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R.H.S. RHODODENDRON AND CAMELLIA YEAR BOOK 1967

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THE RHODODENDRON AND CAMELLIA YEAR BOOK 1967

THE ROYAL HORTICULTURAL SOCIETY

This issue contains articles on rhododendrons in four gardens, each of which differs very much from the other. Capt. Collingwood Ingram writes about the hybrids he has raised to grow in his Kentish garden; Mr. Arthur Pack-Beresford describes the many mature plants of large-leafed and tender species at Ballywalter Park and in his own garden at Woburn Lodge, both gardens being on the favoured Ards Peninsula, Co. Down; finally Mr. Ian Hedge gives an account of the garden at Larachmhor, Argyllshire which Mr. Hedge and some of his colleagues at the Royal Botanic Garden, Edinburgh, are rehabilitating after years of neglect. In his article Mr. T. H. Findlay recommends Evergreen Azaleas for planting in the Home Counties while Mr. Percy Wiseman also discusses these attractive plants. Mr. E. H. M. Cox asks in an article if there are any more *Rhododendron* species while Mr. Michael Black reports on those species he collected recently in New Guinea, some of which may be new to Science.

In the Camellia Section of the Book Sir Giles Loder, Bt. reports on camellias at Leonardslee where he has been holding his own Trial, both out of doors and under glass. Mr. A. W. Headlam describes camellias in Melbourne, Australia, where *C. reticulata* plays an important part in hybridization. Descriptions of new *Camellia* and *Theopsis* species from China are reprinted in this book, by permission of Dr. Hu.

Reports on Camellia and Rhododendron Shows are also included as are many "Notes". The book contains five coloured plates and many black-and-white illustrations.

COVER ILLUSTRATION
Rhododendron lanigerum
Colour photograph by
J. E. Downward

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Photo: J. E. Downward

Rhododendron lanigerum. A very fine form shown as *R. peramoenum* by Sir Ralph Clarke, K.B.E., Borde Hill, Haywards Heath, Sussex on 22nd February, 1966

THE RHODODENDRON AND CAMELLIA YEAR BOOK

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FOREWORD

WITH this issue, the Rhododendron and Camellia Year Book comes of age under the sponsorship of The Royal Horticultural Society. It may be interesting to review the other activities by which the Society helps in the improvement and increased popularity of these two genera.

The Hardy Hybrid trials of Rhododendrons, carried on at Wisley since the war, create much interest in their flowering season and have been described by Frank Knight in the 1963 issue. New cultivars are constantly being added, and a dwarf-growing section, especially suited for the smaller garden, is being added. Nor must the evergreen azalea trials just opposite be missed, nor the deciduous azaleas, now in a new and more spacious setting behind the Bowes Lyon Memorial Pavilion. The Rhododendron Committee inspects these trials several times in the flowering season and their recommendations for awards are published in the Year Book. Though camellias have no actual trials at Wisley, a large collection, grown in pots, and clearly labelled to help in identification, provides a splendid show in the greenhouses in early spring. Many more cultivars of *C. japonica* are planted out around Battleston Hill, together with a collection of *C. williamsii* to help in distinguishing between the different forms.

The Rhododendron and Camellia Group normally has a visit to some famous garden or nursery every year; the description of their recent tour to Scotland appears in this issue.

However, the Rhododendron and Camellia Shows at the Society's Halls are probably the highlight of the year for growers of these two genera. The recently introduced Rhododendron Competition, four to six weeks before the main Show, has demonstrated the wealth of early flowering species and hybrids, whilst the main Show, with its 100 odd competitive classes and colourful trade exhibits, fills the hall to capacity. The Camellia Show has also recently been divided into two sections. The early one, for both indoor and outdoor blooms, the later one confined to outdoor-grown flowers only. The most interesting aspects of these shows are written up in the Year Book.

The Rhododendron and Camellia Committee meets every

fortnight from February to July to judge new plants for awards. The full descriptions of these, frequently with photographs, also appear in the Year Book, and serve to keep enthusiasts up-to-date with recently introduced and newly raised forms.

With regard to this year's issue, I will not try and mention any article specifically, except to comment on Rhododendron Notes. I am glad to see so many contributors and hope for even more in years to come. In pre-war days, the Rhododendron Society's publication was largely composed of notes and writings from its members, and it would be nice if more would contribute similar notes on either genera for insertion in the Year Book.

