride is taken in the production of first-class plants, and the actual workmanship involved in grafting Rhododendrons is of a very high standard among those who value their good name. We are all conscious of the suckering nuisance as it is called, and freely draw our customers' attention to the necessity of being watchful for sucker growths from the ponticum stock. In fact I have seen nursery employees taking a good deal of trouble to demonstrate to customers methods by which they can detect the difference between the appearance of the growth of stock and scion. There would appear to be little need for me to take up a lot of space to describe Rhododendron grafting in detail, for the nurseryman who reads these notes will know exactly how it is done, while the non-commercial man will generally not be equipped for such work. The method briefly, however, is that of selecting vigorous clean grown young plants of *Rhododendron ponticum* about 9–12 inches high having single straight stems and establishing these in pots of about four inches in diameter. These are placed in a warm propagating frame in the early winter months and grafting usually commences in January. Care should be taken to see that the roots are active. The type of graft prepared for increasing the majority is known as a saddle-graft, this is made of the wood developed the previous summer, and flower buds are removed, the stem is then cut with a very sharp knife so that a wedge-shaped portion falls away from the base of the scion, the pot containing the stock is placed on its side, this is then beheaded by first cutting through one side of the stem, and then the other so that a wedge-shaped point is obtained. The scion is then fitted saddle-like on to this and bound securely, but not too tightly, with good quality raffia. The stock plant is cut down near to the surface of the soil in the pot, and stock and scion should match as near as possible in size. After grafting the plants are returned to the warm frame where they are kept close and moist until united and then transferred in gradual stages to a cold frame and planted out in nursery beds in the summer months, usually selecting a rainy spell of weather for this (Fig. 5). I have had some success in grafting on to stocks of *Rhododendron* ' Cunningham's White ' which have been raised from cuttings. Certain Rhododendrons which do not develop sufficiently

thick wood to allow for the cutting of a saddle-graft are increased by side grafting, that is, a single cut is made on the scion with a corresponding cut on the stock and the two bound together. In this case the stock is not beheaded but reduced in size, leaving some of the foliage to draw up sap. The two methods described are well illustrated in *The Propagation of Trees and Shrubs* by TAYLOR and KNIGHT, published by Dulau in 1927, p. 48.

Root Grafting

This method deserves more attention, and is well described and illustrated by Mr. S. BOWLER in the *R.H.S. Journal* for September 1932, pp. 352–3. It is also dealt with by Mr. HANGER in the article already referred to, but the two methods described are different. It is in my opinion, a more fussy operation to carry out than stem grafting, but it does away with the suckering nuisance and should therefore be encouraged. It really means that the scions are grafted directly on to roots of *Rhododendron ponticum*, and is in a way comparable to the methods used for increasing many other trees and shrubs. The work is usually done in late January and February, and the roots used must be about pencil thickness, with fibrous roots attached, the scion must be similar in size and the operation consists in copying the saddle-graft already described, although in Mr. BOWLER'S photograph a variation is shown. It is essential that stock and scion should fit in order to ensure a perfect union. After tying firmly with raffia the graft is potted so that the union is beneath the soil and then placed in a propagating frame having bottom heat. The subsequent treatment is the same as that for stem grafting.

The reader of the foregoing account who is desirous of propagating Rhododendrons is now left to decide which of the methods described will best meet his particular requirements. For myself I feel that I will be more than repaid for the time spent in imparting such knowledge as I have accumulated if it results in the more general distribution of many beautiful Rhododendrons which are now scarce.

Rhododendrons in the Western Highlands

(From notes prepared by the late Mr. F. R. S. Balfour in 1939)

IT would be difficult to imagine topographical surroundings more dissimilar than those of the Scottish western sea-board and of the high Himalaya. In the former there are many days of rain with occasional considerable gales from the south-west. Frosts when they occur are not so severe and there is almost complete immunity from snow. Moreover the seasons are not clearly defined, and growth is possible almost all the year round. The conditions under which nearly all the Rhododendron species have evolved at the higher altitudes of the stupendous mountains of Central Asia are those of short hot summers alternating with long winters, when plants lie dormant under a deep covering of many feet of snow. The mists and rains of the monsoon, however, find a parallel in the climate of the Scottish west coast. Men who have seen Rhododendrons in both countries assure us that nowhere in their native valleys can finer specimens be seen than in those places on our western and south-western coasts of Scotland where Rhododendrons of Sir Joseph Hooker's introduction have been growing for more than eighty years past.

Rhododendrons in the Western Highlands

Poltalloch (Argyll)

An isthmus between the sea and Lochgilphead with rainfall of 60 in.

R. Falconeri . . . . 26 ft. high × 20 ft. wide
(Probably grown from Sir Joseph Hooker's seed)

R. fulgens . . . . 13 ft. high

Glengarn at Rhu (Dumbartonshire)

R. Falconeri . . . . 25 ft. high with a branch circumference 78 ft.

R. Thomsonii . . . . 25 ft. high with triple trunks, each of well over 2 ft. girth
(Probably grown from Sir Joseph Hooker's seed)

Kilmory (Loch Fyne, Argyll)

Cultivation of Rhododendrons begun about 1850.

R. arboreum . . . . 30 ft. high × 31 ft. diameter of spread
R. niveum . . . . 20 „ × 25 „ „
R. campanulatum . . . . 20 „ × 21 „ „
R. barbatum . . . . 32½ „ × 36 „ „
(Probably grown from Sir Joseph Hooker's seed)

Stonefield (Western shores of Loch Fyne, Argyll)

Cultivation of Rhododendrons begun about 1850.

R. Falconeri . . . . 25 ft. high in 1911
R. arboreum . . . . 30 ft. „ in 1911
R. Thomsonii . . . . 15 ft. „ × 20 ft. diameter in 1911

	HEIGHT FEET	WIDTH FEET	GIRTH
R. arboreum, pink	36	× 31	5 trunks, average 3 ft.
„ white	21	× 24½	
„ var. *cinnamomeum*	37½	× 26	6 trunks average 3 ft. 2 in.
„ scarlet	23	× 28	3 „ „ 2 ft. 9 in.
R. barbatum	19½	× 18½	
R. brachycarpum	13	× 10½	
R. campanulatum	16	× 21½	
R. cinnabarinum	14	× 16½	
R. × 'Elsae'	30	× 32	A remarkable plant of this hybrid *R. grande* × *R. Hodgsonii* 3 trunks, average 2 ft. 8 in., trunk girth 3 ft. 7 in.
R. eximium	20½	× 29½	
R. Falconeri	29½	× 27½	
R. × *fragrantissimum*	8½	× 10	
R. fulgens	16½	× 20	5 stems
R. grande	20	× 24½	
R. Hodgsonii	19	× 26½	
R. lepidotum	6½	× 8½	
R. Maddenii	13½	× 12½	
R. niveum	18½	× 24	
R. Thomsonii	16	× 23½	
R. Thomsonii	24½	× 22½	
R. zeylanicum	13	× 19	Many of these may have been grown from Sir JOSEPH HOOKER'S seed)

Leny (near Callander in Western Perthshire)

R. campanulatum			22 ft. high, diameter of 47½ ft. E. to W., and 30½ ft. N. to S. (Grown from seed sent by Dr. WALLICH in 1820)
R. arboreum			21½ ft. with a stem of 2 ft. girth

Flowerdale (near Gareloch in N.W. Ross-shire)

R. Falconeri			25 ft. high, with a circumference of over 82 ft. (From seed probably sent from India before time of HOOKER)

Ballamoar (Isle of Man)

R. Falconeri			5 ft. 5 in. in girth of trunk, 33 ft. diameter of spread and 34 ft. 7 in. high (From seed sent from Sikkim in 1830)

Inverewe (N.W. Ross-shire)

At Inverewe cultivation of Rhododendrons was begun in 1900.

R. argenteum			12 ft. high
R. 'Cornubia'			12 „ „
R. eximium			12½ „ „
R. fictolacteum			14 „ „
R. Griffithianum			13 „ „
R. Hodgsonii			14 „ „
R. neriiflorum			8½ ft. × 7 ft.
R. niveum			12 ft. high
R. triflorum			9 ft. × 8½ ft.
R. zeylanicum			12 ft. × 13 ft., and in splendid flower in the first week of June. This plant was one of those raised at Arduaine from seed gathered in Ceylon. It is producing natural seedlings freely
R. sinogrande			14 ft. × 12 ft.

There are also now thickets of self-sown plants of *R. campylocarpum*, *R. niveum*, *R. Thomsonii*, *R. eximium*, *R. ciliatum*, *R. barbatum* and *R. campanulatum* and natural seedlings from *R. decorum*, *R. sutchuenense*, and *R. yunnanense*.

Attadale (*Ross-shire*)

At Attadale cultivation of Rhododendrons was begun in 1920.

R. oreotrephes	14 ft. × 6 ft.
R. campylocarpum	13 ft.
R. rubiginosum	14 ft. × 15 ft.
R. haematodes	5 ft. × 6 ft. a very fine plant
R. mallotum	7 ft.
R. fulvum	12 ft.
R. Wardii	6 ft.
R. cinnabarinum var. *superbum*	14 ft.
R. praecox	10 ft.

Craignish (*Argyll*)

At Craignish cultivation of Rhododendrons was begun in 1906.

R. Roylei	12 ft.
R. sinogrande	12 ft. × 8 ft.
R. zeylanicum	14 ft.
R. Bodartianum (*R. campanulatum* × *R. arboreum*)	14 ft. × 16 ft.
R. Thomsonii	14 ft. × 18 ft.
R. grande	14 ft.

Arddarroch (*Dumbartonshire*)

R. arboreum	over 45 ft. height, girth of 3 ft.

Glenarn (*Dumbartonshire, near Rhu*)

R. arboreum hybrid	Root is a huge boss from which seven trunks rise, it has a ground level circumference of 12½ ft. The girths of the individual trunks added together amount to 19 ft. The height is 24 ft. 9 in. and the approx. spread is 134½ ft. round.
R. Nobleanum	23½ ft. high : two main trunks which rise from the boss, the largest of these has a girth of 4½ ft. This tree begins flowering at end of November and frequently carries blossom till May

Edenbarnet (*Dumbartonshire, North of the Clyde in the Kilpatrick Hills*)

R. Thomsonii (3 plants)	15 ft. high, circumference of 100 ft.
R. fulgens (4 plants)	9 ft. „ „ 50 ft.
R. campylocarpum	11 ft. 3 in. high, 10 ft. through
R. niveum	14 ft. high, circumference of 100 ft.

Blackhills (*Morayshire*)

Climate at Blackhills is as dry as any in Scotland with normal rainfall of 30 in., but district is particularly immune from early and late frost.

R. Williamsianum	3½ ft. × 4 ft. laden with flowers
R. camtschaticum	
R. Wightii	
R. ledifolium	
R. chaetomallum	
R. orbiculare	3 ft. × 5 ft.
R. × *Loderi*	12 ft. × 18 ft.
R. fulgens	
R. campylocarpum	
R. fulvum	
R. caloxanthum	
R. Fortunei	10 ft. × 12 ft.
R. fictolacteum	
R. Falconeri	
R. argenteum × *niveum*	
R. euchaites	

Deciduous Rhododendrons at Gladwyne

By Mrs. Norman Henry
(Pennsylvania, U.S.A.)

AFTER what invariably seems like a long winter, spring with its wonderful renewal of life, brings Trilliums, my favourite early spring flowers. Their brave hardiness, their marvellous symmetry and sheer beauty are most appealing. At this time of year, about May 1, the Halesias fairly drip with their enchanting burden of snow-white, impeccably formed bells, all strung along the otherwise bare branches and waving with every breeze. Another ten days and spring is well on its way and all green and growing things are full of promise as the deciduous Rhododendrons burst their buds and open their gorgeous flowers. They seem so ineffably beautiful, it is difficult to remember the loveliness of the flowers that have so recently bloomed.

About twenty-five years ago I had a longing to see our rarer deciduous Rhododendrons. Unwilling to leave home and our little family, I endeavoured to obtain plants or seeds, but all efforts ended in failure. For fifteen years I waited until our young ones grew up and since then I have travelled far in search of rare species and varieties of Rhododendron, also of Halesia, Magnolia, Lilium, Trillium, Phlox, Gentiana, Liatris, Amsonia and other handsome native plants that have bloomed and blushed unseen for far too many years.

Rare and beautiful plants are usually only to be found in places difficult of access, and so I have wandered through miles of pathless forests, waded into countless snake-infested swamps, followed along rivers, waded streams and climbed mountains too numerous to mention, in order to fulfil my mission of obtaining new floral treasures.

Eleven seasons in the Rocky mountains, from southern New Mexico to the British-Columbia-Yukon border, have given me many thrills. In 1935, accompanied by my daughter Josephine, I led a 1,200-mile, ninety-day expedition on horse and foot, through a vast unmapped mountainous wilderness, blazing a trail across the northern Rocky Mountains.[1] The Alaska Highway is using part of this trail. Over forty trips to our south-eastern States have given me many thrills, too. Here, also, there are untrammelled, unspoiled areas, though comparatively small and hard to find. Although I would rather go to the Northland than anywhere else in the world, I have to confess that, horticulturally, the plants from the south outshine in beauty and outdo in variety those from the north.

[1] The British Columbian Government named the highest mountain in northern British Columbia Mt. Mary Henry in honour of Mrs. Henry.

Over one hundred new trees, shrubs and plants acquired on these trips have been put into commercial hands and there are many to follow. The proceeds go to war charities, so that the plants are doing their " bit " too.

My first plant collecting trip was organized to search for *Rhododendron speciosum.* After covering about 2,400 miles, I succeeded in finding a few plants. In later years more came to light. Inspired by their beauty, spring after spring found me starting southward searching, often for weeks, for the finest forms and the most attractive and unusual colours in each species. My car has what I call an " attic," built on top in order to hold herbarium specimens, etc. Inside is a small book-case and two or three plant presses, and many topographical maps always go along. WILLIAM BARTRAM's famous *Travels* is an indispensable, and, in order to profit by this wholly interesting volume, I acquired contemporary maps. On some of my visits to London my time was largely spent searching for early maps of the south-eastern States, which portrayed old Indian trails, and added immeasurably to the interest of my journeys. The rear compartment of the car holds about ten buckets, one for each Azalea. If the selected plant is a rare one, very large, or growing among rocks, a few suckers must suffice. Of course it is necessary to hunt Rhododendrons of any sort when they are in bloom, if one wants to obtain the finest varieties. Sometimes it is possible to mark them and return in autumn, but after years of experience it seems best to take them when first found, as a number of plants were lost when forest fires ravaged the country or the advancement of civilization occurred before an opportunity came to claim a plant. Being an ardent conservationist, I often gather seeds and make selections after the plants reach the blooming stage.

Following are brief descriptions of most of the deciduous Rhododendron species, varieties and colour forms growing at Gladwyne. The illustrations are from photographs taken here by my daughter Josephine.

R. alabamense comes first on the list and it is one of the most enchanting of all ! With its supremely beautiful velvety white flowers that appear, so abundantly, before the leaves that sometimes the stems are invisible, it is a fair sight indeed, and as for fragrance, it is utterly unlike any other Azalea with which I am familiar, the odour being full and mellow with much of the rich sweetness of some of the oriental Lilies. I found it nine years ago, and since then it has been blooming annually at Gladwyne. In its home it commonly lives on dry hillsides where its height is about 2 to 3 feet, but when it grows in the richer soil of ravines it reaches 8 feet in height (Fig. 8).

During the past five or six years I have found some extremely lovely colour forms. The usual colour of the flowers of *R. alabamense* is white with a yellow spot. The yellow gives a sort of glow which is wholly delightful. However, the snow-white form is not rare and is

chaste and lovely, too. There is also one here with pretty pale apricot flowers, and a bright pink one, too. Yellow patches adorn them both. Another gem has crimson-tipped buds opening to white flowers. Beautiful as the foregoing Azaleas are, the two following are the choicest of all. The colour effect of both of them is pale yellow. One has flowers of palest creamy-yellow with vivid orange-yellow blotches, and the other has flowers of very pale yellow, charmingly suffused with lemon-yellow. Visitors have called these the most beautiful Azaleas they have ever seen, and surely they merit high praise. One more of this group remains to be mentioned and *R. alabamense* fl. pl. is a lovely plant. The first flowers come double, with the corolla made up of rather narrow strap-like segments. It is a unique and pretty Azalea, white with some yellow in the flower. The leaves, too, of this species are variable and frequently the undersides are glaucous white. Most of these *R. alabamense* came from Georgia.

R. arborescens' value lies in its pleasing fragrance and its late appearing white flowers. It never makes much of a display, but is a hardy and popular shrub and is obtainable from nurseries.

R. arborescens Richardsonii is a good variety. It is a broad low shrub with grey-green foliage and the flowers seem larger than those of the type.

R. atlanticum is a charming, very fragrant dwarf for the rock garden or anywhere that a pretty little shrub is wanted. As a rule it does not rise over 12 to 18 inches, but frequently blooms at 6 or 8 inches. It is stoloniferous and spreads slowly into broad clumps. *R. atlanticum* usually bears flowers that are pinky-white with tubes of a deeper shade.

R. atlanticum luteo-album has greenish buds that open to pure white flowers.

R. atlanticum (Mrs. Henry's var.) This variety is very distinct and comes true from seed. As for beauty it can hold its own with the best. Deliciously fragrant snow-white flowers open from rose-pink buds. The foliage is a wonderful pale glaucous green that is very blue, and the stems of the young growth are crimson, making a delectable colour scheme. It comes into bloom about three weeks later than the others.

R. atlanticum (yellow var.) This, too, is a miniature beauty whose flowers are coloured a soft chamois-yellow, in cool cloudy weather sometimes tinged with pink (Fig. 10). While with my daughter, Mrs. E. M. Davis, in Virginia, she called my attention to a bouquet of this Azalea in the hands of a little coloured boy. We hunted up the source and dug a few small bushes. The original plant covered an area about 30 feet in diameter ! I also selected one with deep crimson tubes and white flowers. Occasionally a pink one occurs, usually with a tinge of magenta. After years of search, however, I found a plant with flowers coloured a very precious bright soft pink that verged on salmon.

In addition to the foregoing dwarf growers, I came across an area where *R. atlanticum* is a vigorous shrub with large flowers. In eight years it has reached 5 feet.

R. austrinum is a brilliant beauty of a very high order. The fragrant flowers do not vary much in colour. Usually they are flame orange with more or less red shading on the tubes. My tallest one, sixteen years old, and over 7 feet high, makes a magnificent display every May. In its forest home it is often 10 or 12 feet tall. The long protruding filaments add much to its grace, giving the flowers a delightful feathery appearance. Fragrance is not a fixed trait of this species, but with some specimens the scent is most delicious and equal to the best of the race. There is one that is my especial favourite, not only because of its lovely soft yellow colouring, but also because it is so entrancingly fragrant. Another specimen is a very pale colour, almost a straw yellow, with reddish tubes. In our part of the country this species requires full sun and a position sheltered from cold winds. It is so handsome and so free flowering—even after sub-zero temperatures—that it is well worthy of a choice location. For years I have hunted *R. austrinum* and found it in numerous locations in Georgia, Florida and Alabama (Fig. 11).

R. calendulaceum has been and always will be a staunch and sturdy shrub in gardens where beautiful Azaleas are appreciated. I have seen it in its mountain home where it makes truly grand displays. As this Azalea is carried in stock by nurserymen, I have spent little time hunting it ; however, I do have a number of specimens. Among my favourites is a splendid yellow with fairly large-sized crinkly-edged flowers, and glowing orange coloured flowers on another are something to remember until they bloom again.

R. canadense is a most choice small shrub that blooms in early spring. The flowers are singularly light and airy for an Azalea and the colour is very attractive, a soft greyish-purple that has a pinkish cast. With me it does not exceed 2½ feet in height. It is well worth a big effort to make this handsome little Azalea a success. It needs a very acid soil and some moisture.

R. canescens is the southern pale pink Azalea. To me it is more attractive than *R. nudiflorum.* However, the general effect is much the same, but it is not as hardy as that species. In Alabama it is rather variable and there are some which are beautifully fragrant. As a rule there is little variation in the usual pale pink of the flowers, but I collected one plant that bears full rich, soft pink flowers with a hint of peach, which is very lovely.

In eastern Tennessee, a few years ago, I found quite an extraordinary Azalea. After examination, Dr. E. T. WHERRY feels it belongs to the *R. canescens* group, although he had never seen anything similar. The flowers are snow-white and fragrant, and early in the season the

stems and young leaves are so covered with comparatively long white hairs as to give the plant a greyish appearance. It is rather a dwarf grower and a very fine ornamental.

A puzzling low growing Azalea from southern Georgia is intermediate in habit between *R. atlanticum* and *R. canescens*.

R. cumberlandense, Dr. BRAUN'S comparatively new species, is a beautiful and valuable Azalea. Early in the spring of 1936, I made a special trip to Kentucky to collect it. I brought home two small plants, but when they flowered they turned out to be orange and I had expected them to be red, as that is the usual colour for this species. The orange flowers were exceptionally handsome, but the following season found me on my way again to Kentucky. The Azaleas were in full bloom this time and made a truly marvellous display. I had no difficulty in selecting three young plants in luscious shades of scarlet and blood red. This Azalea comes into bloom after *R. calendulaceum*. The colour has a curious way of deepening as the flowers age, thus the orange becomes scarlet and the reds very deep and rich in colour. In their native home they were 6 and 8 feet tall. In the ten years they have been here they are 4 feet tall, thick and bushy and generously covered with their splendid bloom every season.