GILES LODER

THE GARDEN OF LARACHMHOR, ARISAIG

By IAN C. HEDGE

ALTHOUGH most of the large gardens of West Scotland have at one time or another been featured in print, very little indeed has ever been published about Larachmhor. On the one hand this is surprising, as the garden has an interesting history and contains many noteworthy plants, yet on the other it is not to be wondered at because for many years Larachmhor was in a state of gradual decay and many plants were dead or being choked by the rampant natural vegetation. Within the last four years, however, the garden has been leased by Miss Becher of Arisaig Estate to a group of six enthusiasts, all on the staff of the Royal Botanic Garden, Edinburgh, who, in their spare time, during weekends and holidays, are trying to preserve the fine collection of rhododendrons and other plants and generally revivify Larachmhor.

The originator of the garden was John A. Holms, a Glasgow business man of many and varied interests. He had fine collections of pictures, porcelain, silver and carpets, and in these fields was a recognised authority. But his main love was gardening. A founder member of the Rhododendron Association and an enthusiast in the genus for many years, his name was recently commemorated by the *R. arboreum* cultivar 'John Holms' which received an Award of Merit in 1957. At his home at Formakin near Bishopton, Renfrewshire, he created a fine and well-known garden in the early 1920's. It was here at Formakin that his love of rhododendrons was born and matured. Soon his collection became too extensive for his garden and he started to look for a better site with a softer climate and a more natural setting. After considering many parts of western Scotland, he finally settled on Arisaig and, in 1927, acquired the lease of 28 acres of what was virtually natural woodland. Situated about a mile inland from the sea at Arisaig village, a small part of the land had been cultivated at one time as a kitchen garden for a nearby house, but with this exception and a few planted hardwoods and conifers, the vegetation was natural. Larachmhor, Gaelic for a big

area or site, then contained only large forest trees of beech, oak, lime, sycamore, ash, birch and some alders lining the burn. To many people this would have seemed an unlikely area in which to create a garden and a daunting task to undertake. Holms, however, realised the potential of the stream, the varying contours and the massive trees. With tremendous enthusiasm he began the genesis of a garden. As with his interests in the arts and antiques, everything was done on a lavish scale. He moved from Formakin most of his considerable collection and set about assembling at Arisaig as large a rhododendron collection as he possibly could. His accession books at this time are fascinating reading. Everything was carefully listed—the name of the species, collector's number, its provenance, its price and any general remarks. Truckloads of plants arrived by rail at Arisaig, were taken down by lorry to the garden, carefully sited and planted. Specimens up to 8 feet or more would arrive from as far as the SW of England. Methodically, he tried to obtain every available species from nurseries and private collectors throughout Britain. During this time, his home was still at Formakin, as there was no house at Larachmhor, and his visits to Arisaig were, no doubt, less frequent than he would have desired.* Although Holms started building a house at Larachmhor this was not completed at the time of his death and the skeleton of bare brick walls still stands. Despite all his difficulties of travel, accommodation and labour, he assembled, in an incredibly short time, what must have been at that time one of the largest and finest collections of rhododendrons anywhere in Scotland. Although his main interest was certainly in rhododendrons, he also planted many of the good west coast plants such as *Embothrium*, *Gevuina*, *Weinmannia*, *Tricuspidaria*, *Lomatia*, *Cunninghamia* and *Magnolia*. Today, there are many fine specimens of these plants to be seen. He also planted a large number of western Hemlock Firs (*Tsuga heterophylla*) both as shelter from the west winds and to form glades for the rhododendrons. Bamboo he also used as a shelter plant. By the early 1930's most of the planting was completed and the new garden gradually started to mature. For Holms, one of the highlights of this time must have been the flowering in April 1933 of *R. sinogrande*—one of the first outdoor flowerings in Scotland. Dr. Cowan has related elsewhere† how Holms came down to

* An interesting sidelight on the times was that in the 1930's the Sunday excursion return rail fare from Glasgow to Mallaig was 9/-!!

† The Journeys and Plant Introductions of George Forrest, edited by Dr. Cowan, Royal Horticultural Society, 1952.

Photo: R. M. Adam

FIG. 1.—One of the first trusses of *R. sinogrande* to flower outdoors in Scotland, brought by Mr. Holms, of Larachmhor, to the Royal Botanic Garden, Edinburgh, in April, 1933.

Edinburgh by train from Arisaig and surprised the promenaders of Princes Street by marching in triumph along that famous street, *en route* for the Botanic Garden, proudly bearing aloft a huge leafy flowering truss of his treasure. Although he continued his interest in Larachmhor in the later years of the 1930's, his tremendous initial momentum was spent and his plans were not completed at the time of his death in May 1938. A year later, immediately before the outbreak of war, a sale took place of the plants of Larachmhor. The carefully compiled catalogue ran to 15 closely printed pages. Numerous collectors numbers and the names of many rarely-grown species occur on these pages. At the time of the sale and subsequently, many of the rhododendrons left Larachmhor and found their way to gardens throughout Britain. Much, however, was left either because of the outbreak of war or the physical difficulty in shifting the plants. Until 1959, one of Holms' gardeners, the Irishman John Brennan looked after Larachmhor. He lived in the heart of the garden in a small wooden bothy, quite devoid of any modern conveniences, and

became a well-known character to the local people and to the numerous visitors to the garden. After Brennan's death, the new tenants in the early 1960's found Larachmhor a fascinating place but in urgent need of restoration. Tall birch and sycamore were everywhere thriving to the detriment of the rhododendrons, carefully dug drains were silted up, fallen and dead trees and shrubs all combined to give an air of decay. In some areas it was impossible to reach the rhododendrons. The first stage in the renovation, involving cutting down and clearing innumerable saplings, removing overhanging branches and drain digging, has been a major task, and even now is not fully completed. Complementary with the clearing has been the naming of the plants. A fair number of them still bear the original lead labels by which it is usually possible with Holms' accession books to trace its provenance and name, but with most of the rhododendrons the identification marks have been lost. Gradually, however, with the continued help of Mr. Davidian (without whose collaboration this article would never have been written) the process of naming goes on, and it is now possible to give a fair idea of what the garden contains and to mention some of the more outstanding plants.

At the present count, there are about 140 species of *Rhododendron* represented compared with the 200 or so listed in the 1939 catalogue. Although they are scattered throughout the area of Larachmhor, four main areas of interest can be recognised: the burn, the flat garden, the hill and the bamboos.

Starting our tour in the area of the burn, pride of place should probably go to the *R. sinogrande*, whose claim to fame has already been mentioned. Now a big spreading tree of about 25 feet high, it was covered with flower trusses in late March 1966, which later were destroyed by the exceptionally severe frosts of early April. Across the stream from the *R. sinogrande* is a fine trio of the rusty leaved *R. eximium* situated on a steep bank and thriving in the thick beech leaf mould. Lower down the burn are many good rhododendrons, of which one can mention a fine *R. calophytum* about 16 feet high and 20 feet across, a vigorously growing *R. grande* and a *R. griffithianum* with a beautiful smooth reddish trunk. Flourishing nearby are *Triscuspidaria*, *Eucryphia*, *Hoheria* and *Trachycarpus*. In association with them is a clump 10 feet high of four *R. habrotrichum* with pale rose corollas and large crimson blotches at their bases. Nearby is a good plant of 'Sir Charles Lemon' about 16 feet high with a very attractive leaf

indumentum that starts white in colour but later turns to a rich reddish cinnamon. Among some of the lower growing plants mention should be made of a very free-flowering clump of *R. ciliatum*, always covered with white flowers in March, and a sturdy plant of *R. wiltonii*, 7 feet high and 14 feet across, with deep pink flower buds and paler coloured corollas. Across the stream from the *R. wiltonii* are two noteworthy plants. One is a 24 feet high *R. arboreum* f. *roseum* of narrow columnar shape and the other is a tall growing *R. cinnabarinum* var. *roylei* with large waxy cherry-plum coloured flowers. On higher ground above the sheltered burnside and with a more open exposure is a tall, 18 feet high, *R. auriculatum* and close to it a big clump of *R. crassum* about 12 feet high. Dwarfing everything else on this higher ground are four gigantic *Abies alba*, probably about a century old, the largest of which is 15 feet in circumference at chest height. Although the burnside area of the garden has many fine plants in it, the general impression it gives is not so much of individual

FIG. 2.—*R. wiltonii* at Larachmhor
Photo: Ian Hedge

specimens but rather natural healthy rhododendron vegetation thriving in sheltered wind-free conditions among tall deciduous trees.