R. nudiflorum is the pink Azalea of Eastern Pennsylvania and adjacent States, and there are numerous native plants in my woodland. In New York I found two beautiful variations. One has deep maroon tubes and pale pink flowers. The contrast is striking. The other, *R. nudiflorum glandiferum*, has flowers coloured a stunning vivid pink, just as magnificent as *R. roseum*.

R. oblongifolium is quite indispensable. It is very floriferous and when covered with its snow-white, deliciously fragrant flowers, is indeed lovely to look at. It comes into flower shortly after *R. alabamense*.

R. occidentale, the superb Azalea native to California and Oregon, has large flowers that are fragrant and very handsome. They are pinkish with a yellow blotch. There are two striking variations here. One has flowers of pure ivory white, while those of the other appear almost as though they were made of burnished copper. *R. occidentale* is not very hardy here but the copper-coloured ones are hardy, even in sub-zero weather and have bloomed regularly in a position sheltered from cold winds for over fifteen years.

R. pennsylvanicum (*R. atlanticum* × *R. nudiflorum*) is intermediate between its parents and of interest mainly to the connoisseur.

The day I first found *R. prunifolium*, July 10, 1936, will always stand out as a red letter day in a life that has had many thrills, and when my eyes first fell on this marvellous shrub, a stately specimen 8 feet tall, I thought no single Azalea in the world could possibly be more magnificent. It was in a pine forest in Georgia, quite dark except where a ray

of sunlight broke through and touched the Azalea until it looked like scarlet fire. The flowers are a real scarlet red and not crimson as listed by SMALL, REHDER, BOWERS and VAN DERSAL, which makes me think that none of them ever saw it. Then, too, it has never been given credit for the magnificent proportions it reaches. One bush I measured was 11 feet 8 inches tall with a spread of 15 feet 3 inches. In many of the specimens the flowers were still in tight bud. The flowers are larger than those of other eastern Azaleas and it is probably the grandest of all shrubs native to the eastern United States. It has made itself at home at Gladwyne and flowers annually the latter part of July, about the same time as in its native habitat. R. *prunifolium* is a strong vigorous grower and our sub-zero temperatures have no ill effects. It is easily and fairly quickly raised from seed.

R. prunifolium × *R. serrulatum.* I have quite a few seedlings resulting from this cross which I made in 1944. They should be a handsome lot of late July flowering Azaleas, ranging in colour from scarlet to white, with fragrance from its *R. serrulatum* parent.

R. roseum is one of our handsomest, hardiest and most valuable pink Azaleas. It is a vivid warm pink and the flowers are wonderfully fragrant. It varies little in colour, but I have it in pale pink and a deep shade, too. One wonders why *R. nudiflorum* is planted so freely when this one is just as hardy and so much handsomer.

R. serrulatum is valuable because its white flowers appear in July. To be sure, they are small, probably smaller than those of any other American Azalea, but they have the charm of fragrance. Its distinctive rust-coloured young branches make it easy to recognize, even in winter. The young foliage, too, has a delightful reddish tint.

R. serrulatum × *R. prunifolium.* The reverse cross of the already-mentioned Azalea, which should also give a fine summer flowering series.

R. speciosum in its best forms stands near the top of the list. While I have often seen it 6 feet tall in its native home, after twelve years at Gladwyne, my largest one is 32 inches tall, 42 inches in diameter. Like *R. calendulaceum* it has a wide colour range. It has a great advantage over this species as it blooms before the leaves, and so makes such a marvellous display of colour it fairly takes one's breath away. Literally, it is so covered with its orange-scarlet mantle of flowers that scarcely an inch of a twig is visible. My shrubs have never missed a season's bloom in the years they have been here. They do require a sheltered southern exposure in order to do their splendid best. I have this species in a good rich scarlet, an orange and a coral-pink (Fig. 9).

Some years ago, while searching for colour forms of *R. speciosum*, I found a large colony of them mostly in shades of red and orange, but intermixed with these colours were combinations of pinks, yellows and whites. I immediately turned to search for the reason, for of course I realized they

were hybrids. About a mile away *R. canescens* grew along the edge of a swamp, and among the pinks, too, there were unusual colour forms. *R. alabamense* grew nearby, too, and by the white waxy undersides of the leaves of some of the hybrids, I detected an admixture of the blood of this species ! Season after season found me returning to this area, and now I have over a dozen well-coloured Azaleas from this group. Among them is a deep red, a tangerine red, an orange, a coral, a near-crimson, a marvellous old rose, a light old rose, pale pink with yellow blotch, yellow flowers except for pink shading on tube, yellow beautifully suffused with orange. In addition, I have a number of home-raised seedlings in other colours, too. *R. speciosum* and its hybrids are not rampant growers, and strong growing plants and grasses must be kept away from them. They should be treated and cherished as jewels, as indeed they are among the gems of the race.

There is an exceedingly handsome yellow Azalea that I collected in the wild or grew from wild seed. It flowers in April and is the first Azalea to bloom after the early *R. canadense*. The very attractive yellow flowers come before the foliage. During the war a few tags were lost, but I think it belongs to the Speciosum group.

R. Vaseyi is undoubtedly one of the two best of our pink Azaleas, the other is *R. roseum*. It lacks, however, the delicious fragrance of the latter. *R. Vaseyi* is readily available from nurseries. The flowers are a pretty shade of pink. Those on one of my plants turn white after the pale buds expand.

R. viscosum, whose fragrant white flowers come in June, is readily obtainable from commercial sources.

R. viscosum glaucum has very attractive foliage.

R. viscosum montanum is a nice Azalea, but not especially outstanding.

The same may be said of *R. viscosum nitidum*.

The pink-flowered variety, *R. viscosum rhodanthum* is valuable.

All of the foregoing Azaleas, including every variety and colour form mentioned, are growing at Gladwyne, and I would not willingly do without even one of them.

The rewards of my labours have exceeded by far my fondest anticipations, and I am reaping the harvest now.

Evolution and Classification of Rhododendrons

By J. Hutchinson

UNTIL about the beginning of the present century only a few species of Rhododendron and a great number of hybrids from them were cultivated in Britain. These were mainly from the Himalayas, Japan, the Caucasus, and North America. Our botanical knowledge of the genus was confined mostly to these, though from about 1880 onwards the French botanist, Adrien Franchet was describing from time to time various new species collected by French missionaries in the more remote and botanically little known parts of Western China. But very few of these found their way into cultivation. The Himalayan species had been rather meagrely described in the *Flora of British India*, though long before beautifully figured by Fitch,[1] and some of the East Asian species were known through the classical work of Maximowicz,[2] but there was little other literature about the genus.

It was not until Wilson went out to Hupeh and Szechuan, first on behalf of Messrs. James Veitch & Sons, and later for the Arnold Aboretum, that the rich harvest of new species and new garden plants began to come in an ever-increasing stream. He was quickly followed by George Forrest, from the Edinburgh Botanic Garden, and subsequently by Farrer and Purdom, Kingdon Ward, and later still by Rock, on behalf of the Arnold Arboretum, and by a few others.

Wilson's first collections were named at Kew by the collector himself and Dr. W. B. Hemsley, and the new species described in the *Kew Bulletin*. His collections on behalf of the Arnold Arboretum were in turn enumerated in the *Plantae Wilsonianae*. Much information about these was collected together by J. G. Millais and published in his two large volumes. Then Professor (later Sir) Isaac Bayley Balfour came into the picture, assisted by Mr. Harry Tagg and Mr. (now Sir) William Wright Smith. They classified and described most of Forrest's magnificent collections, and at the same time laid the foundations for the tentative classification of the genus as we know it to-day.

Balfour selected an outstanding species as the nucleus of a group, gave it a serial name and included in each of these Series those species which appeared to be more or less closely related. This method found

[1] J. D. Hooker, *Rhododendrons of Sikkim-Himalayas*. 1849–51.

[2] C. J. Maximowicz, *Rhododendreae Asiae orientalis* (Mém. Acad. Péterb. VII, xvi. 1870).

favour at once, especially amongst growers, and the merits of *Arboreum*, *Falconeri*, *Maddenii*, *Neriiflorum*, *Taliense*, *Triflorum*, etc., were heard in certain circles just as much as or even more than racehorses and greyhounds had been in earlier years. Likewise, collectors' names and numbers were bandied about, and FORREST 3042, WARD 1109, or WILSON 4506 were discussed at week-end parties, much to the disgust of butlers and footmen with ears open for a " tip " for the Derby or Cesarewitch. Those were happy days for some of us, and one wonders whether they can ever return.

BALFOUR'S scheme was adopted by the Rhododendron Society, and a small pocket handbook was issued by Mr. J. C. WILLIAMS of Caerhays Castle, Cornwall, with a list of the Series in alphabetical order, with the names of the species assigned to them by BALFOUR. Eventually these were defined, keys to the species provided, and each species described, sometimes accompanied by an illustration, in the Rhododendron Society's book [1] published in 1930.

Some years before the recent war, I arranged at the annual Rhododendron show an exhibit showing the relationships of the various series one with another. This was done in the form of a family " tree," on which the typical species of each series was illustrated by a coloured picture. Considerable interest was aroused, though details of it were never published. This opportunity has now come, though space is too limited to give more than a brief outline of it.

The interrelationships and phylogeny of the families of flowering plants have been the chief study of the writer for many years, and connected with it the origin and affinities of the *Ericaceae* to which *Rhododendron* belongs, has always been kept in mind. Having a corolla of united petals, *Ericaceae* have on this account always been placed in the *Gamopetalae* (*Sympetalae*), alongside *Vacciniaceae* and *Epacridaceae*. But within that artificial group of families they have no near relatives, apart from those mentioned, and it is amongst the families with free petals that we have to seek for real " blood relationship," as we say in human affairs.

It may seem a far cry from a *Magnolia* to a *Rhododendron*, and indeed it is, though there are many connecting links. One of these is the *Dillenia* family (*Dilleniaceae*) and another the tea family (*Theaceae*), to which the familiar *Camellia* belongs. It is through these two families that I would trace the origin of *Rhododendron*, which of course includes *Azalea*.

The group of Rhododendrons showing the most primitive characters is, in my opinion, the *Falconeri* Series. This is because :—

(1) The leaves are large and evergreen with coarse nerves and indumentum just as in the *Dillenia* family.

[1] Written jointly by ALFRED REHDER (*Azalea* section), H. TAGG (non-lepidote species) and J. HUTCHINSON (lepidote species).

(2) The flowers are numerous and rather coarse and arranged in a raceme-like truss.

(3) There are more than five lobes (7–10) in the corolla.

(4) There are more than ten stamens (12–18).

(5) There are more than five chambers in the ovary (sometimes up to 18).

These characters, even taken separately, but particularly in combination, are all regarded as being primitive in the *Gamopetalae*, and collectively they are found in *Rhododendron* almost exclusively in the *Falconeri* Series. It should be noted that in primitive groups of plants there is generally more waste of material in the floral parts than in those of more advanced groups, and there is a minimum of cohesion and adhesion. For example, in *Scrophulariaceae* and *Labiatae* the stamens are mostly reduced to four or even two, and they are carried up on to the corolla. Even with the genus *Rhododendron* economy is evident, though the stamens are never reduced to less than five, as in many species of the *Azalea* group. Thus the latter may be regarded as a very advanced and therefore more recently evolved group. Other groups with a small number of stamens are *Cephalanthum* and *Lapponicum* (in part), and in *Cephalanthum* Series the stamens are hidden in the corolla-tube. A little higher up the " tree " comes the *Grande* Series, with very similar floral characters, but with a different and more refined hairy covering on the lower surface of the leaves. In addition, most of the species of the *Falconeri* and *Grande* Series are trees or tree-like shrubs.

From the *Grande* Series it is not a great step into the *Arboreum* group, in several of which the arboreal habit of the *Falconeri* Series is retained, with dense many-flowered trusses. In most of them the 10-chambered ovary is also continued, but the stamens are reduced to ten as in more advanced series. The leaves, also, have still a coating of hairs, though much more refined than in the more primitive groups already mentioned.

From the *Arboreum* Series the evolution of the *Barbatum* Series may be traced. Some are trees, and the leaf-indumentum has largely become marginal, consisting of bristly or stiff glandular hairs. Series *Irroratum* and *Glischrum* seem to be derived from this stock, and the species of *Irroratum* Series, especially, are still in an active state of evolution, and very difficult to define in consequence. To my mind they are equivalent to *Hieracium* in *Compositae* or *Rubus* in *Rosaceae*.

Series *Parishii*, which is sufficiently distinct to stand on its own, and not as a subseries of *Irroratum*, is well marked by its fugitive stellate indumentum. It is found mainly in the warmer parts of north-east Burma and Western Yunnan, rarely ascending beyond 9,000 ft. altitude. The flowers are red to crimson, characters more in keeping with the *Arboreum* Series than with *Irroratum*. Series *Glischrum* and *Irroratum* culminate another branch of our " tree," and both have almost invariably

[To face p. 44.

Photo, Josephine Henry.]

FIG. 8.—RHODODENDRON ALABAMENSE. A YOUNG PLANT

(See p. 36.)

Photo, Josephine Henry.]

FIG. 9.—RHODODENDRON SPECIOSUM

(See p. 40.)

Photo, Josephine Henry.]

FIG. 10.—RHODODENDRON ATLANTICUM LUTEO-ALBUM GROWING WITH JUNIPERUS HORIZONTALIS

(See p. 37.)

Photo, Josephine Henry.]

FIG. 11.—RHODODENDRON AUSTRINUM

(See p. 38.)

the orthodox 5-lobed corolla, ten stamens, and a 5-chambered ovary characteristic of the bulk of Rhododendrons.

From the *Grande* Series we may also trace relationship with *Calophytum*, which I prefer to separate from the *Fortunei* Series, in which they have been placed. The ovary has 14–16 chambers, an ancient feature, and there are 15–25 stamens, whilst the corolla-lobes vary from 7 to 5. The hairy covering is scanty and soon falls off. Thence it is not a far cry to the *Davidii* Series, which also includes *R. sutchuenense* and *R. praevernum*. Here again the number of corolla-lobes often exceeds five.

A further step takes us into the *Fortunei* Series proper, containing some better known species such as *R. Fortunei*, *R. decorum*, and *R. discolor*. A spotting feature for the whole series is the style, which is glandular from base to apex. Series related to this stock are *Griffithianum*, *Orbiculare*, *Campylocarpum*, and *Thomsonii* with its various subseries such as *Martinianum*, *Souliei* and *Selense*. Their interrelationships require much more study than I have been able to give them. From the *Fortunei* stock I would also derive the *Ponticum* Series, which besides its typical species includes *R. catawbiense*, *R. maximum* and *R. californicum*. Tacked on to it in the Rhododendron book is Series *Caucasicum*, which to me seems something of a dumping ground for species which do not fit very well into other groups. This is commonly the case in nearly every large genus where evolution is still pretty active.

By a rather speculative path we have once more reached the periphery of our phylogenetic " family tree," and must again climb down the " trunk " as far as the *Grande* Series. The typical species of the *Lacteum* Series is *R. lacteum*, which has lovely yellow flowers, as also its close relative, *R. Wightii*. Yellow is rather a primitive colour, and in flowers probably the nearest to green. As in the *Grande* Series, the number of chambers in the ovary exceeds 5, except in more advanced members of this series, which have white to rose flowers.

From the *Lacteum* Series affinity is also traced with the *Fulvum* Series, the type species of which has still an ovary with 10–8 loculi, though the number of stamens is reduced to the round number of 10, as in the majority of Rhododendrons. I regard the *Fulvum* Series as a group parallel with the *Arboreum* Series. The number of loculi in the ovary varies from 10 to 5, but again the stamens have been reduced to the fixed number of ten.

To trace the *Haematodes*, *Sanguineum*, *Neriiflorum* and *Forrestii* Series along the same branch of our tree would require too much detail, and it would be difficult to distinguish the " wood from the trees," even if there were space in the present paper, for which there is not. It is interesting, however, to note that in this branch the stature changes from arboreal to shrubs, quite small and much branched shrubs in fact, and finally in the *Forrestii* Series to a *creeping* habit, and the inflorescence

is often reduced to a *single flower*, whilst the corolla is 5-lobed, the stamens are 10, and the ovary 5-locular. *R. Forrestii* itself seems to me to represent the peak of evolution in this alliance of *Rhododendron* species.

From the *Fulvum* stock, the *Campanulatum* and *Taliense* Series seem to be derived, with a great development of very closely related species and culminating, as in the *Forrestii* Series, in the dwarf habit of the *Roxieanum* subseries of *Taliense*, the species of which are difficult to separate.

The above completes a very brief outline of the probable evolution of the various groups of *elepidote* Rhododendrons, and from them we must now turn to the *lepitode-leaved* groups, all of which are placed on the right hand side of the diagram. For want of anywhere better I have shown them to be tacked on to the *Grande-Lacteum* Series, placing at the bottom the *Edgeworthii* Series. I put them at the base chiefly because their leaves have a covering of both woolly hairs and scales. Most Rhododendrons have either the one type or the other or none at all, but very rarely both kinds. Indeed it is highly probable that *lepidote* Rhododendrons have been evolved independently of, or at any rate on parallel lines with, the hairy and glabrous groups already described, just as the Azaleas may have arisen separately, as shown in the diagram.

Probably the most primitive group of lepidote Rhododendrons is the *Maddenii* Series. This attains its maximum development in the warmer regions of Sikkim, Assam and Burma. They are medium-sized to large shrubs, and sometimes epiphytic. The most primitive feature is the number of the stamens, which ranges from 25 down to the orthodox 10 ; and the ovary-loculi vary from 12 to 5.

These primitive features are found only in subseries *Maddenii*. In the other two subseries, *Megacalyx* and *Ciliicalyx*, the stamens are reduced to 10, and the ovary-loculi 7 to 5.

From subseries *Ciliicalyx* may be derived the large and well-known *Triflorum* Series, a link with which is provided by such species as *R. supranubium*, *R. Veitchianum* and *R. formosum* (subser. *Ciliicalyx*).

Closely linked to the *Triflorum* Series is the *Yunnanense* subseries, which in some respects represents what I regard as a development parallel with some groups of *Azalea*, for example, the deciduous form of *R. chartophyllum* (*praecox*). The declinate exserted stamens contribute to this view.

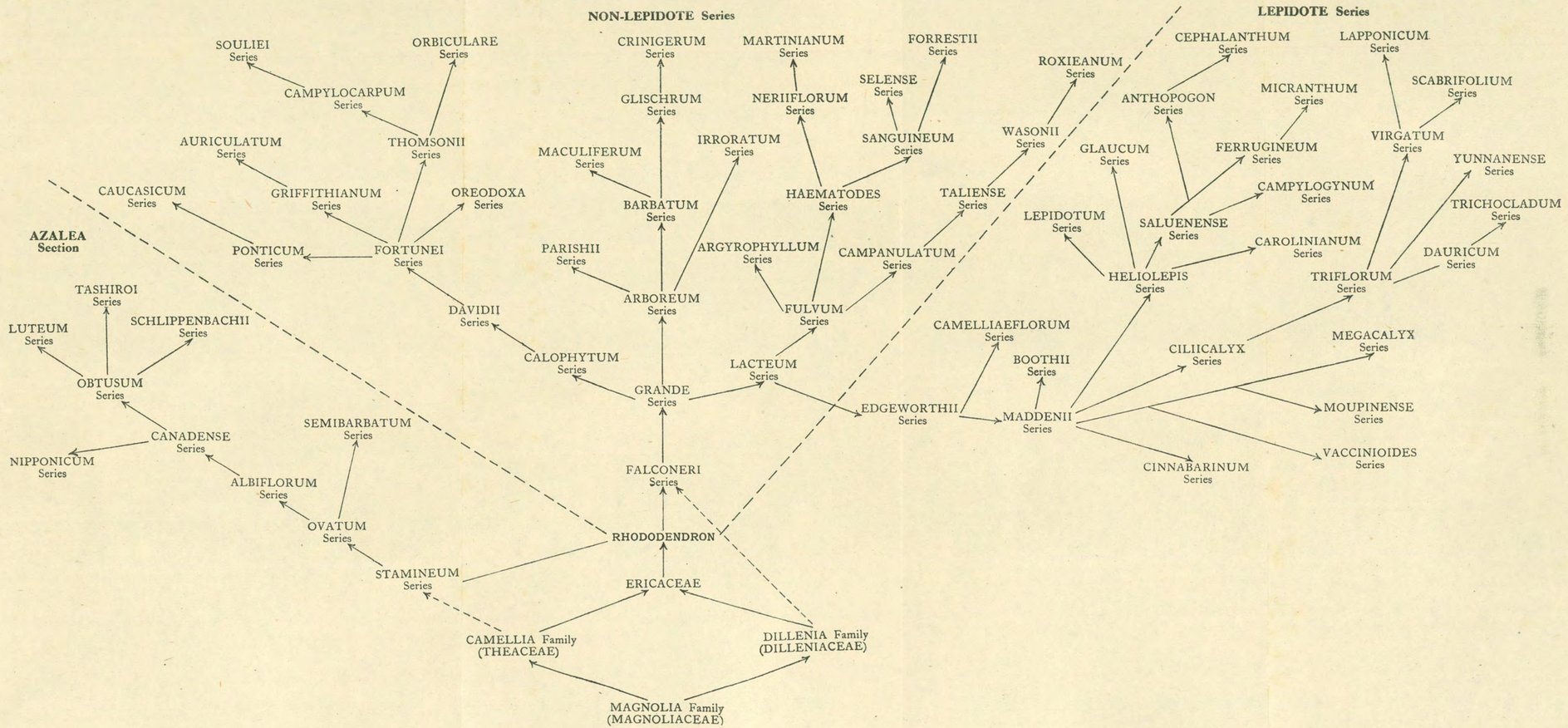
We are now climbing a long way up our lepidote branch of the " family tree " and approaching even more climax series such as *Dauricum* (semi-deciduous) *Trichocladum*, *Virgatum* and *Scabrifolium*. And through the *Hanceanum* subseries it is not a far cry to *Lapponicum*, nearly all of which are dwarf shrublets mainly with blue or some shade of blue flowers, a few of the most recently evolved species having only 5–6 stamens, and the inflorescence reduced to a single flower, as in *R. verruculosum*. It should be noted that again the reduction to a dwarf

Chart for Classification of Rhododendrons

This diagram is designed to show the probable course of evolution of the Series of the genus *Rhododendron*, which belongs to the Erica family, *Ericaceae*. Though the family is widely distributed, there are two main areas with a great concentration of species. These are South Western Africa (Cape Region), where there are about 500 species of *Erica*, and the Eastern Himalaya-Tibet-Western China region, with several hundred species of *Rhododendron*.