In contrast to the area of the stream, there are few tall forest trees in the flat garden. Flanked on two sides by a tall beech hedge, protected on the east by the slope of the hill and with a fairly open outlook to the south, this is the maximum concentration area for rhododendrons. There is, in fact, a plethora of plants here, as many were planted closely in lines and never subsequently moved. As a result, many of them have been drawn up to the light and overhead their leaves form a dense canopy. There are, however, many exceptions to this and, fortunately, one of them is a fine plant of *R. fortunei*—not a common species in cultivation—measuring about 11 feet high and with a similar spread. Another is a 12 feet high *R. hookeri* with deep crimson flowers and a smooth lilac grey trunk. There are many plants of *R.* × *loderi* in the flat garden and although Holms on the whole does not seem to have been very much in favour of hybrids, *loderi* was clearly a favourite of his because throughout the garden there is a great selection of different forms that every year are covered with blossom. *R. argyrophyllum* var. *cupulare* with its silvery lower leaf indumentum is another good plant that flowers freely every year. Near to it soars a massive plant of *R. falconeri* about 33 feet high. Unusual in that it has a single unbranched trunk and a relatively narrow spread, this is probably the plant listed in the 1939 catalogue as being 18 feet high. Still in vigorous health and a good flowerer, this is probably one of the best specimens in Scotland. In the flat garden there are only a few months in the year when there is nothing in flower. In late February or early March a good plant of *R. oreodoxa* can be relied on (frostless weather permitting!) for a good splash of colour. From then on, a constant succession of different species of rhododendron and other genera gives colour till the end of the season is heralded by the flowers of numerous *Eucryphias*. In the centre of the flat garden is one particularly large *E.* × *nymansensis* that every September is a great conical mass of flowers. Later on, there are several fine foliage plants. *Fothergilla* colouring to a deep blood red, numerous scarlet-leaved maples and several large trees of *Cercidiphyllum japonicum*, beautiful at any time of the year but especially attractive when their leaves turn to yellow. At the south end of the flat garden is one of the several stands of Hemlock Firs. Magnificent specimens in full vigour of growth, and the

home of numerous goldcrests, the rich dark green of the foliage is a shelter for many plants and a fine background for their flowering trusses. Two of the many rhododendrons here can be mentioned. A plant of *R. insigne* with its characteristic dark green leaves and a 10 foot high *R. vaseyi* whose precocious rosy-pink flowers are a pretty sight in the middle of May.

Moving now from the flat garden to the west-facing hill slope of Larachmhor, we enter an area of oak and beech, chestnut and birch scrub. In some parts, the rhododendrons have, as in the flat garden, been close planted, and to stand among the thick trunks with a leaf canopy 15-20 feet above one is like being in the centre of a natural rhododendron forest. In other parts, the plants have been planted with plenty of space to expand and are now fine individual specimens. One such is an outstanding plant of *R. coriaceum* about 15 feet high and with a similar spread. With exceptionally large leaves measuring up to 14½ by 13½ inches, this plant must be one of the best in Scotland. *R. macabeanum* (KW 7724), of which there are several in other parts of the garden, among them some fine deep yellow colour forms, is represented on the hill by a plant about 25 feet high. There are many good foliage and bark species nearby. For example, there is an 18 feet high *R. basilicum* that catches the eye on account of the deep tawny lower leaf surfaces. Other large-leaved species with a good shape are several big plants of *R. fictolacteum*, *R. eximium* and *R. arizelum*, all beautiful foliage plants. Among species with fine trunks may be mentioned a *R. smithii* (Fig. 4) with peeling reddish-purple and white bark, *R. hodgsonii* with a smooth brown trunk and also a clump of a dozen plants of *R. thomsonii* with perfectly smooth pale brown stems. Among the small-leaved species on the hill, *R. lutescens* deserves mention. About twenty plants form a large clump about 15 feet high that is usually a mass of yellow early in the year. Nearby, *R. martinianum*, not a common species in cultivation, is represented by a plant about 7 feet high.

The last major area in the garden to be considered is the bamboos. This is a rocky knoll fringed to the south and east by huge beeches and ringed within by a dense circle of bamboos. Even when a gale is blowing in the outside world, it is quite still standing inside this great bamboo ring. It was here that Holms chose to plant many of his choice plants. A few years ago much of this area was a bamboo jungle and machettes were needed to cut a way through and reach the plants. At one time it must have

Photo: Miss J. Lamond

FIG. 3.—*R. fulvum* at Larachmhor

Photo: Ian Hedge

FIG. 4.—The fine trunk with peeling bark of *R. smithii* at Larachmhor

been a treasure trove of rhododendron riches, and even today, after the ravages of time and of predatory pre-war man, much of interest remains. But before entering the bamboos there are several interesting plants nearby. A 30 foot high *R. falconeri*, a sturdy free-flowering plant of *R. ririei* with deep mauve-purple flowers, a good form of *R. arboreum* f. *album* and a well-shaped plant of *Lomatia ferruginea*. Within the shelter of the bamboos, several of the large-leaved species, such as *R. basilicum* and *R. fictolacteum* thrive and flower well. More noteworthy, however, is a 15 feet wide spreading *R. coriaceum* (F. 25622) with white flowers blotched crimson, an 11 feet high *R. sutchuenense* var. *geraldii* with rosy flowers and purplish blotches and a 10 feet high *R. crinigerum*. Other notable plants here include a massive *R. barbatum*, almost 24 feet high, a pair of tall plants of *R. zaleucum* and a 25 feet high but poorly shaped *R. rex* (KW. 4507).

After this brief account of Larachmhor one can only say, in conclusion, that it is a unique place. It is a garden without a house, without a lawn and without a herbaceous border. It con-

tains many fine plants that clearly enjoy life in this soft and sheltered part of Scotland without much need of 'gardening'. The overall result is a place of natural beauty, where nothing overwhelms—not even the rhododendrons!

Climate

Although there is no corresponding data available for sunshine, humidity or temperature, the rainfall figures* given below are the monthly averages at nearby Arisaig House for the period 1916-1950. They show maxima in September and October and minima in April and May.

Jan.	6·32 in.	May	3·37 in.	Sept.	6·37 in.
Feb.	4·27 in.	June	4·41 in.	Oct.	7·51 in.
Mar.	3·82 in.	July	5·26 in.	Nov.	6·46 in.
Apr.	3·76 in.	Aug.	5·65 in.	Dec.	6·58 in.

The yearly average is 63·78 in.

Soil

Soil samples taken from various parts of Larachmhor and sent to the Macaulay Institute, Aberdeen, gave pH values ranging between 4·4 and 6, with an average of 5·1 and organic matter percentages of between 10 and 15 with an average of 12.

* I am indebted to the Meteorological Office in Edinburgh for supplying the information.

SOME OF MY RHODODENDRONS

By COLLINGWOOD INGRAM, V.M.H.

IT was not until I bought a property in Kent, some forty-odd years ago, and started with an ex-footman to make a garden out of four acres of pastureland, that I began to take a serious interest in gardening. Being a complete novice at the time, I then gladly lent an attentive ear to the words of any old hand. And in those days I suppose no one was better qualified to proffer counsel than that great Cornish gardener, J. C. Williams, of Caerhays Castle. "Let me give you a piece of advice," he said to me one day. "Start hybridizing rhododendrons. It's the greatest fun. You get ten, fifteen, perhaps even twenty years of pleasurable anticipation, and only *one* day of disappointment—the day your seedlings open their first flowers!" As I have ever since been diligently following that piece of advice, it is perhaps not surprising that well over fifty per cent. of all the rhododendrons in my garden are hybrids, many of them still unflowered, of my own creation!

Only too often have my mentor's words of warning come true and long cherished hopes been shattered by that "one day of disappointment". Though not always: there have been exceptions, and it is mainly of these that I propose to write. Of the countless failures, or near failures (which were especially numerous when I started and had only a little material to work with), I shall remain discreetly silent.

It was also while I was staying at Caerhays that J. C. Williams gave me a pinch of seed he had gathered from one of his plants of 'Isabella'—a *R. griffithianum* × *R. auriculatum* hybrid of outstanding beauty with enormous, slightly fragrant, pure white flowers, probably larger than those of any other hardy rhododendron in cultivation. He assured me that plants raised from these seeds would be very like, in fact almost indistinguishable, from those of 'Isabella', and that has proved to be the case. By using the pollen of *R. griersonianum* on the best of these F_2 'Isabella' seedlings I have succeeded in producing a grex containing a few really striking rhododendrons. This grex I have called Infanta. The finest clone—the one which received an A.M. in 1941—has large, funnel-shaped flowers nearly five inches

across. (Pl.1) When fully expanded these shade from whitish pink to a dark tawny-red in their throat—an unusual and, incidentally, a very effective colour scheme. Another clone has even bigger flowers. Because its huge, flat-shaped blooms vaguely suggest, to my mind, the whirling skirts of an Andalusian dancer, I have named this seedling 'Flamenco'. Its flowers, measuring nearly six inches across are, for my taste, too gross and flamboyant to be aesthetically pleasing, but they seem to appeal to most of my visitors.