The family *Ericaceae* is most closely related to the Tea family, *Theaceae*, which in turn shows affinity with the *Dillenia* family, *Dilleniaceae*, and further back still with *Magnoliaceae*.

The middle portion of the " tree " deals with the evolution of the *non-lepidote* leaved Series of the genus, the right-hand portion the *lepidote* (scaly)-leaved Series, and the left-hand side the *Azalea* section. It seems probable that *Azalea* has been evolved independently of the other two groups. Tropical species from the Malayan region are not included in this scheme.



habit is accompanied by reduction in the inflorescence and stamens. From *Maddenii* again it is an easy step into the *Heliolepis* Series and into *Lepidotum*, *Saluenense* (dwarf), *Anthopogon*, and *Cephalanthum*. The variable number of stamens found in *Anthopogon* Series gives place in *Cephalanthum* to the definite number 5, all hidden away in the corolla-tube, a very rare feature in the genus. And in this group the nectar is protected by a densely villous corolla-tube, thus protecting it from unwelcome guests.

It is rather difficult to trace the relationship of the *Azalea* section of *Rhododendron* with any other of the series. They usually have deciduous leaves without scales and the hairy covering, when present, often consists of strigose hairs. The inflorescence is terminal, and the stamens range in number from 10 to 5. The *Stamineum* Series, as suggested by REHDER (' Species of Rhododendron ,' p. 42), seems to be related, and I have placed it at the bottom of the branch on the left-hand side of the diagram. They are found mostly in warmer regions from Burma to Hupeh, and in Southern China and Formosa. The inflorescence is axillary, the corolla is narrowly funnel-shaped as in *Azalea*, there are 10 stamens, and only 5 or 6 loculi in the ovary. Possibly they have been derived directly from the stock of the family *Theaceae* and not directly from Rhododendron proper.

The *Ovatum* Series is not far removed from *Stamineum*, but the stamens are reduced to 5 as in *Azalea*, though the leaves are still evergreen. Very closely related is Series *Albiflorum*, represented by only one species, *R. albiflorum*, from North Western America.

The next evolutionary stage would, I think, be the *Canadense* subseries, with 10 or rarely 12 exserted stamens, with a side step into the monotypic *Nipponicum* subseries, still with 10 stamens, but these included in the corolla-tube. *R. nipponicum* is found only in Central Japan. From these groups it is but a short way to the large, rather unstable and prolific *Obtusum* subseries, about half of which have still retained 10 stamens, the other half with only 5. As in other advanced groups of *Rhododendron*, the dwarf habit is very pronounced.

Finally the peak of evolution is reached in the *Luteum* subseries comprising about 20 species, most of which are found in eastern North America, with an outlier (*R. luteum* Sweet) from eastern Europe to the Caucasus.

The *Camtschaticum* " Series " has not been dealt with in the foregoing notes, because I consider it to be quite a distinct genus, *Therorhodion* Small, of which I published an account in the *Kew Bulletin* 1921 ; 201.

Limitation of space has caused this account of the phylogeny and relationships of the genus *Rhododendron* to be little more than a very brief outline. Its object will be achieved, however, if it adds even a little to the pleasure the cultivator already derives from his less theoretical knowledge of the many lovely species and hybrids in cultivation.

The Significance of Rhododendron Grierdal

By J. M. Cowan

WHEN Admiral Walker-Heneage-Vivian raised the hybrid Rhododendron, *R. Grierdal*, by crossing *R. Griersonianum* with *R. Dalhousiae*, he accomplished something more than the making of a new and beautiful plant ; succeeding where others had failed, he disproved the common assumption that no cross could be made between a lepidote and an elepidote Rhododendron. The full significance of the cross is in the parentage—the crossing of an elepidote with a lepidote Rhododendron—first because the presence or absence of scales has been regarded as a fundamental distinction in the genus Rhododendron, a criterion of prime importance in classification ; and second because of the opportunity that such a hybrid affords of studying parental inheritance, since hybrids of dissimilar parents give this opportunity, while those of allied parents do not. In relationship as in geographical distribution the parents of *R. Grierdal* are far apart.

R. Griersonianum, the seed parent, which was discovered by Forrest in South West Yunnan on the Shweli-Salween Divide approaching the Burmese frontier, is not closely allied to any other Rhododendron but has been placed with justification along with *R. auriculatum* in the Auriculatum Series. It is of course an elepidote Rhododendron and its qualities as a seed parent are well known. It is listed as the parent of no less than 54 different hybrids in the Year Book of the Rhododendron Association for 1939.

R. Dalhousiae, the pollen parent, which was discovered by Sir Joseph Hooker in the Eastern Himalayas, where it is often epiphytic, is a typical member of the Maddenii Series in the Megacalyx subseries and of course a lepidote Rhododendron. It is listed in the Rhododendron Year Book as the parent of 5 hybrids—of *R. Grierdal* and 4 others, the second parent of the other 4 being each a close relative of the first parent and in the Maddenii Series.

With the dual purpose of establishing the authenticity of this unique hybrid and of studying how far the characters of each parent were inherited by the hybrid, Miss Elspeth Waterston, B.Sc., working at the Royal Botanic Garden, Edinburgh, made an interesting investigation of which she published an account in the *Transactions of the Botanical Society of Edinburgh* in 1940.[1] She examined in detail (1) the external

[1] Elspeth J. Waterston, B.Sc. "An investigation into the Leaf and Flower Structure of *Rhododendron Griersonianum* Balf. f. et Forrest, *R. Dalhousiae* Hook. f. and their Hybrid *R. Grierdal*." *Trans. Bot. Soc. Edin.* Vol. XXXIII, Part I, (1940).

morphology of the leaf blade and (2) of the petiole, (3) the internal structure of the leaf blade, (4) the inflorescence and (5) the flower, tabulating side by side the character of each parent and of the hybrid. Three of her five tables are reproduced here. "The characters of the three Rhododendrons examined have been tabulated in the following tables, those of *R. Grierdal* being printed in roman type when agreeing with *R. Griersonianum*, and in italics when in agreement with *R. Dalhousiae*."

External Morphology of the Leaf Blade

Character	R. Griersonianum	*R. Dalhousiae*	R. Grierdal
1. Base	Narrowly cuneate	*Cuneate*	*Cuneate*
2. Apex	Acute	*Obtuse*	Acute
3. Margin	Revolute	*Plane*	Revolute
4. Surface	Flat	*Undulant*	*Undulant*
5. Colour of :			
(*a*) Upper surface	Dull green	*Glossy green*	Dull green
(*b*) Lower surface	Buff	*Pale translucent green*	*Pale translucent green*
6. Primary veins :			
(*a*) Number	12–17 pairs	10–12 *pairs*	10–12 *pairs*
(*b*) Visibility	Concealed by tomentum	*Not concealed*	*Not concealed*
7. Indumentum	Dendriform hairs	*Scales*	Hairs + *scales*

Inflorescence

Character	R. Griersonianum	*R. Dalhousiae*	R. Grierdal
1. Peduncle	Heavily tomented	*Glabrous*	Sparsely tomented, *intermediate*
2. Pedicel :			
(*a*) Length	3·0–4·0 cm.	1·0–1·5 *cm.*	3·0–4·0 cm.
(*b*) Appearance	Straight	*Curved*	Straight
(*c*) Colour	Red	*Green*	Red
(*d*) Indumentum	Dendriform hairs	*Scales + unicellular hairs*	*Scales + unicellular hairs*
3. Truss	4–5 flowered	2–3 *flowered*	4–5 flowered
4. Position of flower	Erect	*Pendulous*	*Pendulous*

Morphology of the Flower

Character	R. Griersonianum	*R. Dalhousiae*	R. Grierdal
	(i) Calyx		
1. Colour	Red	*Green*	Red
2. Sepal :			
(*a*) Shape	Reniform	*Ovate-obtuse*	*Ovate-obtuse*
(*b*) Size	0·5 × 0·5 cm.	1·0 × 0·5 *cm.*	1·0 × 0·5 *cm.*
(*c*) Venation	Obscured by tomentum	*Not obscured*	*Not obscured*
(*d*) Indumentum	Dendriform hairs	*Scales + unicellular hairs*	*Scales + unicellular hairs*
(*e*) Margin	Dendriform hairs	*Glabrous*	*Scales* + hairs

Morphology of the Flower.—cont.

Character	R. Griersonianum	*R. Dalhousiae*	R. Grierdal
	(ii) Corolla		
1. Colour	Scarlet	*White*	Scarlet
2. Stippling	Stippled	*Unstippled*	Stippled
3. Form	Tubaeform	*Campanulate*	Tubaeform
4. Base	Grooved	*Foveolate*	Grooved
5. Width at base	0·5 cm.	2·5 *cm.*	1 *cm., intermediate*
6. Overall length	5·5 cm.	9·5 *cm.*	9·0 *cm.*
7. Maximum width	7·0 cm.	9·5 *cm.*	8·0 *cm., intermediate*
8. Length undivided	3·0 cm.	7·5 *cm.*	7·0 *cm.*
9. Lobe :			
(*a*) Width at base	1·4 cm.	3·7 *cm.*	2·5 *cm., intermediate*
(*b*) Width	2·5 cm.	4·0 *cm.*	3·5 *cm., intermediate*
(*c*) Length	3·0 cm.	3·0 *cm.*	3·0 cm.
(*d*) Apex	Notched	*Not notched*	Notched
10. External surface	Hairy at base	*Scaly at base*	*Scaly at base*
11. Internal surface	Conoid hairs at base	*Base glabrous*	*Base glabrous*
	(iii) Androecium		
1. Length of stamens	4·5 cm. and 3·5 *cm.*	7·5 *cm. and* 7·0 *cm.*	6·6 cm. and 5·0 *cm., intermediate*
2. Colour of filament	Red	*Green*	Red
3. Base of filament	Bulbous	*Cuneate*	Bulbous
4. Density of pubescence	+ conoid hairs	+ + + *conoid hairs*	+ +, *intermediate*
5. Length of anther	0·3 cm. and 0·2 cm.	1 *cm. and* 0·8 *cm.*	0·6 *cm. and* 0·4 *cm., intermediate*
6. Colour of anther	Black	*Light brown*	*Dark brown, intermediate*
7. Base of lobe	Left lobe curved	*Lobes straight*	Left lobe curved
	(iv) Gynaeceum		
1. Length	Exceeds corolla	*Equal to corolla*	*Equal to corolla*
2. Ovary :			
(*a*) Length	0·5 cm.	1·0 *cm.*	1·0 *cm.*
(*b*) Indumentum	Densely hairy	*Densely scaly*	*Densely scaly*
(*c*) Basic colour	Red	*Green*	*Green*
(*d*) T.S.	Ridged	*Smooth*	*Smooth*
3. Style :			
(*a*) Base	Concealed by tomentum	*Not concealed*	*Not concealed*
(*b*) Indumentum	Hairs	*Scales*	*Scales*
(*c*) Colour	Red	*Green*	*Green*
4. Stigma :			
(*a*) Size	Small	*Large*	Small
(*b*) Colour	Maroon	*Yellow*	*Yellow*

From a perusal of the tables Miss WATERSTON concludes that " 39 per cent. of the hybrid characters are derived from *R. Griersonianum* (the

female elepidote parent) and 49 per cent. from *R. Dalhousiae* (the male lepidote parent)." But Miss WATERSTON has examined also the minute structure of the hairs and the scales of the parents and also the corresponding structures of the hybrid and this, from our point of view, is perhaps the more significant part of her work.

On the leaf of *R. Griersonianum* there are dendriform hairs (Fig. 1). Each hair consists of a short stalk of thick-walled cells surmounted by a large number of elongated cells. Above the stalk these elongated cells are twisted and entwined to form a cylindrical column ; upwards they separate and are free and spreading. The hair thus assumes a tree-like appearance, the stalk together with the column of appressed elongated cells resembling the bole, the free portion resembling the crown or branches.

On the leaf of *R. Dalhousiae* we find typical peltate scales (Fig. 2). Looked at from above the scale under high magnification resembles a shield or disc, with a central lens-like portion fringed by a rim of thin, transparent, radiating cells. Seen in vertical section, the scale consists of a short stalk of thick-walled cells surmounted by a head composed of two parts, a central core of vertically elongated cells and a peripheral ring of radially expanded cells.

What, then, are the corresponding structures to be found on the leaf of *R. Grierdal* ? How are the diverse structures of the parents blended or modified in the hybrid ? Miss WATERSTON supplies the answer. On the leaf of *R. Grierdal* both hairs and scales are to be found. This in itself is interesting since hairs and scales together on the lamina of a Rhododendron leaf are of rare occurrence, seen only in *R. Edgeworthii* and allied species of the same series.

The hair on the leaf of *R. Grierdal* (Fig. 3) is built on the pattern of the hair of *R. Griersonianum* but with only incipient branches, not a truly dendroid hair—like a tree-trunk perhaps, but not like a tree. It has a short stalk surmounted by a series of elongated cells overlapping longitudinally and united to form a sinuous somewhat nodose hair. Only the tips of the upper elongated cells are free.

The scales on the leaf of *R. Grierdal* (Fig. 4) agree with those of *R. Dalhousiae* in that they have a stalk and a head composed of vertically elongated cells, but differ in that the peripheral ring of radially expanded cells is absent. Instead of appearing on surface view as a flat plate or shield, the scale appears as a compactly rounded head ; there is no rim.

Miss WATERSTON remarks " The hair of *R. Grierdal* resembles a juvenile hair of *R. Griersonianum*—i.e. prior to the separation of the head cells." And " The scale in fact may be described as a juvenile form of peltate scale which has acquired an abnormally big stalk." " It is remarkable that the scales and hairs of the hybrid are both juvenile forms." Had Miss WATERSTON's analogy stopped at resemblance I

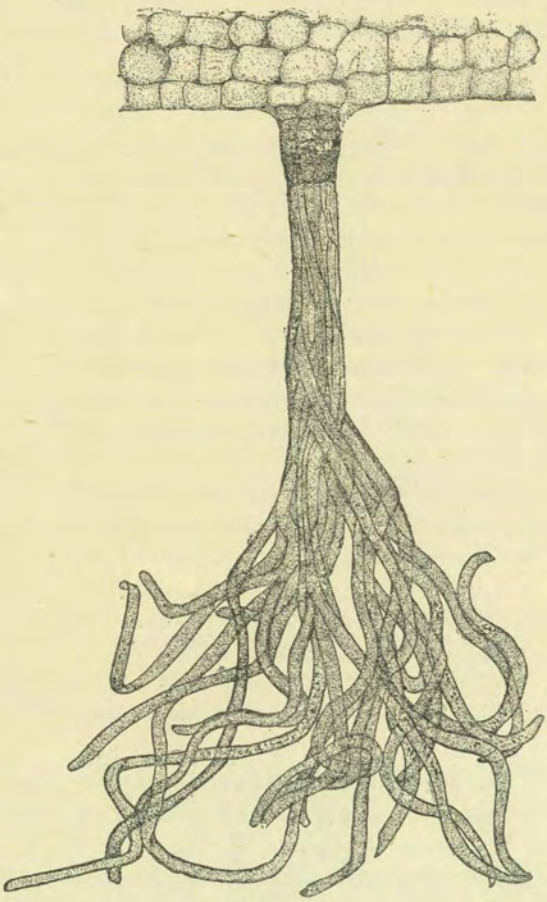


FIG. 1.

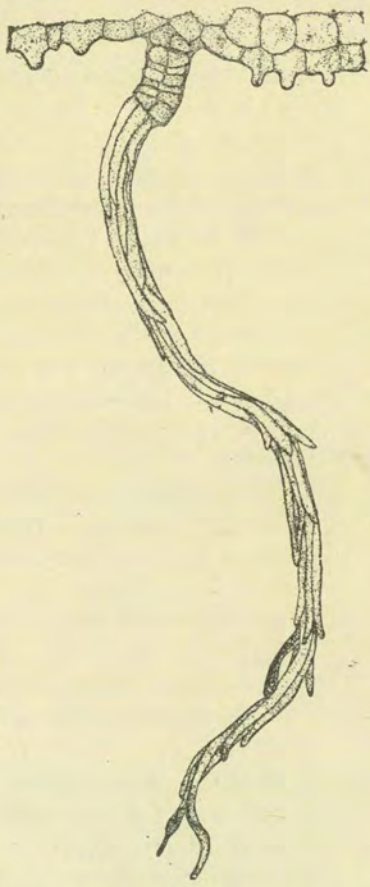


FIG. 3.

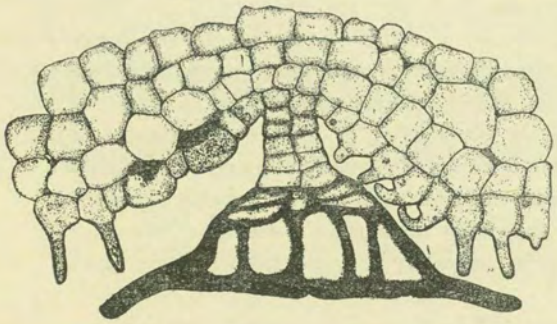


FIG. 2.

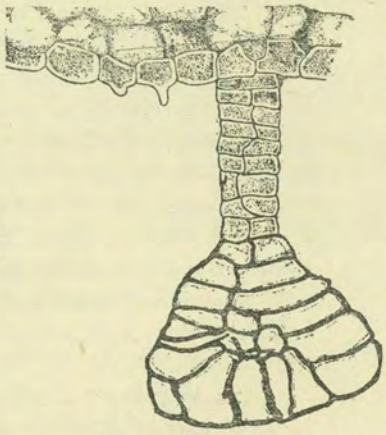


FIG. 4.

FIG. 1.—*R. Griersonianum*, a typical dendroid hair.

FIG. 2.—*R. Dalhousiae*, atypical peltate scale.

FIG. 3.—*R. Grierdal*, a 'hair.'

FIG. 4.—*R. Grierdal*, a 'scale.'

(All × 275)

The permission of the Council of the Botanical Society of Edinburgh to reproduce four of Miss Waterston's figures is gratefully acknowledged.

should entirely agree with her—that the hairs and scales of the hybrid resemble the juvenile hairs and scales of the parents—but I do not consider it safe to assume that they are in fact juvenile forms. In the present state of our knowledge of the structure and development of the very varied hair and scale structures in the genus Rhododendron it is much safer to assume that the structures in the hybrid are modified hairs and scales, not juvenile forms. The question indeed arises—is the scale structure of the hybrid in fact a scale ? And further questions are raised. Can there be an intermediate between a hair and a scale in the Rhododendron ? And again, does the hybrid *R. Grierdal* offer any answer to these questions ?

In a classical paper on " A Comparison of the Minute Structure of Plant Hybrids with that of their Parents " Professor MACFARLANE [1] cites many instances of heredity pertinent to these questions but there is no space to discuss his work in detail here. He cites the well-known hybrid *R.* ' Princess Alice ' in which he finds that the waxy papillae on the underside of the leaf of the hybrid are intermediate in size and position between those of the parents, *R. ciliatum* and *R. Edgeworthii.* With regard to the hairs of Rhododendrons, he merely notes that these may vary greatly in two parents ; and that those of one parent only or of both may be inherited by the offspring. And, he states, it is the same with scales. After a critical examination of the histological details of hybrids in different families of plants, Professor MACFARLANE concludes that the minute structures of hybrids are very often intermediate between those of their parents. For us there is in Professor MACFARLANE's conclusion the implied suggestion that we should look for something intermediate between hair and scale in the hybrid *R. Grierdal.* So Miss WATERSTON's paper has a further interest in the deductions we may make from her observations, for not only does she describe the hair and scale structures of both parents and hybrid but she has painstakingly traced their development. Writing of *R. Grierdal* and of *R. Griersonianum* she states : " In development the two hairs are identical." And then : " In development the hybrid scale agrees with that of *R. Dalhousiae* and differs only in the later stages, where the peripheral cells of the head do not expand radially." It is from this point that she continues : " It is remarkable that the scales and hairs of the hybrid are both juvenile forms."

But has Miss WATERSTON overlooked a point of greater significance ? In describing the scales of *R. Dalhousiae* she notes : " The first three stages in scale development are identical with those of the hair in *R. Griersonianum.*" In other words, in the juvenile form hairs and scales are similar ! If that be so, is there any fundamental distinction between

[1] " A Comparison of the Minute Structure of Plant Hybrids with that of their Parents and its bearing on Biological Problems " by Prof. J. MUIRHEAD MACFARLANE, D.Sc., F.R.S.E., in *Trans. Roy. Soc. Edin.* XXXVII, Pt. 1, No. 14 (1892).

them ? Throughout the genus Rhododendron the " hairs " show an extraordinary diversity of form, and the " scales," when we examine them critically, an unsuspected range of variation also, yet in the early stages of development all are alike. We are faced then with this question —Is the difference between " hairs " and " scales " one of kind or of degree ? Should we not regard " hairs " and " scales " as two aspects of the one thing rather than as two separate things ? If they are not of a different kind may not both parents have influenced both the " hair " and the " scale " structure of the hybrid *R. Grierdal* ? Does the influence of the pollen parent account for the absence of the rim in the so-called " scale " of the hybrid ? Is the so-called " scale " in fact a " scale " or something intermediate between a " hair " and a " scale." And now again compare Figs. 2 and 4 and note that the scale in *R. Dalhousiae* is set in a pit, whereas there is no pit on the epidermis of *R. Grierdal* ; and compare the papillae of the pollen parent and of the hybrid and it will be seen that they confirm Dr. MACFARLANE'S observations. We may therefore ask : If the influence of both parents is clearly marked in certain minute structures why should it not be equally well marked in others also ? In fact, is the classification of all Rhododendrons into lepidote and elepidote an over-simplification ? But these questions cannot be answered now, and it would be interesting to examine further hybrid (lepidote cross elepidote) material before even voicing an opinion. I have seen *R. Pan*, a cross between *R. Griersonianum* and *R. crassum*, made by Sir JOHN STIRLING MAXWELL, but ' Pan ' when I examined it with care showed no signs of " scales." Had I not been told its parentage I should have guessed that perhaps *R. decorum* and not *R. crassum* was the pollen parent and yet the " scales " might be entirely suppressed. This is a cross that is worth trying again. As far as I know no other lepidote and elepidote Rhododendrons have ever been crossed. If, however, any member knows of any other such cross I should be glad if he would bring it to my notice. Because *R. Grierdal* shows so well a blending of lepidote and elepidote parents it is unique. Should anyone succeed in making another cross between any lepidote and any elepidote Rhododendron whatsoever, he will advance our knowledge of the genus and perhaps enable us to find an answer to all these interesting and so far unanswered questions.

Report of the Rhododendron Show

April 30th and May 1st, 1946

By N. K. Gould

THE Rhododendron Show of 1946 was on a comparatively small scale, there being only thirty-six competitive classes ; but it proved very popular with the Fellows of the Society and other visitors. So much so, in fact, that only at an early hour on the second day of the Show was it possible to examine the exhibits closely. There were but three groups, and one missed very much the splendid amateur exhibits of the pre-war days.

In the first class, for nursery groups, Messrs. W. C. Slocock, Ltd. won the Society's Gold Medal for a fine group of plants arranged on the floor. At the dais end ' Naomi ' (Exbury variety), *Wightii* and the cream ' Letty Edwards ' were attractively mingled with ' Cetewayo,' ' Blue Ensign '—a bright mauve, maroon-spotted flower, which won the Rhododendron Society's Challenge Cup in Class 2—and ' Susan ' in heliotrope. The centre was occupied by a good specimen of ' Mrs. Charles Pearson,' and at the other end ' Red Riding Hood ' and ' Goldsworth Crimson ' were prominent. Around the outside a number of small species were arranged, including *russatum*, *ambiguum*, *racemosum* and *timeteum*.

Messrs. J. Waterer, Sons & Crisp, Ltd. won the Society's Silver-gilt Banksian Medal with a smaller exhibit dominated by two tall bushes, the rosy-crimson ' Sun of Austerlitz ' and ' Sir John Ramsden ' in pink-flushed ivory. ' Mary Swaythling,' ' Langley Park ' and ' Mrs. C. B. Van Nes ' were also well shown.

Class 3, for a group of cut flowers, attracted only one exhibit—from the Commissioners of Crown Lands, Windsor, who won the Rothschild Challenge Cup with a tiered wall group containing many fine things, arranged perhaps rather too closely for the best effect. Among the large-flowered kinds ' King George,' ' White Diamond,' ' Rose Perfection ' and a handsome pink *Thomsonii* hybrid were well represented, and a fine form of ' Hawk ' was conspicuous. *Vaseyi*, *yunnanense*, *myrtilloides*, *tephropeplum*, *oreotrephes* and *reticulatum* were among the many species which, with *obtusum* varieties, filled a large part of the space.

Major Edmund de Rothschild won the first prize in Class 4, for one truss of each of eight species, his *bullatum*, *Falconeri*, *Nuttallii* and Knap Hill *campanulatum* being especially good. Col. Stephenson

R. CLARKE was second, with a selection including the true *Metternichii* and good specimens of *euchaites* and *Falconeri*. Lord ABERCONWAY was third, showing a pleasing blue *campanulatum* and a fine truss of *argyrophyllum* among others.

In Class 5, for eight hybrids, one truss of each, Lord ABERCONWAY'S exhibit was adjudged the best, and included a beautiful specimen of 'Cornish Cross,' *Loderi* 'King George,' and the vivid red 'Gretia,' 'Siren' and 'Matador.' Sir GILES LODER took second place with an attractive selection, among which were 'Pink Bride' and a *galactinum* × *Loderi* hybrid of similar colouring, 'Red Glow,' 'Luna' and 'Sunkist.' The third prize entry came from Bodnant, with 'Elisabeth,' 'Phoebus' and 'Aspansia' to the fore. Major DE ROTHSCHILD'S entry, placed fourth, contained 'Lady Chamberlain' (F.C.C. variety), 'Naomi,' 'Yvonne,' 'Carita' and 'Chanticleer,' all raised at Exbury.

In Class 6, for one truss of one species, high quality was to be expected, and the McLaren Challenge Cup went to Admiral WALKER-HENEAGE-VIVIAN for a splendid six-flowered truss of *Lindleyi* in excellent condition. Lord ABERCONWAY'S *Griffithianum* and Sir HENRY PRICE'S *Falconeri*, which took second and third prizes respectively, were also very fine. The last-named species was also shown by Lord DIGBY, Major DE ROTHSCHILD and Major A. E. HARDY.

The Loder Challenge Cup, awarded in Class 7, for one truss of one hybrid, was won by Lord ABERCONWAY with a shapely truss of 'King George'; the second prize went to Major DE ROTHSCHILD for the glowing, blood-red 'Gaul'; and the Commissioners of Crown Lands were third with a lovely truss of the sulphur-yellow 'Hawk.'

Class 8 required one truss or spray of each of four hybrids raised by, or in the garden of, the exhibitor, and the Crosfield Challenge Cup for the best entry went to Sir GILES LODER for 'King George,' 'Sunset,' 'Pink Bride' and 'Pride of Leonardslee.' Major DE ROTHSCHILD, second, showed 'Gaul,' 'Idealist,' 'Carita' and 'Yvonne'; and from Lord ABERCONWAY came 'Matador,' 'Cardinal,' 'Elisabeth' and 'Camilla' to win the third prize.

Class 9, for one truss of any Rhododendron of the Series Arboreum, Barbatum, Campanulatum, Fortunei, Fulvum, Irroratum or Lacteum, was rather poorly supported, and Lord ABERCONWAY'S *campanulatum*, Admiral WALKER-HENEAGE-VIVIAN'S *glischrum*, and Sir HENRY PRICE'S *irroratum*, the only entries, were awarded the prizes in the order given.

There were eight entries in Class 10, for one truss of the Series Falconeri or Grande, Colonel STEPHENSON R. CLARKE being placed first with a good form of *Falconeri*, Sir HENRY PRICE third with the same species, and Lord DIGBY second with *fictolacteum*.

Of the eleven exhibitors in Class 11, for one truss of the Series Neriiflorum, no fewer than six showed *euchaites*, Colonel STEPHENSON

R. CLARKE taking the first prize with a beautiful truss of that species. Sir HENRY PRICE's *neriiflorum* gained second place, and Lord DIGBY put up *Beanianum* for the third.

In Class 12, for a single truss of the Series Maddenii or Edgeworthii, a superb eight-flowered example of *Lindleyi* secured the first place for Admiral WALKER-HENEAGE-VIVIAN, and Lord ABERCONWAY's exquisite *carneum* and Major DE ROTHSCHILD's *Parryae* were second and third. In the same class contrast was supplied by the deep yellow, red-stalked *mishmiense* also from Bodnant, and *Edgeworthii* and *bullatum* came from Major HARDY and Mr. J. HOWLETT, respectively.

The first prize in Class 13, for a truss or spray of the Thomsonii Series, was won by Colonel STEPHENSON R. CLARKE with *callimorphum*, the second by Major DE ROTHSCHILD, who showed a good dark form of *campylocarpum*, and the third by Lord DIGBY with *Thomsonii*.

In Class 14, for one spray of any deciduous Azalea, Lord ABERCONWAY's *reticulatum roseum* was given first place over Major DE ROTHSCHILD's rather pale-coloured form of *Vaseyi*.

Class 15, requiring one spray of any evergreen Azalea, species or hybrid, produced an interesting variety of exhibits. Sir GILES LODER's large, floriferous branches of 'Hinodegiri' and 'Hinomayo' were placed first and second; a brick-red *obtusum* from Colonel STEPHENSON R. CLARKE third, and Admiral WALKER-HENEAGE-VIVIAN's 'Hinodegiri' fourth. Lord DIGBY showed the unusual and pretty mauve 'Fuji-manyo' (*mucronatum plenum*), Mr. J. B. STEVENSON exhibited 'Orange Beauty,' and Mr. C. JACOBS a good double white Kurume Azalea.

In Class 16, for one spray of any Rhododendron of the Series Anthopogon, Cephalanthum, Campylogynum Lepidotum or Saluenense, Lord ABERCONWAY's *calostrotum* and *campylogynum* were placed first and third; Mr. J. B. STEVENSON's *sphaeranthum* second, and Major DE ROTHSCHILD's *saluenense* fourth. Sir HENRY PRICE showed a spray of the little violet *Baileyi*.

Two prizes only were awarded in Class 17, for one spray of the Lapponicum Series; the first to Major DE ROTHSCHILD for a superior, richly-coloured *russatum*, the second to Sir HENRY PRICE, who showed *impeditum*.

In Class 18, for a spray of the Series Cinnabarinum, Heliolepis or Triflorum, Colonel STEPHENSON R. CLARKE entered a floriferous spray of *chasmanthum* which secured first prize, and well-coloured specimens of *Augustinii* put up by Sir GILES LODER and Lord ABERCONWAY were placed second and third respectively, Lord DIGBY showed a nice branch of *Hanceanum* and also *Davidsonianum*, Brigadier EVANS *cinnabarium* var. *Roylei*, and Admiral WALKER-HENEAGE-VIVIAN *oreotrephes*.

Class 19, for the Series Glaucum, Scabrifolium or Virgatum, was rather poorly supported. The first prize was withheld, the second

going to Major DE ROTHSCHILD for *spinuliferum*, and the third to Lord DIGBY for a deeply-coloured *glaucum*.

In Class 20, for one vase of any species of any series not catered for in any earlier Class, prizes were awarded to Major DE ROTHSCHILD, who showed the blood-red *gymnocarpum* (Series Taliense), and to Lord DIGBY for the uncommon yellow *melinanthum* (Series Trichocladum).

The prize-winning exhibits in Class 21, for one truss of a *Loderi* variety, were, first, ' King George ' from Sir GILES LODER ; second, ' Koodoo ' exhibited by Lord ABERCONWAY ; and third, ' Venus,' put up by Mr. J. HOWLETT.

In Class 22, for any hybrid obtained from a cross between *Griffithianum* and any hybrid, the first prize was awarded to Sir HENRY PRICE for a seedling from *Griffithianum* × a plant of *campanulatum* parentage, the second for a good un-named white seedling from Sir GILES LODER, and the third to Admiral WALKER-HENEAGE-VIVIAN for a large, cherry-red *Griffithianum* × *Gauntlettii seedling*.

In Class 23, for one truss of ' Penjerrick ' or ' Mrs. Randall Davidson,' the prizes were awarded to Lord ABERCONWAY and Mr. J. B. STEVENSON, who both showed the first-named hybrid.

In Class 24, for any other hybrid obtained by crossing *Griffithianum* with any other Rhododendron, Lord ABERCONWAY's ' Cornish Cross,' in fine condition, was given first place, Mr. J. B. STEVENSON's ' Lamellen ' was second, and Admiral WALKER-HENEAGE-VIVIAN took third prize with ' W. Leith.'

In Class 25, for any other hybrid of the Campylocarpum or Souliei subseries, the prize-winning exhibits were the cream, rose-flushed ' Cremorne ' (*campylocarpum* × ' Luscombei '), first, from Major DE ROTHSCHILD, the primrose-yellow ' Damaris ' (' Dr. Stocker ' × *campylocarpum*), ' Logan Form,' from Mr. J. B. STEVENSON, and Lord ABERCONWAY's ' Edusa ' (' Penjerrick ' × *campylocarpum*).

Class 26, for one truss of any hybrid of the Neriiflorum Series, produced ' Major ' from Major DE ROTHSCHILD, ' Aspansia ' from Lord ABERCONWAY, and ' F. C. Puddle ' from Lord DIGBY, the prizes being awarded in that order.

Major DE ROTHSCHILD's ' Chanticleer ' secured the first prize in Class 27, for a truss of any *Thomsonii* hybrid, ' Luscombei ' and an unnamed hybrid from Major HARDY were placed second and third, and Lord ABERCONWAY was awarded the fourth prize for ' Hecla.'

In Class 28, for one truss of any *Griersonianum* hybrid, a blood-red, un-named hybrid from Admiral WALKER-HENEAGE-VIVIAN took the first prize, Lord ABERCONWAY's ' Dorinthia ' (*Griersonianum* × ' Hiraethlyn ') was placed second, and Major DE ROTHSCHILD's ' Ivanhoe ' (' Chanticleer ' × *Griersonianum*) was third. A fine truss of ' Siren ' (' Choremia ' × *Griersonianum*) also came from Bodnant, and Lord DIGBY showed ' F. C. Puddle.'

A large spray of ' Nadine ' (*bullatum* × *Johnstoneanum*) won for Major DE ROTHSCHILD the first prize in Class 29, for any hybrid of the Maddenii or Edgeworthii Series, and prizes were also awarded to Major HARDY and Admiral WALKER-HENEAGE-VIVIAN for *fragrantissimum*.

Lord ABERCONWAY selected ' Lady Chamberlain ' for his entry in Class 30, for any hybrid of the Cinnabarinum Series, winning the first prize, and Major DE ROTHSCHILD's ' Biskra ' (*cinnabarinum* var. *Roylei* × *ambiguum*), in deep salmon-rose, was placed second.

In Class 31, which specified a spray of any hybrid of the Triflorum Series other than with the Lapponicum Series, Major DE ROTHSCHILD's fine blue ' Electra ' (*chasmanthum* × *Augustinii*) was placed first, and Major HARDY's un-named seedling *chartophyllum* × *yunnanense*, a clean white, rather starry flower, second. Lord ABERCONWAY showed ' Peace ' (*caeruleum* white form × *concatenans*).

In Class 32, for any hybrid of an Alpine species, ' Blue Diamond ' (' Intrifast ' × *Augustinii*) won the first prize for Mr. J. B. STEVENSON, and Lord DIGBY was awarded the fourth prize for the same hybrid. Lord ABERCONWAY's ' Bluebird ' (*intricatum* × *Augustinii*) was second, and ' Elisabeth ' (*repens* × *Griersonianum*) from the same exhibitor, third.

There were no entries in Classes 33 and 34, and Lord DIGBY was the sole exhibitor in Class 35, for two leaves of each of six Rhododendrons, showing foliage of *Falconeri*, *sinogrande*, *arizelum*, *mallotum*, *basilicum*, and *Bureavii*.

In Class 36, for any Alpine species, Major DE ROTHSCHILD's large, compact plant of *Sargentianum* was the only exhibit.

On the first afternoon of the Show the President addressed a meeting of members of the Rhododendron Group on " The Rhododendrons in the Show," Mr. J. B. STEVENSON taking the Chair. The President referred to the predominance of the hybrids in the competitive classes over the species, reminding the audience of the difficulty of getting many of the more imposing, large-flowered species in flower at the same time. Commenting on some of the more outstanding hybrids, he drew attention to the strong influence exerted by certain species, such as *R. Griffithianum*, *R. Griersonianum* and *R. haematodes*, on the character of the progeny of crosses in which they were employed.

Miss GODMAN, and Messrs. F. J. ROSE, J. P. C. RUSSELL, O. C. A. SLOCOCK and J. COMBER took part in the discussion which followed the address. The proceedings are fully reported in the Society's Journal for July, 1946.

The Trials of Hardy Rhododendron Hybrids

By N. K. Gould

FOR a century or more it has been the custom of the Council of the Royal Horticultural Society to bestow awards upon plants which, in the opinion of competent specialist committees, possess outstanding merit for exhibition or garden decoration. Many of the committees' recommendations are made after inspection of specimen plants or cut flowers exhibited at the Society's fortnightly Shows. This procedure has its value in drawing the attention of Fellows and the general public to new and good plants as well as in the encouragement it gives to those whose business or pleasure it is to raise new varieties.

It has long been appreciated, however, that a single specimen or a vase of cut flowers may convey little or no idea of the habit or behaviour in the garden of the plant represented, and to overcome this objection awards to certain kinds of plants grown primarily for their decorative effect in the garden may be withheld until the conclusion of trials which provide for comparison with other varieties, and which reveal their shortcomings as well as their good qualities.

About the year 1929 the Rhododendron Association made arrangements for trials of hardy hybrids introduced by nurserymen since 1918 to be conducted at Exbury. Requests were accordingly sent to all the leading nurserymen who were known to have raised hybrids to enter one plant of each introduced since 1918 for trial. A joint committee composed of representatives of the Royal Horticultural Society and the Rhododendron Association was empowered to inspect these plants periodically and to make recommendations for awards.

The Rhododendrons were planted in an open piece of ground in the woodland to the north of Exbury House. Surrounding trees afforded shelter from wind, but none was sufficiently close to affect the growth by shading. The ground was bastard trenched before planting began and later given bracken mulches, but no manure was employed.

In the first and second years after planting the Committee paid several visits to the trial ground and made notes on the progress of the plants, but as these were mostly small and as yet forming few flower-buds no recommendations were made. In 1932 there was such a scarcity of flower that no meeting of the Committee took place.

In the spring of 1933 a fair proportion of the plants flowered well, and the Committee, meeting at Exbury in the first week in June, recommended one First Class Certificate and fourteen Awards of Merit.

The next year saw an extension of the trials, much new material having been received from both British and Dutch nurseries. In view of the difficulty experienced by some members of the Committee in making the long journey to Exbury frequently some additional members were elected. During the following season the F.C.C. was recommended to one, and the A.M. to five varieties. A similar number of awards was made in each of the years 1935, 1936 and 1937.

During 1938, owing to abnormal weather conditions, the Committee did not meet. Early in the year Mr. DE ROTHSCHILD made the suggestion, to which the Council of the Royal Horticultural Society readily acceded, that the trials should be removed to Wisley. The newly-acquired land in the vicinity of Battleston Hill, at the south end of Wisley Gardens, seemed to offer a very suitable site. This land forms a ridge running parallel to the Portsmouth Road, substantially higher than other parts of the Gardens. It is well wooded with Scots Pine, Chestnut and Birch on a light, peaty soil. The site selected for the trial is on the north slope of the ridge and occupies an area of about one acre. It lies to the east of the broad grass walk sloping gradually upwards from the Rose borders near the main entrance.

During the early months of 1938 the new trial ground was prepared. When it is remembered that this land had never before been under cultivation it will be appreciated that this was no light task. Useless and unsightly trees were felled, old rotting stumps excavated, and the dense undergrowth of bracken and bramble cleared away. The whole area was then bastard trenched, the masses of bracken rhizomes unearthed during the operation being thrown out and left on the surface to decay as a mulch. Beds and paths were marked out, and by the end of the year the entire collection of over four hundred plants was in its new home.

The growth of the trial plants has, on the whole, been satisfactory, although the conditions at Wisley cannot be described as ideal. The soil in the trial ground is a fine sand containing a fair proportion of organic matter, and it is without lime. But it is dry, and the twenty-five-inch annual rainfall is on the meagre side. Not infrequently there is drought just when water is most needed, and then serious wilting may be observed at a time when the young growths should be rapidly elongating. Spring frosts, too, can be troublesome, but in an average season only the earliest varieties have their flowers injured.

So far as cultural treatment is concerned there is little to report. The beds are, of course, weeded when necessary and periodically mulched with oak and beech leaves. The most necessary operation—the removal of faded trusses—is promptly attended to, and well repays the labour expended on it.

The Committee first met at Wisley in 1940, to find a goodly number of flowers awaiting their consideration, and the A.M. was recommended to six varieties. No further meetings were held at Wisley until 1945,

when one variety received the F.C.C. and two the A.M. In 1946 only one meeting was held, and the A.M. was recommended to five varieties.

During the whole course of the trials seven varieties have been given the F.C.C. and forty-six the A.M., and these are listed below. The failure of any particular hybrid to secure an award during the early years of the trials does not necessarily indicate that it lacks merit, for some are slower to mature than others and may only reveal their true value after a relatively long period of growth. If after a reasonable length of time, during which they have been seen in flower on several occasions, certain varieties fail to reach the required standard of excellence, the Committee may recommend their removal from the trial, and the best of these are planted elsewhere in the Gardens.

At the present time Azaleas are somewhat poorly represented in the trials, but it is intended in the near future greatly to extend the range of varieties. The formation of a more complete collection of both deciduous and evergreen kinds will give them the prominence they merit and should afford an excellent opportunity for the solution of some of the problems of nomeclature presented by this group.

Awards to Rhododendrons after Trial

First Class Certificate

Britannia (Blaauw), 1937
Earl of Athlone (Van Nes), 1933
Hinomayo (Knap Hill), 1945
Mars (Waterer), 1935
Mrs. G. W. Leak (Koster), 1934
Mrs. Philip Martineau (Knap Hill), 1936
Unique (Slocock), 1935

Award of Merit

Adriaan Koster (Koster), 1935
Betty (Knap Hill), 1940
Betty Stewart (Van Nes), 1936
Betty Wormald (Koster), 1935
Blue Peter (Waterer), 1933
Butterfly (Slocock), 1940
Dairymaid (Slocock), 1934
Dr. M. Oosthoek (Knap Hill), 1940
Edith Mackworth Praed (Koster), 1934
Elspeth (Slocock), 1937
Gladys var. Letty Edwards (Slocock), 1946
Hamlet (Koster), 1936
Handel (Koster), 1937
Hugh Koster (Koster), 1933
J. J. de Vink (Koster), 1946
John Cairns (Knap Hill), 1940
Lady Bligh (Van Nes), 1934
Lady Primrose (Slocock), 1933
Lady Stuart of Wortley (Koster), 1933
Madame F. J. Chauvin (Koster), 1933
Marinus Koster (Koster), 1937
Marmion (Koster), 1936
Mrs. A. M. Williams (Koster), 1933
Mrs. Chas. Pearson (Koster), 1933

Mrs. Furnival (Knap Hill), 1933
Mrs. Lindsay Smith (Koster), 1933
Mrs. P. D. Williams (Knap Hill), 1936
Mrs. Philip Martineau (Knap Hill), 1933
Netty Koster (Koster), 1945
Norman Gill (Gill), 1936
Orange Beauty (Knap Hill), 1945
Peggy (Waterer), 1940
Peter Koster (Koster), 1946
Princess Elizabeth (Waterer), 1933
Pygmalion (Waterer), 1933
Raoul Millais (Koster), 1935
Red Star (Koster), 1940
Rosamund Millais (Koster), 1933
St. George (Waterer), 1946
Sea Shell (Slocock), 1940
Snow Queen (Knap Hill), 1946
Souvenir of W. C. Slocock (Slocock), 1935
Unique (Slocock), 1934
Valewood Pink (Slocock), 1934
White Swan (Waterer), 1937
Zuyder Zee (Koster), 1936

Awards to Rhododendrons, 1939-1946

Rhododendron × 'Agnes.' A.M. June 8, 1943. This beautiful hybrid between *R. Griersonianum* and *R.* × 'Norman Gill' bears large, well-formed trusses, the individual flowers, which are shallow-funnel-shaped, being 4½ inches across ; the buds are deep pink, Neyron Rose (H.C.C. 623) and the colour becomes paler till the fully expanded flower has the deep pink colour only at the edges and at the base of the tube. Exhibited by Lord Swaythling, Townhill Park, Southampton.

Rhododendron 'Albatross,' Townhill form. A.M. May 29, 1945. In this form of the hybrid, whose parents are *R. Loderi* 'King George' and *R. discolor*, the flowers are up to 5½ inches across ; they are borne in large trusses, each flower being wide-funnel-shaped, the petals waved at the edge ; the colour is Fuchsine Pink (H.C.C. 627/3), and in the fully opened flower persists chiefly on the backs and edges of the petals, the centre being almost white and without spots. Shown by the Rt. Hon. Lord Swaythling.

Rhododendron Albrechtii. A.M. April 13, 1943. A deciduous 'Azalea' with wide, shallow, Phlox Pink flowers (H.C.C. 625), 1¼ inch in diameter. It is a hardy plant for general garden use and was introduced from Japan by E. H. Wilson. Shown by Lord Aberconway, C.B.E., V.M.H., Bodnant, Tal-y-Cafn, North Wales.

Rhododendron 'Alison Johnstone.' A.M. April 17, 1945. An interesting hybrid between *R. yunnanense* and *R. concatenans* which has medium-sized trusses of nine to ten flowers with slender tubes and smooth-edged, round lobes, about 1½ inch wide ; the colour is amber flushed with pink, and there are no markings. Shown by G. H. Johnstone, Esq., Trewithen, Cornwall.

Rhododendron × 'Amalfi.' A.M. March 7, 1939. Shown by Lionel de Rothschild, Esq., V.M.H., Exbury, Southampton, as a hardy flowering shrub for the woodland garden. A cross between *R. calophytum* × *R.* × 'Cornubia' with medium-sized, compact, spherical trusses of about twenty funnel-shaped flowers about 2¼ inches diameter by 1¾ inch long, approaching Carmine Rose (H.C.C. 621) towards the tips of the corolla lobes shaded to white on the tube, which is spotted dark red with a crimson splash at the base within. The leaves, up to 7 inches long by 2¾ inches broad, are more or less oblanceolate, obtusely pointed, glabrous, dull green above and paler beneath.

Rhododendron × 'Angelo' var. 'Solent Queen.' A.M. June 6, 1939. *R. discolor* × *R. Griffithianum*, sent by Lionel de Rothschild, Esq., V.M.H., as a hardy flowering shrub for general garden use. Large loose trusses of about ten widely funnel-shaped sweet-scented

flowers, very pale rose fading to almost pure white, green-spotted within, up to 5 inches across by 2½ inches deep ; calyx irregularly lobed, up to ½ inch long, pink-margined. The ovate, obtuse, glabrous, slightly cordate leaves are up to 9 inches long by 3 inches broad.

Rhododendron × **'Antonio.'** **A.M.** June 6, 1939. The result of crossing *R. discolor* and *R.* × 'Gill's Triumph.' Sent by Lionel de Rothschild, Esq., V.M.H., as a hardy flowering shrub for general garden use. The loose trusses are up to 8 inches across by 5 inches deep and bear about ten funnel-shaped flowers as much as 4 inches across by 3 inches deep, suffused rose-pink fading slightly with age, crimson blotched and spotted within. The obtuse leaves, rounded at the base, are dull green above, paler below, glabrous, up to 8 inches long by 2½ inches wide.

Rhododendron × **'Arthur J. Ivens.'** **A.M.** April 18, 1944. This hybrid between *R. Williamsianum* and *R. Houlstonii* has shallow bell-shaped flowers, 3 inches across, Persian Rose (H.C.C. 628/3) in colour. Shown by Messrs. E. L. Hillier & Son, Winchester.

Rhododendron 'Aspansia.' **A.M.** April 17, 1945. This hardy shrub is useful for the rock garden as it retains the dwarf and spreading habit of its parent *R. haematodes* ; the other parent in *R.* 'Astarte' (*R. dichroanthum* × *R.* 'Penjerrick'). It has large bell-shaped flowers of Brilliant Red (H.C.C. 820) with a very large, petaloid calyx of the same colour, there being eight to nine flowers in a truss. Shown by Lord Aberconway, C.B.E., V.M.H.

* **Rhododendron 'Betty.'** **A.M.** May 6, 1940. An evergreen hybrid Azalea of rather spreading and very free-flowering habit ; result of crossing *R. malvatica* and *R. Kaempferi*. Foliage oblanceolate, 1 to 1½ inch long, dark green. The flowers are open funnel-shaped, 1⅝ inch across, with five regular, spreading petals, arranged in twos in a flat-headed truss. The corolla is of a brighter shade of Neyron Rose (H.C.C. 623), with a few darker spots on the upper two petals. Sent by The Knap Hill Nursery, Ltd., Woking, Surrey.

Rhododendron × **'Biskra'** (*R. cinnabarinum* var. *Roylei* × *R. ambiguum*). **A.M.** April 30, 1940, as a hardy flowering plant for the woodland garden. The flat truss is up to 4 inches wide, containing narrowly trumpet-shaped flowers, 2 inches across, 1½ inch deep and the lobe ¾ inch long ; the colour is between Vermilion (H.C.C. 18/2 and 18/1). The elliptic leaves, dark green glabrous above, pale green and covered with many minute, crimson, resin-bearing cells beneath, are up to 2½ inches long by 1¼ inch wide. Shown by Lionel de Rothschild, Esq., V.M.H.

Rhododendron × **'Blue Bird.'** **A.M.** April 13, 1943. This hybrid between *R. intricatum* and *R. Augustinii* received a **P.C.** in 1937. It is a hardy flowering plant suitable for rock garden or border ; the close

* After trial at Wisley.

round trusses consist of eight to ten or more flowers, each 2 inches in diameter, of a most beautiful blue, Veronica Violet (H.C.C. 639/1), the filaments being of the same colour. Shown by Lord Aberconway, C.B.E., V.M.H.

Rhododendron × 'Blue Diamond.' F.C.C. May 2, 1939. Shown by J. J. Crosfield, Esq., Embley Park, Romsey, Hants, as a hardy flowering shrub for general use. A hybrid between *R. Augustinii* ♂ × *R.* × 'Intrifast' ♀, which received **A.M.** when exhibited by Mr. Crosfield in 1935 (*R.H.S. Journal* **60**, p. 321). The plant before the Committee on this occasion was of a deeper and better blue than that originally certificated.

Rhododendron 'Bric-a-Brac.' A.M. February 20, 1945. This hardy Rhododendron is a cross between *R. leucaspis* and *R. moupinense*, and was raised by the late Mr. Lionel de Rothschild ; it is rather more compact in habit than *R. moupinense*. The flower is pure white with only the faintest markings on the upper petal, the corolla is about 2¼ inches across, rotate, and the stamens have dark anthers like those of *R. leucaspis*. The bud-scales are brightly coloured and more or less persistent. Shown by Major Edmund de Rothschild, Exbury, Southampton.

Rhododendron bullatum pink form. A.M. May 14, 1946. This is a fine form collected by Capt. F. Kingdon Ward in China. Growing against a North wall at Bodnant it has survived, without injury, a temperature two degrees below zero Fahrenheit. The leaves are elliptic, bullate and dark green above, covered with a pale tomentum beneath, up to 5 inches long. The flowers, two or three in each truss, are widely funnel-shaped, 2½ inches long, with five spreading lobes, pale blush-pink in colour, flushed externally with rose. Exhibited by Lord Aberconway, C.B.E., V.M.H.

Rhododendron Bureavii. A.M. May 16, 1939. Sent by Lionel de Rothschild, Esq., V.M.H., as a hardy flowering shrub for the woodland garden. The rather flat trusses up to 5 inches wide bear about ten funnel-shaped flowers, up to 2½ inches wide by 2 inches deep, five to seven lobed, at first flushed rose, later fading to white, crimson-spotted within. The ovate-lanceolate thick leaves are shiny above and covered below with a thick felty cinnamon indumentum which also covers the young shoots.

*** Rhododendron 'Butterfly.' A.M.** May 6, 1940. A *R. campylocarpum* hybrid of rather loose habit. The wide, flat bell-shaped flowers are 3½ inches across, arranged in a compact, close truss of twelve to fourteen flowers, being of a creamy-white shade, the upper petals spotted with blood-red ; margins of the petals wavy. Leaves 4½ inches long, oblanceolate, almost obtuse. Raised and sent by Messrs. Walter C. Slocock, Ltd., Goldsworth Nursery, Woking, Surrey.

* After trial at Wisley.

Rhododendron caeruleum. A.M. May 16, 1939. Shown by Lionel de Rothschild, Esq., V.M.H., as a hardy flowering plant for the woodland garden. The flowers, borne in great profusion, are small, wide open, white, but reddish on the top of the tube without and prettily speckled red within. The small obovate leaves are scaly below and shiny above. This plant was raised from Rock's seed number 59207.

Rhododendron × 'Camilla.' A.M. April 18, 1944. This fine variety with trusses of large white flowers is a hybrid between *R.* × 'Penjerrick' and *R.* × 'Loderi' var. 'King George.' Shown by Lord Aberconway, C.B.E., V.M.H.

Rhododendron 'Carita.' A.M. April 17, 1945. The parents of this fine hybrid are *R. campylocarpum* and *R.* 'Naomi'; it bears trusses of twelve to thirteen large flowers whose colour is very Pale Primrose (H.C.C. 64/3), the pedicels being pink. Shown by Major E. de Rothschild.

Rhododendron 'Charmaine.' A.M. April 30, 1946. The parentage of this richly-coloured hybrid is stated to be 'Charm' ♀ × 'May Day.' The leaves are elliptic-lanceolate, 2½ inches long, 1 inch wide, rugose above and densely brown-tomentose beneath. The truss is six-flowered, the corolla broad-campanulate, 1½ inch long, 1¾ inch wide, subtended by a cup-shaped incised calyx nearly an inch long, in colour like the corolla, Blood Red (H.C.C. 820/3). Exhibited by Lord Aberconway, C.B.E., V.M.H.

Rhododendron × 'China' (*R. Wightii* × *R. Fortunei*). **A.M.** April 30, 1940, as a hardy flowering plant for the woodland garden. The loose truss is up to 9 inches across, containing up to seventeen flowers, 3½ inches wide, 2½ inches deep, creamy white. The narrowly ovate, dark green, glabrous leaves are up to 4½ inches long by 2 inches wide. Shown by Messrs. W. C. Slocock, Ltd.

Rhododendron × Chrysaspis. A.M. April 14, 1942, as a hardy flowering plant suitable for the rock garden. This is a hybrid between *R. chrysodoron* and *R. leucaspis*; in form and in the dark coloured anthers it strongly resembles *leucaspis*, but the colour of the petals is Pale Sulphur-Yellow (H.C.C. 1/3). Shown by Lord Aberconway, C.B.E., V.M.H.

Rhododendron cinnabarinum var. Blandfordiaeflorum. A.M. May 29, 1945. The specimen shown was a fine form of this variety; the flowers are nearly 2 inches long and 1½ inches wide, the tube being almost straight for the first inch, then expanding into five neat, rounded segments. At the base the colour is Bright Red (H.C.C. 18), becoming paler, whilst the inner surface is a Lighter Red (H.C.C. 18/2) over Apricot (H.C.C. 609/2), giving a combination of colour approximating to H.C.C. 16/2. Shown by Lord Aberconway, C.B.E., V.M.H.

Rhododendron × 'Circe.' A.M. April 14, 1942, as a hardy flowering plant suitable for the rock garden. This plant is a cross between

R. × 'May Day' and *R.* × 'Elisabeth'; it is low growing with shining green leaves, the underside covered with pale brown tomentum when young. The flowers, five or more in each truss, are deep trumpet-shaped, 2½ inches across at the mouth, and Bright Red in colour (H.C.C. 820/1). Shown by Lord Aberconway, C.B.E., V.M.H.

Rhododendron × **'Clotted Cream.'** **A.M.** June 16, 1942, as a hardy flowering plant. A hybrid between *R. auriculatum* and *R.* × 'Neda' (*R. dichroanthum* × *R.* 'Cunningham's Sulphur'). The leaves are long and slender, dull green above, pale below, and the truss consists of seven to eight flowers; the tube is long, about 2½ inches, and the lobes (of which there are occasionally six) are widely spread; the colour of the petals is Deep Cream (H.C.C. 503/2). The bracts at the base of the flower stalks are persistent; they are long and narrow, the pale colour darkened towards the tips by a covering of brown tomentum. Shown by Lord Aberconway, C.B.E., V.M.H.

Rhododendron × **'Cretonne'** (*R. Barclayi* × *R. Loderi*). **A.M.** April 30, 1940, as a hardy flowering plant for the woodland garden. The loose flat-topped truss is up to 9 inches across and contains up to twelve flowers, 4 inches wide, 2 inches deep, the lobes 1¾ inch long; they are widely funnel-shaped, white, the lobes stained within and without Rose Bengal (H.C.C. 25/2). The broadly elliptic, pale green, glabrous leaves are up to 5 inches long by 2¾ inches wide. Shown by Sir Giles Loder, Leonardslee, Horsham.

Rhododendron × **'Dainty.'** **F.C.C.** April 18, 1944. This hardy flowering plant for the rock garden is a hybrid between *R.* × 'May Day' (*R. haematodes* × *R. Griersonianum*) and *R.* × 'Elisabeth' (*R. Griersonianum* × *R. repens*) and shows the dwarfing effect of *repens* and the scarlet calyx of *haematodes*; the flowers are Currant Red (H.C.C. 821). Shown by Lord Aberconway, C.B.E., V.M.H.

Rhododendron × **'David.'** **F.C.C.** May 16, 1939. A *R.* × 'Hugo Koster' hybrid sent by the Rt. Hon. Lord Swaythling, as a hardy flowering shrub for general garden use, with compact spherical trusses of many deep blood-red flowers, slightly spotted on the upper side of the tube within, funnel-shaped; stamens white, included; style as long as the corolla, white. The ovate-lanceolate acute leaves are up to 4½ inches long by 1¾ inch wide, glabrous on both surfaces.

Rhododendron × **'Day Dream'** (*R.* × 'Lady Bessborough' × *R. Griersonianum*). **A.M.** April 30, 1940, as a hardy flowering plant for the woodland garden. The loose trusses are up to 7 inches across containing up to thirteen flowers, 3½ inches in diameter, 2 inches deep, the lobes 1¼ inch long; they are widely funnel-shaped, deep crimson, flushed and shaded without geranium lake, very bright in the bud and fading to a very pale shade with age. The narrowly elliptic leaves are glabrous, mid-green above, pale green beneath, up to 4½ inches long and 1¾ inch wide. Shown by Lionel de Rothschild, Esq., V.M.H.

Rhododendron 'Dot.' **A.M.** April 17, 1945. This hybrid between *R.* 'Mrs. Lindsay Smith' and *R. Fortunei* has large white flowers 4 to 5 inches across, making handsome trusses. Shown by the Rt. Hon. Lord Swaythling.

* **Rhododendron 'Dr. M. Oosthoek.'** **A.M.** May 20, 1940. A deciduous Azalea of erect bushy habit, very free flowering, with nine to fifteen flowers in the trusses; flowers simple, open funnel-shaped, 3 inches diameter, Mandarin Red (H.C.C. 17/1), upper petal shaded Fire Red (H.C.C. 15) at the middle, of good substance and does not burn. Foliage deciduous, dark green, 3 to 3½ inches long, elliptical, obtuse. Sent by The Knap Hill Nursery, Ltd.

Rhododendron × 'Eleanore.' **A.M.** April 13, 1943. A hybrid between *R. desquamatum* and *R. Augustinii*, the flowers are 2½ inches across, four or five together and Amethyst Violet (H.C.C. 35/3). The plant is hardy at Exbury and suitable for the woodland garden. Shown by Capt. Edmund de Rothschild, Exbury, Southampton.

Rhododendron × 'Electra' (*R. chasmanthum* × *R. Augustinii*). **A.M.** April 30, 1940, as a hardy flowering plant for the woodland garden. The numerous flower heads are up to 4 inches across and contain up to seven flowers, 2½ inches wide, about ½ inch deep and the lobes an inch long; they are violet blue, a shade brighter than Veronica Violet (H.C.C. 639/1) and marked with greenish-yellow blotches at the base of the upper lobe. The narrowly elliptic leaves are about 2½ inches long and ¾ inch wide, glabrous and rich dark green. Shown by Lionel de Rothschild, Esq., V.M.H.

Rhododendron 'Elisabeth.' **A.M.** May 2, 1939. **F.C.C.** April 13, 1943. A hybrid raised from a cross between *R. Griersonianum* and *R. repens*, resembling the latter in habit, being close-growing but larger than this parent. The leaves are small, up to 2 inches long and ¾ inch wide, ovate, dull green above, with a thin fawn tomentum beneath. The flowers are Dark Red (H.C.C. 0/20), about 3 inches across and 2½ inches long, borne in trusses of five or six. Exhibited by Lord Aberconway, C.B.E., V.M.H.

Rhododendron × 'Elsae' var. 'Clyne' (*R. grande* × *R. Hodgsonii*). **A.M.** April 2, 1940. A hardy flowering plant for the woodland garden. The close-set truss is about 7 inches in diameter composed of thirty funnel-shaped flowers. The flowers are about 2 inches long by about 1¾ inch wide, pale Fuchsia Purple (H.C.C. 28/3). The edges of the outside of the lobes are stained with a deeper shade (H.C.C. 28/2). The oblanceolate leaves are up to 10 inches long by about 3 inches broad, mid-green, glabrous above and lightly felted with pale fawn tomentum beneath. Shown by Admiral A. Walker-Heneage-Vivian, Clyne Castle, Blackpill, Swansea.

* After trial at Wisley.

Rhododendron × **'Ethel'** (*R.* 'F. C. Puddle' × *R. repens*). **F.C.C.** April 2, 1940. A hardy flowering plant for rock-garden and general garden purposes. The plant is about 18 inches across and 8 inches high, carrying 23 loose trusses composed of four to five trumpet-shaped flowers, 1½ to 2 inches deep and 1¾ to 2 inches wide. These are of a rich shade of light crimson-scarlet, and the coloured calyx is of the same shade. The pale green, glabrous, oblanceolate leaves are about ¾ inch broad and 2 inches long. Raised and shown by Lord Aberconway, C.B.E., V.M.H.

Rhododendron × **'Eureka.'** **A.M.** March 21, 1939. A cross between *Rhododendron arboreum* and *R. Hookeri*, shown by Lionel de Rothschild, Esq., V.M.H., as a hardy flowering plant for the woodland garden. The spherical trusses, about 5 inches wide and deep, comprise about fifteen or eighteen narrowly funnel-shaped flowers, each up to 2 inches deep by 2½ inches across, blood-red, speckled dark brown within. The obtuse, elliptic-oblong, slightly mucronate, glabrous leaves are about 6 inches long by 2 inches broad, dull green above, paler below.

Rhododendron 'Euphrosyne' var. × **'Eurydice.'** **A.M.** April 18, 1939. Shown by Lionel de Rothschild, Esq., V.M.H., as a hardy flowering plant for the woodland garden. A cross between *R. arboreum album* and *R.* × *Loderi* with well-formed trusses up to 6½ inches broad by 6 inches deep of about fifteen large funnel-shaped flowers delicately tinged with pale rosy-pink with a crimson blotch within. The oblanceolate sharply pointed leaves are glabrous on both sides, dark green above, paler below.

Rhododendron × **'Fabia' var. 'Tangerine'** (*R. dichroanthum* × *R. Griersonianum*). **A.M.** May 21, 1940. As a hardy flowering plant for the rock or woodland garden. The rather lax flower trusses are composed of up to eight funnel-shaped, campanulate flowers. The latter are of 2½ to 3 inches diameter, the lobes 1 inch long. The petaloid calyx is irregularly incised and 1 inch long. The colour of the flower is Vermilion (H.C.C. 18/1), shaded towards the edges of the lobes Geranium Lake (H.C.C. 20/2) and in the throat of the corolla with Poppy Red (H.C.C. 16/1). The dark green, lanceolate leaves are up to 5½ inches long by 2 inches wide, lightly felted with fawn tomentum beneath. Shown by Lord Aberconway, C.B.E., V.M.H.

Rhododendron × **'Felicity.'** **A.M.** May 19, 1942, as a hardy flowering plant. The flowers are wide bell-shaped, 2½ inches across, evenly coloured throughout, a beautiful warm Red (H.C.C. 620); the parents were *R.* × 'Radiance' and *R.* × 'F. C. Puddle.' Shown by Lord Aberconway, C.B.E., V.M.H.

Rhododendron fictolacteum var. roseum. **A.M.** April 16, 1946. A very handsome variety raised from seed collected by Kingdon Ward (No. 4509) in Yunnan in 1921. The leaves are oblanceolate, 12 to

14 inches long, polished above and covered beneath with fawn indumentum. The compact truss consists of about twenty-five wide campanulate flowers, each 2½ inches long and 3 inches wide at the mouth, with eight rounded lobes. The deep rose-coloured buds open to flowers of pale Amaranth Rose (H.C.C. 530/3) with a small basal crimson blotch. Exhibited by Lord Aberconway, C.B.E., V.M.H.

Rhododendron × 'Fire Flame.' A.M. May 19, 1942, as a hardy flowering plant. This hybrid has well formed trusses of short-tubed flowers whose lobes spread widely, about 2½ inches in diameter, of a very beautiful Red colour (H.C.C. 20/1); the inside of the upper petal only has darker spots. The parents were *R. apodectum* × *decorum* and *R. Griersonianum*. Shown by C. R. Scrase-Dickins, Esq., Coolhurst, Horsham.

Rhododendron × 'Fusilier.' F.C.C. May 19, 1942, as a hardy flowering plant. A very handsome hybrid with large trusses of Brilliant Red (H.C.C. 719/3) flowers; each flower is bell-shaped, spreading at the mouth, 3 inches across, the inner surface of the petals faintly spotted with darker colour all over. The parents were *R. Elliottii* and *R. Griersonianum*, and the hybrid received the Award of Merit in 1938 (see *R.H.S. Journal* **63**, p. 337). Shown by Lieut.-Colonel E. H. W. Bolitho, Trengwainton, Penzance.

Rhododendron × 'Gaul.' A.M. April 18, 1939. Shown by Lionel de Rothschild, Esq., V.M.H., as a hardy flowering plant for the woodland garden. The result of crossing *R. Elliottii* and *R* × *Shilsonii*. The compact truss contained about twenty narrowly funnel-shaped deep red flowers, the corolla up to 2 inches broad by 1¾ inches deep, the cup-shaped scarcely lobed calyx of the same colour. The broadly ovate, glabrous leaves are dark green above, paler below.

Rhododendron × Geraldii. A.M. March 20, 1945. This plant was formerly considered to be a variety of *R. sutchuenense*, but it is almost certainly a natural hybrid with *R. praevernum*; it is distinguished by the deeper colour of the flowers, which are faintly mottled Amaranth Rose (H.C.C. 530/1) and by the striking Purple blotch (H.C.C. 830); the flowers are 3½ inches across. Exhibited by the Misses Godman, South Lodge, Horsham.

*** Rhododendron 'Gladys' var. 'Letty Edwards.' A.M.** May 13, 1946. A compact, free-flowering bush carrying many rather lax nine- to twelve-flowered trusses. The funnel-shaped, pale Sulphur Yellow (H.C.C. 1/3) flower is 2½ inches long and 2¾ inches wide. Sent by Messrs. W. C. Slocock, Ltd.

Rhododendron 'Glamour.' A.M. May 14, 1946. Raised from a cross between 'Margaret' ♀ and *Griersonianum*, this very handsome variety has a shapely truss of ten widely expanded flowers each 3 inches long and 4 inches wide, in colour deep Cherry Red (H.C.C. 722). The

* After trial at Wisley.

leaves are elliptic, acute, mat green above, paler beneath, 7 inches long and over 2 inches wide. Exhibited by Major E. de Rothschild.

Rhododendron × 'Goblin.' **A.M.** May 16, 1939. The progeny of *R.* × 'Break of Day' × *R. Griersonianum*, shown by Lionel de Rothschild, Esq., V.M.H., as a hardy flowering shrub for the woodland garden. Loose trusses of about seven widely funnel-shaped flowers up to 3 inches wide by 2 inches deep, pale salmon-rose ; the calyx very large, irregularly lobed, some lobes over 1 inch long, somewhat streaked. The ovate-lanceolate leaves are acute and glabrous.

Rhododendron 'Golden Horn.' **A.M.** May 1, 1945. The parents of 'Golden Horn' are *R. dichroanthum* and *R. Elliottii* ; the trusses contain up to ten trumpet-shaped flowers of a Bright Red colour (H.C.C. 18/1). Shown by Major E. de Rothschild.

Rhododendron × 'Grand Prix' (*R. grande* × *R. eximium*). **A.M.** April 2, 1940. A hardy flowering plant for the woodland garden. The flat-topped truss, about 8 inches in diameter, is composed of twenty-two flowers, borne on bright red pedicels 1½ inch in length. The flowers are funnel-shaped, 2 inches deep by about 2½ inches wide, ivory in colour, shaded without Pale Carmine (H.C.C. 21/3). The backs of the lobes are stained at the edge with a deeper shade of carmine. The narrowly obovate leaves are up to 9 inches long by 4 inches wide, pale green, glabrous above and covered with heavy fawn tomentum beneath. Raised and shown by Admiral A. Walker-Heneage-Vivian.

Rhododendron × 'Grenadier.' **F.C.C.** May 18, 1943. This fine hybrid is a cross between *R.* × 'Moser's Maroon' and *R. Elliottii*, and has a close round truss, the individual flowers being 3½ inches in diameter, Blood Red (H.C.C. 820/1) in colour. Shown by Capt. Edmund de Rothschild.

Rhododendron 'Gretia.' **A.M.** April 30, 1946. Another of the fine *Griersonianum* hybrids raised by the exhibitor, the seed-parent in this case being 'Portia.' The elliptic leaves measure 4 inches by 1¼ inch, and are rugulose above, tomentose on the veins beneath. The dense truss contains fourteen large flowers 2½ inches long and 3 inches wide with irregularly incised calyces, coloured like the corolla, Blood Red (H.C.C. 820/3). Exhibited by Lord Aberconway, C.B.E., V.M.H.

Rhododendron 'Grosclaude.' **A.M.** May 29, 1945. This hybrid between *R. haematodes* and *R. eriogynum* bears ten- to twelve-flowered trusses of waxy campanulate flowers, 2 inches long and 2½ inches wide, the petals being slightly waved at the edge. The colour is Blood Red (H.C.C. 820/1). Shown by Major Edmund de Rothschild.

Rhododendron gymnocarpum. **A.M.** April 30, 1940, as a hardy flowering plant for the woodland garden. The flat-topped truss is 4½ inches to 5 inches wide, containing up to ten flowers, each about 2¼ inches across and 1 inch deep, the lobes ¾ inch long ; they are funnel-shaped and deep rich crimson. The dark green, lanceolate leaves are

up to 4½ inches long by 1½ inch wide, glabrous above and lightly felted beneath. Shown by Lionel de Rothschild, Esq., V.M.H.

Rhododendron × 'Hermione' (*R.* 'Gilian' × *R. arboreum*). **A.M.** March 25, 1941, as a hardy flowering plant for the woodland garden. The spherical flower trusses are up to 5 inches across and contain up to twelve flowers. The corolla is 3 inches in diameter and 1¾ inch long, the 5 lobes ¾ inch deep; the colour is deep rich crimson. The oblanceolate leaves are up to 5 inches long and 1½ inch wide, glabrous, mid-green above, pale green below. Shown by E. J. P. Magor, Esq., Lamellen, St. Tudy, Bodmin, Cornwall.

Rhododendron hormophorum (white form). A.M. May 18, 1943. This plant appears to be an albino form of the type, the flowers being white with a few buff spots on the upper petal; they are borne in few-flowered clusters on the pale, bare stems, before the leaves appear; in autumn the foliage turns red. Shown by Lord Digby, Minterne, Dorchester.

Rhododendron 'Idealist.' A.M. May 1, 1945. This hybrid between *R.* 'Naomi' Exbury var. and *R. Wardii* has bold trusses of ten to twelve wide campanulate flowers which are very Pale Greenish-Yellow (H.C.C. 663/2). Shown by Major E. de Rothschild.

Rhododendron impeditum. A.M. April 18, 1944. A small, hardy species suitable for the rock garden; the specimen shown was a fine colour form selected from Rock 59263. (H.C.C. 36/1). Shown by the Sunningdale Nurseries, Windlesham, Surrey.

Rhododendron 'Impi.' A.M. June 19, 1945. The very dark colouring of this hybrid is distinctive; the flowers, on longish stalks, are held in small trusses and are 2 to 2¼ inches across, the corolla being funnel-shaped with the petals slightly frilled. The colour is very Dark Red (H.C.C. 826) but lights up to a brilliant red when seen by transmitted light. The parents of this hybrid are *R. didymum* and *R.* 'Moser's Maroon.' Shown by Major Edmund de Rothschild.

Rhododendron 'Infanta.' A.M. June 17, 1941. A distinct hybrid raised from the cross *R.* 'Isabella' × *R. Griersonianum.* The shortly stalked leaves are narrow-elliptical, shortly acuminate, about 8 inches long and of very leathery texture. The tall truss is made up of seven widely spaced flowers carried on long, glandular-hairy pedicels. The flower has a funnel-shaped tube 2½ inches long with five roundish-ovate, spreading lobes, and when fully expanded has a diameter of 4 inches. The colour is Light Crimson (H.C.C. 22/2–3) deepening to Rose Madder (H.C.C. 23/1) at the base of the tube. Exhibited by Collingwood Ingram, Esq., The Grange, Benenden, Kent.

Rhododendron sp. Irroratum Series. A.M. May 1, 1945. This has a very lovely truss of shallow, campanulate, white flowers, about 2 to 2½ inches across, with a pattern of crimson dashes on the upper petals. Shown by Major E. H. Savill, Windsor Great Park.

Rhododendron 'Ivanhoe.' **A.M.** May 15, 1945. This hybrid between *R.* 'Chanticleer' and *R. Griersonianum* has fine trusses of wide campanulate flowers, about 3½ inches across, of a Brilliant Red colour (H.C.C. 020), very faintly mottled on the upper petals in a darker shade of the same red. Shown by Major Edmund de Rothschild.

* **Rhododendron 'J. J. de Vink.'** **A.M.** May 13, 1946. A vigorous variety forming a compact bush with very dark green foliage. The truss is of medium size, pyramidal, containing about a dozen flowers, each 3½ inches long and 3 inches wide. The colour is rich Rose Red (H.C.C. 724) with a brown blotch. Sent by Messrs. M. Koster & Son, Boskoop.

* **Rhododendron 'John Cairns.'** **A.M.** May 6, 1940. An evergreen hybrid of spreading and free-flowering habit, the result of crossing *R. malvatica* and *R. Kaempferi*, with dark green foliage, ½ to ¾ inch long, oblanceolate. The flowers are wide, open funnel-shaped, 1½ to 1¾ inch across, with five regular, spreading petals, arranged two or three in a flat-headed truss. The corolla is of a shade of Geranium Lake (between H.C.C. 20 and 20/1), with a few darker spots on the upper petals. Sent by The Knap Hill Nursery, Ltd.

Rhododendron Johnstoneanum var. rubeotinctum. **A.M.** April 22, 1941, as a hardy plant for general garden use. The plant appeared amongst seedlings of *R. Johnstoneanum* (K.W. 7732) raised by the exhibitor and differs from that species in the colour of the flowers which are white with a deep pink (H.C.C. 621/1) stripe along the middle of each petal on the outside, the same colour superimposed on yellow forming a patch towards the base of the back lobe inside. Exhibited by Lt.-Col. E. H. W. Bolitho, Trengwainton, Heamoor, Cornwall.

Rhododendron × 'Julie.' **A.M.** May 2, 1944. This hybrid was obtained by crossing *R.* × *Loderi* with itself; the truss was eight-flowered, the flowers being narrow funnel-shaped, large and white suffused with sulphur. Shown by the Rt. Hon. Lord Swaythling.

Rhododendron × 'Kingcup.' **A.M.** June 8, 1943. A hybrid between *R. dichroanthum* and *R.* × 'Bustard,' this plant bears waxen tubular flowers of Indian Yellow (H.C.C. 6/2); the tube is 1¼ inches long and the free lobes, which are not widely expanded, another ¾ inch. The flowers are held in loose, rather flat trusses. Exhibited by Capt. E. de Rothschild.

Rhododendron × 'Lady Chamberlain' var. 'Bodnant Yellow.' **F.C.C.** April 18, 1944. The colour of the flowers in this variety is Orange Buff (H.C.C. 507/1), with a deeper reddish flush outside, especially towards the base. Shown by Lord Aberconway, C.B.E., V.M.H.

Rhododendron 'Lady Digby.' **A.M.** April 30, 1946. Raised from *R. facetum* ♀ × *strigillosum*, this fine plant has elliptic leaves 10 inches long and 3 inches wide, dark green above and tomentose beneath.

* After trial at Wisley.

The truss is made up of eight campanulate flowers 2¾ inches long and 2½ inches wide, Blood Red (H.C.C. 820) with faint spots. Exhibited by Lord Digby.

Rhododendron × **'Laura Aberconway'** (*R. Barclayi* × *R. Griersonianum*). **A.M.** May 20, 1941, as a hardy flowering plant for general garden use; **F.C.C.** May 2, 1944. The loose truss contains up to nine flowers. The corolla is funnel-shaped, widely expanding at the mouth, 2½ inches long and 3½ inches broad, the lobes being somewhat frilled. The colour is Geranium Lake (H.C.C. 20/1). The leaves are short-petioled, lanceolate, thick and leathery, dark green above, pale yellow-green on the under surface. Shown by Lord Aberconway, Bodnant, Tal-y-Cafn, N. Wales.

Rhododendron leucaspis. F.C.C. March 21, 1944. Since it received the **A.M.**, in 1929, this small-growing Rhododendron has become well known and much admired for its large white flowers with the chocolate stamens; the plant is hardy, but the flowers appear so early that it should be given a sheltered position to protect the buds. Shown by Capt. Edmund de Rothschild.

Rhododendron × **'Little Bert.'** **A.M.** April 18, 1939. A cross between *R. euchaites* and *R. repens* ♀, sent by C. R. Scrase-Dickins, Esq., V.M.H., as a flowering plant for the rock garden or alpine house. A plant about 1 foot high was shown bearing on the ends of its branches numerous clusters of four or five nodding, shining, crimson-scarlet flowers, up to 2 inches across by 1½ inch long, bell-shaped with spreading lobes. The elliptic-ovate, obtuse, mucronate leaves, rounded at each end, are up to 3 inches long by 1½ inch broad. A lovely plant both in habit and flower.

Rhododendron × **'Louise.'** **A.M.** May 16, 1939. An Azalea produced by crossing *R. Kaempferi* with *R.* 'Dark Red Indian,' and exhibited by Lionel de Rothschild, Esq., V.M.H., as a hardy flowering shrub for the woodland garden. The flowers, usually in twos or threes, are widely funnel-shaped with spreading lobes, about 2½ inches wide, salmon-scarlet with red exserted stamens and style; calyx about ¼ inch long, green, pubescent, ciliate, deeply lobed. The small ciliate leaves are slightly pubescent on both surfaces.

Rhododendron × **'Marcia.'** **A.M.** May 2, 1944. A cross between *R. campylocarpum* and *R. Fortunei* × *campylocarpum*, this hybrid has oval leaves, 3½ inches long, pale beneath and carries a compact truss of about ten flowers with a campanulate corolla over 2 inches across; the colour is Primrose (H.C.C. 601/2). Shown by the Rt. Hon. Lord Swaythling.

Rhododendron × **'Mariloo' var. 'Gilbury.'** **A.M.** April 13, 1943. The large flowers, 4½ inches in diameter, are pale creamy pink, the colour intensified down the centre of each segment owing to the dark pink stripe on the back of each which is crimson at the base. It is

a hybrid of *R.* ' Dr. Stocker ' and *R. lacteum* and is a hardy plant suitable for woodland conditions. Shown by Capt. Edmund de Rothschild.

Rhododendron ' Matador.' **A.M.** April 17, 1945. **F.C.C.** April 30, 1946. A splendid hybrid raised from *R. strigillosum* ♀ × *Griersonianum.* The oblanceolate leaves are 6½ inches long, rugulose above and covered beneath with a thin, buff indumentum. The truss contains ten or twelve broadly funnel-shaped flowers 2½ inches long and 3 inches wide at the mouth. The colour is Turkey Red (H.C.C. 721/1), and the three upper lobes of the corolla are faintly spotted. Exhibited by Lord Aberconway, C.B.E., V.M.H.

Rhododendron ' May Morn.' **A.M.** April 16, 1946. A most attractive hybrid raised from *R.* ' May Day ' ♀ × *R. Beanianum* pink form. It makes a dwarf plant suitable for the rock garden or the front of the border, and has neat, elliptic, rugose leaves 3 to 4 inches long covered beneath with a cinnamon-brown tomentum. The truss bears eight to ten flowers. The corolla is funnel-shaped, 2 inches wide at the mouth, with five spreading lobes. The colour is unusual—Azalea Pink (H.C.C. 618/3), to Begonia (H.C.C. 619/3) flushed on the margins of the lobes with Porcelain Rose (H.C.C. 620/1). Exhibited by Lord Aberconway, C.B.E., V.M.H.

Rhododendron × ' Maya.' **A.M.** March 5, 1940. A hardy flowering plant for the woodland garden. The loose trusses are composed of ten to twelve funnel-shaped flowers about 2½ to 3 inches broad by 2 to 2½ inches deep. These are very pale mauve within, spotted lightly with deep purple and blotched with a more intense shade of purple at the base of the tube. The outside of the flower is flushed with a deeper shade (H.C.C. 633/3). The narrowly obovate leaves are up to 7 inches long by about 2 inches broad, dull green, glabrous and pale beneath. *R.* × ' Maya ' is a hybrid between *R. sutchuenense* and *R. Ririei*, and was exhibited by E. J. P. Magor, Esq.

Rhododendron microleucum. **F.C.C.** April 18, 1939. Sent by Lionel de Rothschild, Esq., V.M.H., as a flowering plant for the rock garden or alpine house. A low bush about 1 foot high bearing many clusters of wide-open white flowers up to ¾ inch across borne in threes on the tips of the branches. The leaves are rather thin, scaly below, about ½ inch long and ⅕ inch or less wide, ovate-oblong.

Rhododendron mishmiense (K.W. 8113). **A.M.** April 16, 1940, as a flowering plant for the cool greenhouse. The loose, flat truss, 6 inches in diameter, is composed of eight widely funnel-shaped flowers with recurving lobes. They are 2½ inches in diameter and about 1 inch deep ; Pale Yellow (H.C.C. Aureolin 3/2), slightly spotted brownish-red within on the three upper lobes. The mid-green, narrowly ovate leaves are up to 5 inches long by 2½ inches wide, glabrous beneath and slightly pubescent above. Shown by Lionel de Rothschild, Esq.

Rhododendron ' Mohamet.' **A.M.** May 29, 1945. The parentage

of this hybrid is *R. dichroanthum* and *R.* 'Tally-ho'; it bears five to six flowers in the truss, each being 2 inches deep and 2½ inches across, with a very large calyx, of the same Red colour (H.C.C. 19/1) as the corolla; on the inside the colour is concentrated towards the slightly frilled edge, the centre of each petal being rather yellower. Shown by Major E. de Rothschild.

Rhododendron 'Mosaique.' **A.M.** May 29, 1945. This distinct little plant is a cross between *R. ambiguum* and *R. Cinnkeys*. The leaves are small and pointed; there are about a dozen flowers in each truss, each flower being about 1 inch long and ¾ inch across. The tube is narrow for half the distance and Bright Red at the base (H.C.C. 020/1); it widens gradually to five narrow lobes which do not expand very fully; these are Pale Yellow (H.C.C. 3/3). Shown by Major E. de Rothschild.

Rhododendron myrtilloides. **F.C.C.** June 8, 1943. One of the dwarf Rhododendrons from high altitudes, this plant is quite hardy and well suited in the woodland where the solitary, Magenta Rose (H.C.C. 027/2) flowers on slender stalks an inch and a half high, may be borne so profusely as almost to hide the mat of foliage. Exhibited by Capt. E. de Rothschild.

Rhododendron × 'Naomi' var. 'Stella Maris.' **F.C.C.** May 16, 1939. Sent by Lionel de Rothschild, Esq., V.M.H., as a hardy flowering plant for the woodland garden. Another result of crossing *R.* × 'Aurora' and *R. Fortunei*, differing from *R.* × 'Naomi' (**A.M.** 1933), and *R.* × 'Naomi' var. 'Nautilus' (**A.M.** 1938), in its slightly larger flowers, fuller trusses, and larger leaves. The flowers also seem to open wider.

Rhododendron × 'Olive.' **A.M.** February 17, 1942, as a hardy early-flowering plant. The flower heads are terminal, one to two flowered. The corolla is wide funnel-shaped, the lobes wavy, 1 inch long and 1½ inch wide; the colour is Mallow Purple (H.C.C. 630/2) with darker scattered spots on the base of the upper lobe. The leaves are elliptic, apiculate, 1 to 1¼ inch long, petiole ⅓ inch long, thick and leathery, dark green above, paler below, with scattered scales. The young shoots are slightly scaly. Shown by Sir John Stirling Maxwell, Bt., K.T., Pollok House, Glasgow.

Rhododendron × 'Panoply.' **A.M.** June 16, 1942, as a hardy flowering plant. This is a hybrid between *R.* × 'G. A. Sims' and *R. eriogynum*; the round full truss contains fourteen to fifteen wide funnel-shaped flowers; the tube is about 1¾ inch deep and the expanded lobes measure 3 inches across; the colour of the petals is Rose Claret (H.C.C. 021) and there is a patterning of darker spots chiefly on the upper petals. Shown by Col. Stephenson R. Clarke, Borde Hill, Haywards Heath, Sussex.

Rhododendron 'Peace.' **A.M.** April 30, 1946. An attractive

hybrid raised from the white form of *R. caeruleum* ♀ × *concatenans.* The flowers, which show the waxy texture of the pollen-parent, are broadly funnel-shaped, 1½ inch long and 1¾ inch wide, white faintly flushed externally with palest rose, and are carried in six-flowered trusses. The elliptic leaves are 2½ inches long and ¾ inch wide, glossy above and brown-scaly beneath. Exhibited by Lord Aberconway, C.B.E., V.M.H.

Rhododendron pentaphyllum. A.M. April 14, 1942, as an early-flowering hardy plant. This is the earliest Azalea to flower, the blossom opening well before the leaves. The flowers, shallow cups, about 2¼ inches across, are Warm Pink becoming paler with age (H.C.C. 25/2 to 25/3). Shown by Lord Aberconway, C.B.E., V.M.H.

* **Rhododendron 'Peggy.' A.M.** May 20, 1940. A garden hybrid of uncertain parentage, first exhibited and named in 1930. Bush of good shape, vigorous and very free flowering, with close, well-arranged pyramidal trusses of fourteen to sixteen flowers. Flowers open basin-shaped, 4¼ inches diameter, Phlox Pink (H.C.C. 625/1); petals five, regular, of good substance, stiff, margins wavy; upper petal of a paler tone, with few faint primrose spots. Foliage dark green, 5 to 6 inches long, oblanceolate. Raised and sent by Messrs. John Waterer, Sons and Crisp, Ltd., Twyford, Berks.

* **Rhododendron 'Peter Koster.' A.M.** May 13, 1946. A free-flowering variety with medium-sized, pyramidal trusses containing twelve to sixteen flowers. The corolla is broad funnel-shaped, 3 inches long and 3 inches wide, in colour Rose Madder (H.C.C. 23) with a brown blotch. Sent by Messrs. M. Koster & Son.

Rhododendron 'Polar Bear.' F.C.C. September 10, 1946. One of the latest of its race to flower, normally during August in the south of England, this handsome hybrid was raised by Mr. J. B. Stevenson in 1933 by crossing *R. diaprepes* with *R. auriculatum.* The leaves on the stems exhibited were 9 inches long, 3 inches wide, slightly auriculate at the base, glaucous beneath with prominent veins. From eight to ten of the 4-inch wide, pure white, fragrant flowers with a narrow green throat are borne on downy pedicels in each inflorescence; the stamens, shorter than the curving style with prominent capitate stigma, vary in number from thirteen to sixteen. Exhibited by Sir Henry Price, Wakehurst Place, Ardingly, Sussex.

Rhododendron recurvoides. A.M. March 25, 1941, as a hardy flowering plant for the woodland garden. The flat-topped truss is up to 5 inches across and contains up to nine flowers carried on short pedicels densely covered with strigose glands, more or less pubescent. The funnel-shaped, campanulate corolla is 2¾ inches wide and 1½ inch deep, with five ovate lobes ¾ inch deep. They are pale Rose Bengal, flushed along the ribs with Rose Bengal (H.C.C. 25/3) deepening

* After trial at Wisley.

towards the lobes to H.C.C. 25/1. The leaves are oblanceolate, thick, leathery, the under-surface covered with thick tawny tomentum, up to 3½ inches long by 1 inch wide, the petiole ¾ inch long, slightly grooved above, rounded below, densely clad with long hairs. Shown by Col. E. H. W. Bolitho, D.S.O.

Rhododendron 'Red Cap' var. 'Townhill Park.' A.M. June 19, 1945. This hybrid between *R. didymum* and *R. eriogynum* has small, bell-shaped flowers 1¾ inches across, the colour being Oxblood Red (H.C.C. 000823), which lights up to scarlet against the light. Shown by the Rt. Hon. Lord Swaythling.

* **Rhododendron 'Red Star.' A.M.** May 20, 1940. A garden hybrid, the result of *R.* 'Mrs. Lindsay Smith' with *R.* 'Molière.' Bush of good shape, and very free flowering, with compact pyramidal trusses of ten to fourteen flowers. The flowers are open bell-shaped, 3 inches across; petals five, rich velvety crimson, upper petal spotted with black. Foliage dark green, 4 to 5 inches long, oblanceolate. Raised and sent by Messrs. M. Koster & Sons, Ltd.

Rhododendron × 'Rosefinch.' A.M. May 16, 1939. A cross between *R.* × 'Bella' and *R. Griersonianum*, shown by Lord Aberconway, C.B.E., V.M.H., as a hardy flowering shrub for general garden use. The loose rather flat trusses bear up to ten flowers, about 3½ inches wide by 2½ inches deep, rather long-tubed with spreading lobes, deep rose with a slightly bluish tinge, a little paler within; calyx red, about ½ inch long, irregularly lobed. The lanceolate leaves are up to 7 inches long by 2¼ inches wide.

* **Rhododendron 'St. George.' A.M.** May 13, 1946. A compact, free-flowering bush with very large, dome-shaped trusses, each bearing about a dozen flowers. The broad funnel-shaped corolla is 4 inches long and as wide, pale Crimson (H.C.C. 22/3). Leaf elliptic, 6 inches long. Sent by Messrs. J. Waterer, Sons & Crisp, Ltd., Bagshot.

Rhododendron saluenense. A.M. April 17, 1945. A fine species for the alpine garden, this plant comes from the Salween River; it is covered with small, shallow, wide open flowers, Dark Mauve-Purple in colour (H.C.C. 29/1), and is quite hardy. Shown by Major E. de Rothschild.

Rhododendron Schlippenbachii. F.C.C. April 18, 1944. This Korean Azalea produces before the leaves its 3-inch-wide flowers whose shallow corollas are Rhodamine Pink (H.C.C. 527/2); it received the **A.M.** in 1896. Shown by Lord Aberconway, C.B.E., V.M.H.

Rhododendron × 'Seagull' var. 'Seamew' (*R. sutchuenense* × *R. Loderi*). **A.M.** April 16, 1940, as a hardy flowering plant for the woodland garden. The large spherical trusses are about 8 inches in diameter, composed of up to fifteen flowers. These are funnel-shaped and up to 4 inches wide by about 2¾ inches deep, pure white. The dark

* After trial at Wisley.

green, oblanceolate, glabrous leaves are up to 7 inches long by about 2½ to 3 inches wide. Raised by the Dowager Lady Loder and shown by Sir Giles Loder.

Rhododendron siderophyllum. A.M. March 20, 1945. A stray seedling growing with the batch of *R. scabrifolium* Rock No. 25443. This plant is not a hybrid, as was thought possible, but a distinct species of the *Triflorum* section, subseries *Yunnanense*. The leaves are smooth and thin, scaly on the back ; the flowers are larger than those of *R. scabrifolium* and the crimson stamens a marked feature. The bud-scales persist during flowering and the calyx is very small and hardly divided into lobes ; the stamens are exserted and the anthers which are curved at right angles to the filaments are crimson, the colour persisting a third of the way down the filament. Exhibited by Major Edmund de Rothschild.

Rhododendron × 'Siren.' A.M. May 19, 1942, as a hardy flowering shrub. The bell-shaped flowers, 2½ inches across, are a Brilliant Red (H.C.C. 19/1) with faint darker spots on each petal ; the hybrid retains the indumentum of its *arboreum* grandparent and the calyx of the *haematodes* grandparent, present in *R.* × *Choremia* which is one of the parents, the other being *R. Griersonianum*. Shown by Lord Aberconway, C.B.E., V.M.H.

* **Rhododendron 'Snow Queen.' A.M.** May 13, 1946. A compact, free-flowering variety. The funnel-shaped flowers are 3½ inches long and 3 inches wide, opening pure white from buds tinted with Neyron Rose (H.C.C. 623/1), and are arranged nine or ten together in rounded trusses. Raised by Sir E. Loder and sent by the Knap Hill Nursery, Ltd., Woking.

Rhododendron × spinulosum. A.M. April 18, 1944. A cross between *R. spinuliferum* and *R. racemosum*, this hybrid is of erect habit and the flowers, borne in compact trusses, are white at the base with Deep Pink (H.C.C. 527) tips to the petals. Shown by the Director, R.H.S. Gardens, Wisley.

Rhododendron 'Springtime.' A.M. March 20, 1945. A hybrid between *R. praevernum* and *R. arboreum* var. *album*, this free-flowering, hardy plant bears compact trusses of white flowers, shading to very Pale Greenish-Yellow (H.C.C. 663/3) in the throat ; the corolla is without blotch or marking of any kind, though some flowers showed a faint blush-pink on the outside ; the width is 2½ inches. Exhibited by Messrs. R. Gill & Son, Himalayan Nurseries, Penryn, Cornwall.

Rhododendron × 'Sulfmeg' (*R. sulfureum* × *R. megeratum*). **A.M.** April 2, 1940. A hardy flowering plant for the rock garden. The trusses are composed of two or three flowers which are borne on ½-inch-long pedicels. The flowers are about 1¾ inch wide by ½ inch deep, broadly funnel-shaped, Pale Sulphur-Yellow (H.C.C. 1/3). The out-

* After trial at Wisley.

side of the flower is of a slightly deeper shade. The leaves are obovate, about 1½ inch by about ¾ inch wide, pale green and glabrous above, the under surface and midrib covered all over with minute cells of a bright reddish colour. Raised and shown by E. J. P. Magor, Esq.

Rhododendron × **'Sunrise.' F.C.C.** May 19, 1942, as a hardy flowering plant. This very fine hybrid has blossoms nearly 4 inches across when fully expanded; the buds are Deep Pink (H.C.C. 21/1) and the colour pales as the flowers open till the petals become palest pink with the deeper colour retained only at the extreme base and on the outside towards the base of the tube; the flowers are of excellent substance; the plant grows quickly and forms a tall upstanding bush. Shown by Lord Aberconway, C.B.E., V.M.H.

Rhododendron Taggianum. F.C.C. April 13, 1943. This beautiful species of the Maddenii Series has very large white flowers, the buds being tinged with salmon pink; it is not hardy but grows well in a cold greenhouse. Shown by Murray Adams-Acton, Esq., 37 Palace Gate, W. 8.

Rhododendron × **'Toreador.' A.M.** June 16, 1942, as a hardy flowering plant. The flowers of this hybrid, which is a cross between *R.* × 'A. Osborn' and *R. Griersonianum*, are a dark red which changes to a Brilliant Scarlet (H.C.C. 821 to 721) when the light shines through the petals; there are seven to eight flowers to each truss, each 3 inches or more across, with a wide short tube; the pedicels are dark red covered with lighter tomentum which extends up the tube of the corolla. The leaves are narrow with thick tomentum on the lower surface. Shown by Lord Aberconway, C.B.E., V.M.H.

Rhododendron × **'Touchstone.' F.C.C.** May 16, 1939. Sent by J. J. Crosfield, Esq., as a hardy flowering shrub for general garden use. A *R. Griffithianum* hybrid which has improved in quality since it received an **A.M.** at Chelsea in 1937. See *R.H.S. Journal*, **62**, p. 374.

Rhododendron × **Valpinense. A.M.** April 13, 1943. A hybrid between *R. moupinense* and *R. Valentinianum*; this is a close, low growing shrub which flowers very freely and is so hardy that no flower-buds are lost during the winter; the flowers are held in two or three together and are Primrose Yellow (H.C.C. 601/2) with deeper colour in the buds and crimson on the broad bracts at the base of the flower-stalks. Shown by Lord Aberconway, C.B.E., V.M.H.

Rhododendron 'Vanessa' var. 'Pastel.' A.M. May 28, 1946. The parentage of this variety is *R.* 'Soulbut' ♀ × *R. Griersonianum.* It has narrow-elliptic, mat-green leaves 4½ inches long. The truss contains eight broadly funnel-shaped flowers 2¾ inches long and 3½ inches wide. The colour is cream, flushed with Shell Pink (H.C.C. 516/2–3), and the tube is stained externally with scarlet (19/2) and scarlet-zoned at the base inside. Exhibited by Lord Aberconway, C.B.E., V.M.H.

Rhododendron 'Welkin.' A.M. May 14, 1946. The parentage of this hybrid is *R.* 'Eros' ♀ × *R. haematodes.* It makes a dwarf, close-growing bush, suitable for the front of the border, and has elliptic leaves sparingly tomentose beneath, 3 to 4 inches long. The truss contains three or four flowers, each 3 inches long and 3½ inches wide, with a petaloid, irregularly-lobed calyx up to 2 inches long, varying in colour, like the corolla, from Geranium Lake (H.C.C. 20/1) to Delft Rose (H.C.C. 020). Exhibited by Lord Aberconway, C.B.E., V.M.H.

Rhododendron 'White Beauty.' A.M. April 17, 1945. The trusses of this hybrid are elongated and carry about 12 pure white flowers; its parentage is *R.* 'Albino' × *R. Loderi* 'Pink Diamond.' Shown by W. J. Whitaker, Esq., Pylewell Park, Lymington, Hants.

Rhododendron × 'White Glory' var. 'Pink Glory' (*R. irroratum* × *R. Loderi*). **A.M.** April 16, 1940, as a hardy flowering plant for the woodland garden. The spherical truss, up to 7 inches across, is composed of up to eighteen funnel-shaped flowers, 3½ inches wide by 2 inches deep. The flowers are blush-pink, stained without Rose Madder (H.C.C. 23/3). The dark green, oblanceolate, glabrous leaves are up to 4 inches long by 1½ inch wide. Raised by the Dowager Lady Loder and shown by Sir Giles Loder.

Rhododendron × 'White Wings.' A.M. April 18, 1939. Sent by C. R. Scrase-Dickins, Esq., V.M.H. A hybrid between *R. bullatum* and *R. ciliicalyx*, with loose trusses of three or four widely funnel-shaped flowers 4½ to 5 inches wide by 2½ inches deep, pure white with a small greenish-yellow blotch at the base, within; leaves ovate-lanceolate, rugose and dark green above, pale green and thickly scaly below, coarsely ciliate.

Rhododendron × 'Zuyder Zee' var. 'Jersey Cream.' A.M. May 16, 1939. A hybrid between *R. campylocarpum* and *R.* × 'Mrs. Lindsay Smith,' sent by J. J. Crosfield, Esq., as a hardy flowering shrub for general garden use. The compact spherical trusses contain about twenty funnel-shaped cream flowers up to 3½ inches wide. The obtuse, elliptic leaves, slightly cordate at the base, are up to 4 inches long by 2½ inches wide, glabrous.

List of Members

RHODODENDRON GROUP

H.R.H. The Princess Royal, Harewood House, near Leeds.
H.R.H. The Crown Prince of Sweden, Royal Palace, Stockholm.

Aberconway, Rt. Hon. Lord, Bodnant, Tal-y-Cafn, North Wales.
Ackers, Charles P., Huntley Manor, Gloucester.
Adams-Acton, Murray, Alderbourne Manor, Gerrards Cross, Bucks.
Adie, Clement J. M., Kings Copse, Wentworth, Surrey.
Annesley, Richard G., Annes Grove, Castletownroche, Co. Cork.
Armytage-Moore, H., Rowallane, Saintfield, Co. Down.
Atkinson, W. Penrose, Handsworth Nurseries, Sheffield.
Bacher, John G., 1920 N.E. Seventh St., Portland, 12, Oregon, U.S.A.
Baker, H. L. P., Wayford Manor, Crewkerne, Somerset.
Balfour, Miss A. G., Balbirnie, Markinch, Fifeshire.
Bartholomew, Sir C. E., Margery Wood, Lower Kingswood, Surrey.
Bean, W. J., 2 Mortlake Road, Kew, Surrey.
Bell, Sir Humphrey, Heather Knowe, Crowborough, Sussex.
Benthall, Sir Edward, 3 Queen Victoria Road, New Delhi, India.
Bentley, W., Quarry Wood, Burghclere, Newbury, Berks.
Blake, Mrs. Anson S., Rincon Rd., Arlington Avenue, Berkeley, California, U.S.A.
Bobbitt, A. H., 106 Howard Rd., Walthamstow, E.17.
Bolitho, Lt.-Col. E. H. W., Trengwainton, Heamoor, Cornwall.
Bond, A. P., 36, Albany Road, Leighton Buzzard, Beds.
Bonnell, Frank B., Route 4, Box 90, Renton, Washington, U.S.A.
Bowers, Dr. Clement G., Maine, Broome County, New York, U.S.A.
Bowman, Dr. Paul J., 160 Brandon Way, Fort Bragg, California, U.S.A.
Boyle, Admiral Sir Algernon, 11 Cranley Gardens, S.W.7.
Boyle, J. A., 29 Prospect Rd., Southborough, Tunbridge Wells.
Brandt, Lester E., 711, 7th Avenue, S.W., Puyallup, Washington, U.S.A.
Brennen, James, Route No. 1, Box No. 11, Woodway Park, Edmonds, Washington, U.S.A.
Brown, Mrs. L. S., Craignahullie, Skelmorlie, Ayrshire.
Bryce, Roland L'E., Ilnacullin, Glengarriff, Co. Cork.
Buchanan, Mrs., Corsewall, Stranraer, Wigtownshire.
Bulkley, G., Oxmans Ford, Ramsdell, Basingstoke.
Burtis, H. S., 17450, 37th Avenue N.E., Seattle 55, Washington, U.S.A.
Campbell, Sir George, Crarae Lodge, Minard, Argyll.

Campbell, Mrs., Arduaine, Argyll.
Campbell, Mrs., Quarrhurst, Binstead, Ryde, I.O.W.
Carte, R. D'Oyly, Coleton Fishacre, Kingswear, Dartmouth, Devon.
Cave, Sir Edward C., Sidbury Manor, Sidmouth, Devon.
Charlton, Colin, Summervale Nurseries, Tunbridge Wells.
Chinnock, W. J., Stonelands, Dawlish, S. Devon.
Clarke, Douglas, Hartridge House, Cranbrook, Kent.
Clarke, Edmund S., Pickwell, Bolney, Sussex.
Clarke, Roy W., 2101 Olympia Avenue, P.O. Box 1157, Olympia, Washington, D.C., U.S.A.
Clarke, Col. Stephenson R., Borde Hill, Haywards Heath, Sussex.
Clements, E. Hamilton, " Holm Lea," 33 Davenport Avenue, Hessle, E. Yorks.
Clive, Col. Harry, Willoughbridge, Market Drayton, Salop.
Cloake, W. J. Kilna, Cargilln, Saltash, Cornwall.
Coe, Major Charles G., 3–7 Southampton St., Strand, W.C.2.
Collett, Lady, Ballamanough, Sulley, Isle of Man.
Colyer, J. R., Binton Cottage, Seale, Farnham, Surrey.
Comber, J., Nymans Gardens, Handcross, Sussex.
Congreve, Ambrose, Winkfield Manor, Winkfield Row, Ascot, Berks.
Conybeare, B. M., Platway, Shaldon, Teignmouth, Devon.
Cook, William D., Eastwoodhill, Private Bag, Gisborne, New Zealand.
Cooke, Randle B., Kilbryde, Corbridge-on-Tyne.
Cooper, Wm. H., Shenstone Court, Berkhamsted, Herts.
Cowdray, The Viscountess, Cowdray Park, Midhurst, Sussex.
Cowell-Smith, Major Robert, Knappach, Banchory, Kincardineshire.
Cox, Euan H. M., Glendoick, Glencarse, Perthshire.
Craddock, Mrs. C. J., 814 J. St., Eureka, California, U.S.A.
Craddock, W. G., Redlands, Hempstead Road, Watford, Herts.
Cranfield, W. B., East Lodge, Enfield Chase, Middx.
Crawford & Balcarres, The Earl of, Haigh Hall, Wigan, Lancs.
Curtis, Chas. H., 24 Boston Manor Rd., Brentford, Middx.
Curwen, Rev. R. Basil, 16A Calverley Park Gardens, Tunbridge Wells.
Dawson, Col. Rupert G., Orchil, Braco, Perthshire.
de Belder, Robert, Dewinasteenway, 60 Mortsel, Antwerp, Belgium.
De Clements, Ralph C., Route 2, Bremerton, Washington, U.S.A.
Dekens, H. G., Boskoop, Holland.
De Keyser, Dr. Arthur, 16 Rue de lay Sablonniere, Brussels, Belgium.
Demoulivs, H. D., Copthorne, Fawley, Hants.
de Rothschild, Major Edmund L., Exbury House, Exbury, Southampton.
Dickson, Miss A. M., Woodhouse, Dunscore, Dumfriesshire.
Digby, Rt. Hon. Lord, Minterne, Dorchester, Dorset.
Director, The (A. W. Jessup), Melbourne Botanic Gardens, South Jarra, S.E.1, Victoria, Australia.

Donoughmore, The Earl of, Chelwood Beacon, Chelwood Gate, Sussex.
Dorrien-Smith, Major A. G., Tresco Abbey, Isles of Scilly, Cornwall.
Downes, Arthur C., 49 Yangur Way, Burgh Heath, Tadworth, Surrey.
Druecker, John S., P.O. Box 511, Fort Bragg, California, U.S.A.
Du Pont, H. F., Winterthui, Delaware, U.S.A.
Dunleath, Rt. Hon. Lord, Ballywalter Park, Co. Down.
Dykhuis, J., Felix & Dykhuis, Boskoop, Holland.
Earle, Reginald, Busbridge Hall, Godalming, Surrey.
Egerton, W. F., Gawithfield, Greenodd, Ulverston.
Eley, Charles, East Bergholt Place, Suffolk.
Elmhurst, Leonard K., Dartington Hall, Totnes, S. Devon.
English, Carl S., 8546, 30th Avenue, N.W., Seattle, Washington, U.S.A.
Evans, Brig. J. M., Wishanger Lodge, Churt, Farnham, Surrey.
Farrard, Mrs. Beatrix, Reef Point, Bar Harbor, Maine, U.S.A.
Farrell, A. E., Birchenholt, Crowthorne, Berks.
Ferguson, T. D., Ballyvally House, Bainbridge, Co. Down.
Fernie, Lt.-Col. W. James, Ladymead, Old Bursledon, nr. Southampton, Hants.
Findlay, R., Estate Office, Ascot Farm, Ascot, Berks.
Findlay, B., Caer Estyn, Cairgwle, near Wrexham, N. Wales.
Fisher, C. Howard, 26 Great College Street, S.W.1.
Fleming, W., Borde Hill Gardens, Haywards Heath, Sussex.
Fogg, H. G., Witham, 11 Cadogan Gardens, Winchmore Hill, N.21.
Foland, Melton A., 5032 Humphrey Boulevard, Portland, Oregon, U.S.A.
Fort, A. D., 16 Slades Hill, Enfield, Middlx.
Fortescue, The Countess, Castle Hill, Barnstaple.
Fraser, Miss L. S., Orchard Cottage, Abinger Common, Dorking.
Fredrickson, A. P., 19,401, Second S.W., Seattle, Washington, U.S.A.
French, Brig. C. N., Daira More, Moor Park, Farnham, Surrey.
Frislbie, L. F., Box 132, Puyallup, Washington, U.S.A.
Frye, Mrs, Else M., 2215 East 46th St., Seattle, Washington, U.S.A.
Fuller, Col. N. B., Britannic House, Finsbury Circus, E.C.2.
Fulmer, W. L., 505 Boylston North, Seattle, Washington, U.S.A.
Gaisford-St. Lawrence, T. J., Howth Castle, Co. Dublin, Eire.
Gates, Mrs. Everard, Nore, Hascombe, Godalming, Surrey.
Gick, Dr. Royal, 1038 Williamette St., Eugene, Oregon, U.S.A.
Gill, Bernard, Himalayan Nurseries, Penryn, Cornwall.
Gilmer, Mrs. Knox, Boulcott St., Wellington, New Zealand.
Goddard, Mrs. J. N., Camp Hill, near Newcastle, Staffs.
Gore, Ralph, Woodhill, Virginia Water, Surrey.
Grace, George D., American Rhododendron Assoc., 10817 S.W. 35 Drive, Portland, Oregon, U.S.A.
Graham, Donald G., Henry Building, Seattle, Washington, U.S.A.

Gray, Louis, Sunningdale Nurseries, Windlesham, Surrey.
Greenwood, Mrs. V. J. Swarcliffe, Birstwith, Harrogate.
Greig, E. J., Royston, Vancouver Island, B.C., Canada.
Grey, The Countess, Howick, Alnwick, Northumberland.
Grootendorst, Herman J., 233 Burg, Colynstr., Boskoop, Holland.
Guinness, Arthur R., Hawley Place, Blackwater, Hants.
Hadden, Norman G., Underway, West Porlock, Somerset.
Halswell, Major Wyndham, Wylmington House, Honiton, Devon.
Hamilton, The Marquis of, Barons Court, Co. Tyrone.
Hamilton, Capt. Lord Claud N., Beechwood, Faygate, Sussex.
Hamilton, W. F., Pylewell Park Gardens, Lymington, Hants.
Hanger, F., Royal Horticultural Society, Wisley, Woking, Surrey.
Hardy, Major A. E., Sandling Park, Hythe, Kent.
Hardy, Savile C., Kilcoroon, Donaghadee, Co. Down.
Harewood, The Earl of, Harewood House, Leeds.
Harms, H. H., Route 3, Box 1320, Portland, 6, Oregon, U.S.A.
Harrow, R. L., Munstead Orchard, Godalming, Surrey.
Hartridge, C. E. A., Bickwell House, Sidmouth, Devon.
Haskins, H. S., Bourne Valley Nurseries, Coy Pond Road, Bournemouth.
Hay, T., Stoatley Cottage, Bunch Lane, Haslemere, Surrey.
Haworth-Booth, M., Abesters Farm, Blackdown, Haslemere, Surrey.
Heal, Harold, Darwell Hill, Netherfield, Battle, Sussex.
Heath, Capt. F. R., Brantwood, Littleton Road, Harrow.
Hedley, Mrs. E. L., Briery Close, Windermere, Westmorland.
Henny, John, Box 212, Brooks, Oregon, U.S.A.
Henny, Rudolf, Box 162, Brooks, Oregon, U.S.A.
Hill, Mrs. Philip, Windlesham Moor, Windlesham, Surrey.
Hillier, H. G., West Hill, Winchester, Hants.
Hilling, T., The Nurseries, Chobham, Woking, Surrey.
Hindley, The Hon. Elizabeth, Meads Cottage, Rondle Wood, Liphook, Hants.
Hoare, Sir Henry H. A., Stourhead, Warminster, Wilts.
Holman, A. T., Chyverton, Truro, Cornwall.
Holman, J. L. Roswarne, Camborne, Cornwall.
Hopkins, Frank B., Easter Ogil, By Forfar, Angus.
Horlick, Lt.-Col. J. N., Titness Farm, Sunninghill, Berks.
Houldsworth, Capt. James F. H., Coltness, Lanarkshire, Scotland.
Howlett, John W., Ravenscourt, Lymington, Hants.
Hughes-Onslow, Commander, Alton Albany, Girvan, Ayrshire.
Hutchinson, Dr. J., Royal Botanic Gardens, Kew, Surrey.
Hutchinson, W., Ridgeland House, Finchampstead, Berks.
Ihrig, H. G., Seattle, Washington, U.S.A.
Ingram, Capt. Collingwood, The Grange, Benenden, Cranbrook, Kent.
Ivens, A. J., Yaverland, Kenmore Drive, Timperley, Cheshire.
Jacobs, Claude, Abbey Spring, Beaulieu, Hants.

Jacobs, Edward S., 20 Metchley Park Road, Edgbaston, Birmingham.
James, C. A., 3201 South Durangs St., Tacoma, Washington, U.S.A.
James, Delbert W., Route 4, Eugene, Oregon, U.S.A.
Jarvis, Sir John, Hascombe Court, Godalming, Surrey.
Jessel, Sir George, Ladham, Goudhurst, Kent.
Johnson, A. T., Bulkeley Mill, Tyn-y-Groes, Conway, N. Wales.
Johnson, Mrs. A. T., Bulkeley Mill, Tyn-y-Groes, Conway, N. Wales.
Johnson, Mrs. Ernest, Ashton Hayes, Chester.
Jones, G. H., 44 Dudley Street, Leighton Buzzard, Beds.
Kenneth, Mrs., Stronachullin, Ardrishaig, Argyll.
Kenyon-Slaney, Capt. R. O. R., Hatten, Shifnal, Shropshire.
Kleinwort, Ernest G., Heaselands, Haywards Heath, Sussex.
Knight, F. P., Messrs. Notcutt, The Nursery, Woodbridge.
Lawrence, Iris Lady, Springwood, Godalming, Surrey.
Leconfield, The Lady, Petworth House, Petworth, Sussex.
Le Marchant, Herbert C., Norney Grange, Eashing, Godalming.
Lee, Frederic P., 6915 Glenbrook Road, Bethesda, Maryland, U.S.A.
Lem, Halfdan, 19, 215 Aurora Avenue, Seattle, Washington, U.S.A.
Leney, Alfred C., Rhodes Farm, Sellindge, Ashford, Kent.
Limerick, The Earl of, Chiddingley, West Hoathley, Sussex.
Lincoln, Irving B., 221 American Bank Buildings, Portland, Oregon, U.S.A.
Linton-Bogle, F. W., Bentley House, Hassocks, Sussex.
Lockhart, Prof. R. D., 25 Rubislaw Den North, Aberdeen.
Loder, Sir Giles, Leonardslee, Horsham, Sussex.
Loder, Lt.-Col. Giles H., Dencombe, Handcross, Sussex.
Londonderry, The Marchioness of, Mount Stewart, Co. Down, Ulster.
Lysaght, Mrs. M. E., Hazelwood, Mallow, Co. Cork, Eire.
Macdonald, Henry L., Dunach, Oban, Scotland.
Macfie, D. T., *Gardening Illustrated*, 2–10 Tavistock St., W.C.2.
Mackay, John M., 18 Rolston Rd., Bearsden, Glasgow.
Mackworth-Praed, Lt.-Col. C. W., Castletop, Burley, Hants.
McLain, D. W., Box 99, Milton, Washington, U.S.A.
McLaren, Hon. Charles, Bodnant, Tal-y-Cafn, Denbighshire.
MacNiven, Dr. Angus, 1055 Great Western Road, Glasgow.
Madison, Harry R., 14535 Sixth N.E., Seattle, Washington, U.S.A.
Malcolm, Ronald, Walton Manor, Tadworth, Surrey
Martin, Alastair B., " Guennol," Glen Head, Long Island, New York, U.S.A.
Marsh, S. J., Ardens, Nutley, Uckfield, Sussex
Matheson, Lady Elizabeth, Duirinish Lodge, Kyle, Ross-shire
Messel, Lt.-Col. L. C. R., Nymans, Handcross, Sussex
Mill, C. King, Woodside, Howth, Dublin, Eire
Milvain, Lt.-Col. R., Eglingham Hall, nr. Alnwick, Northumberland.
Moffill, James K., 86 Seaview Avenue, Piedmont, California, U.S.A.

Montrose, Duchess of, Brodick Castle, Isle of Arran, Scotland.
Munster, The Earl of, Sandhills, Bletchingley, Surrey.
Napier, Miss Isabel N., Knotcrook, Wimborne, Dorset.
Neale, Mrs. Ida D., Nant Fawr, Lisvane, Glam.
Neilson, Mrs. Hugh, Chapeltoun, Stewarton, Ayrshire.
Nelson, B. F., Suguamish, Washington, D.C., U.S.A.
Newgass, Lt. Commander H., Seaborough Court, Crewkerne, Somerset.
Nicholls, B. E., Horsegrove, Wadhurst, Sussex.
Noble, Michael, A. E., Ardkingleas, Cairndow, Argyll.
Norman, The Hon. Lady, Ramster, Chiddingfold, Surrey.
Norman, Willoughby, Pickwell Manor, Melton Mowbray, Leics.
Oldham, W. R., Gatcombe Rectory, Newport, Isle of Wight.
Osborn, Arthur, Orchard House, Shinfield, nr. Reading.
Palmer, Mrs. Don H., Willow-Don, 6956, Fifty-fifth South, Seattle, Washington, U.S.A.
Pape, Miss Dorothy C., Grindon Corner, Notham, North'd.
Pattman, C. H., 25 Brueton Avenue, Solihull, Warwicks.
Pearce, Arnold, Rhoder House, Holt Wood, Aylesford, Kent.
Pearce, R. A., State Flower Nursery, Bothell, Washington, U.S.A.
Penrhyn, Rt. Hon. Lord, Penrhyn Castle, Bangor, N. Wales.
Perans, Capt. A. A., Box 50, Picton, New Zealand.
Percival, Edward, West Porlock, Minehead, Somerset.
Perkins, Milo, 723, 15th Street N.W., Washington, D.C., U.S.A.
Phillips, G. A., Bridgetown Nurseries, Banbury Rd., Stratford-on-Avon.
Pinckney, Major G. H., The Cottage, Bagshot, Surrey.
Proctor, D. Fay, R.F.D.3., Everett, Washington, U.S.A.
Raffill, C. P., Royal Botanic Gardens, Kew, Surrey.
Ramsden, Sir John F., Bulstrode, Gerrards Cross, Bucks.
Rea, Lady, Gatehouse, Eskdale, Cumberland.
Reford, Mrs. R. Wilson, Esteran Lodge, Grand Metis, Co. Matane, P.Q., Canada.
Renton, John T., Branklyn, Perth.
Reuthe, E., Fox Hill Hardy Plant Nursery, Keston, Kent.
Ridgway, C. E., 115, Boren Avenue North, Seattle, Washington, U.S.A.
Rogers, A. E., Angle House, Seal, Kent.
Rogers, Dr. W. S., Brackenhill, Holt Wood, Aylesford, Kent.
Rose, F. J., Townhill Park Gardens, Bitterne, Southampton.
Rosebery, Countess of, Cleveland House, Newmarket, Suffolk.
Ross, D. R., 894, N. Summer St., Solem, Oregon, U.S.A.
Rotherwick, Rt. Hon. Lord, Tylney Hall, Rotherwick, Basingstoke, Hants.
Russell, J. P. C., Sunningdale Nurseries, Windlesham, Surrey.
Rye, R. W., Lochinch Gardens, Castle Kennedy, Stranraer, Wigtownshire.
Sale, O. R. C., c/o Messrs. Sale & Son., Wokingham, Berks.

Savage, Glenn N., 1136 S.E. 50th Ave., Portland, 15, Oregon, U.S.A.
Savill, Eric H., Rangers Lodge, The Great Park, Windsor.
Seabrook, C. Courtney, c/o Messrs. Koster & Co., Bridgton, R.F.D.5, New Jersey, U.S.A.
Skinner, Sydney A., Rookwood, Crowthorne, Berks.
Slocock, O. C. A., Goldsworth Nursery, Woking, Surrey.
Slocock, W. A., Goldsworth Nursery, Woking, Surrey.
Smith, D. H. J., Booths St., Darlaston, S. Staffs. (Rep. Rupery Owen Gard. Soc.)
Smith, Capt. E. M. C. Abel, 2550 Massachusetts Ave., Washington, D.C., U.S.A.
Smith, Owen H., Old Hall, Langham, Oakbourn, Rutland.
Smith, Sir William Wright, Royal Botanic Gardens, Edinburgh.
Smythe, Lt.-Col. F. S., Yew Tree Cottage, Colgate, Sussex.
Sparrow, Mrs., Chartnoll, Beaminster, Dorset.
Spence, H. G., Mountboy, Montrose, Scotland.
Spender-Clay, Hon. Mrs., Ford Manor, Lingfield, Sussex.
Stein, Miss A. H., Monkwood, 10, Kilgraston Road, Edinburgh.
Stephens, Theo. A., 34 Southampton St., Strand, W.C.2
Stern, Col. F. C., Highdown, Goring-by-Sea, Sussex.
Stevenson, J. B., Tower Court, Ascot, Berks.
Stewart, A. J. M., Ferndown, Nurseries, Wimborne, Dorset.
Stopford, Miss D. E., Polmount, Radlett, Herts.
Strathcona & Mount Royal, The Lord, 10 Balfour Mews, W.1.
Struther, Mrs. J. G., Ardmaddy Castle, by Oban, Argyll.
Swaythling, Rt. Hon. Lord, 114, Old Broad Street, E.C.
Thacker, T. C., Knowle Nurseries, Knowle, Warwickshire.
Thoburn, Hugh F., Pympne Manor, Benenden, Kent.
Tod, Dr. Henry, Carnethy, Seafield, Roslin, Midlothian.
Trent, Rt. Hon. Lord, Lenton House, Lenton, Nottingham.
Veitch, Miss A. M., The Royal Nurseries, Exeter.
Venning, Charles E., Boscowan, Heamoor, Cornwall.
Vivian, The Hon. Lady, Glynn, Bodmin, Cornwall.
Walkden, Miss A., The Raft, Derbyshire Road, Sale, Cheshire.
Walkden, H., The Raft. Derbyshire Road, Sale, Manchester.
Walker-Heneage-Vivian, Admiral A., Clyne Castle, Blackpill, Swansea.
Wallace, John A. A., Lochryan, Stranraer, Wigtownshire.
Wallace, R. W., The Old Gardens, Tunbridge Wells.
Waterer, G. Donald, Knap Hill Nursery Ltd., Woking.
Watson, W. R. M., Grangehill, Berth, Ayrshire.
Watts, James A., 26 Minosa Road, Liverpool.
West, A. W., Ardnamona, Lough Eske, Co. Donegal.
Whitaker, W. I., Pylewell Park, Lymington, Hants.
Whitelegg, G. G., The Nurseries, Chislehurst, Kent.
Wickham, Mrs. T., Lynchfield House, Bishops Lydeard, Somerset.

Wigan, Mrs. J. T., Danbury Park, Chelmsford, Essex.
Williams, A. M., Werrington Park, Launceston, Cornwall.
Williams, Charles, Caerhays Castle, Gorran R. S. O., Cornwall.
Williams, G. W., Shernfold Park, Frant, Sussex.
Williams, M. P., Lanarth, St. Keverne, Cornwall.
Winn, A. E. Tremough Gardens, Penryn, Cornwall.
Younger, H. G., Belhaven House, Dunbar.

INDEX

Figures in bold type refer to illustrations.
An asterisk indicates an Award after trial at Wisley.
A small (a) *after the name indicates an Azalea.*

RHODODENDRON HANDBOOK

THE RHODODENDRON HANDBOOK will be published in the first half of 1947 and will contain the Lists of Rhododendrons formerly published in the Year Book of the Rhododendron Association. This will include the List of Rhododendron Species, which contains a description of each species and a classification for hardiness together with asterisks for merit, and Lists of Synonyms, Collector's Numbers, Hybrid Rhododendrons, Hybrid Azaleas and the Rhododendron Stud Book. These lists have been completely overhauled with the addition of many new hybrids, and it is proposed that the new edition should only be published quinquennially.

PRICE ABOUT 15s.

ORDERS MAY BE SENT NOW TO THE SECRETARY
ROYAL HORTICULTURAL SOCIETY,
VINCENT SQUARE, S.W. 1