The hybrid which I personally consider one of my most successful achievements is a plant that the aforesaid ex-footman persisted in calling 'Captain Blood'—an ugly name which, I am afraid I have been too lazy to change. This rhododendron was the outcome of a very lucky alliance—lucky because it was only by the merest chance that its seed parent, 'Queen Wilhelmina'—normally a very early bloomer—happened one year to produce a solitary, belated, truss just as my plants of *R. griersonianum* were coming into flower. This enabled me to make a cross which would have otherwise been impossible. The seedlings have all turned out to be very attractive, early-flowering *R. griersonianum* hybrids, of which 'Captain Blood' is perhaps the pick. Its flowers are of very nearly the same vivid scarlet colour as those of 'Elizabeth' but are individually larger and there are more of them in the truss, usually from nine to twelve pips compared with only six or seven in those of 'Elizabeth'. But where 'Captain Blood' is in my opinion superior to 'Elizabeth' is in its habit of growth. Being more compact and densely branched, its handsome dark, sage green foliage forms a very effective background for its freely produced, long-lasting scarlet flowers.

Some twenty-odd years ago there was a Belgian propagator named John Marchand working at Wallace's nursery in Tunbridge Wells. He was a likeable and intelligent man and I would often have a chat with him on matters of mutual horticultural interest. On one of these occasions he informed me that he had just succeeded in mating *R. moupinense* with *R. sperabile*—that is to say, he claimed to have made a cross between a lepidote and an elepidote species—an achievement which at one time the late J. B. Stevenson considered was an impossibility. Presumably because Wallace did not consider it a sound business proposition to raise any of the resultant seedlings to maturity, he sold me the whole batch of yearling plants for a mere song. It proved a very good buy for, without exception, every one of those tiny seedlings

has grown into a charming bushy shrub, always abundantly floriferous and equally happy in either sun or shade. (Pl. 1) Luckily, since they start blooming early in March, their open-campanulate, rose-red flowers are singularly resistant to frost damage, which is more than can be said of most of the *R. moupinense* hybrids.

Most of my gardening friends consider 'Calfort' (Pl. 1)—a cross between *R. calophytum* and *R. fortunei*—as my most useful contribution to an already overcrowded list of rhododendron hybrids. It has handsome oblong-lanceolate leaves up to a foot or more in length and fragrant purple-blotched white flowers measuring over three inches across. These are carried in shapely, well-filled trusses, each containing from twelve to sixteen pips. The plant has an excellent constitution and forms a wide-spreading, closely-branched bush.

In 1928 I was given some blooms of a blood-red form of *R. arboreum*. With the pollen from these I fertilised a few flowers of my plant of 'Loder's White'—an old hardy hybrid of long standing. Of the many seedlings I raised from this alliance unquestionably the best is the clone I have named 'Timoshenko'. This has inherited the characteristic columnar habit of its pollen parent, as well as the bright scarlet colour of its flowers, but happily it has a more vigorous constitution which is mainly manifested by its larger blooms and handsomer foliage. The original specimen is already over twelve feet high and in April becomes a column of flaming red flowers.

Although not a very spectacular rhododendron the hybrid I have called 'Morfar'—a cross between *R. morii* and *R. fargesii*—can truthfully be described as a useful, reliable garden shrub—useful because it is quite hardy and unfailingly floriferous and also because it is an exceptionally early bloomer, usually flowering with me about the middle of March when any kind of blossom is a welcome harbinger of spring. The nominate clone has largish white flowers liberally speckled with crimson spots on the upper lobes. (Pl. 1)

If I were asked to describe in a few words the hybrid I have named 'Thomaleum' (Pl. 1) I would say it is as nearly as possible mid-way between its two parents—*R. thomsonii* and *R. haemaleum*. True, in the very dark, ruby-red colour of its waxy, bell-shaped flowers it favours *haemaleum* rather more than *thomsonii*, but so far as their size and their shape is concerned, that curt description holds good. Being very floriferous the plant is always much admired by casual visitors to my garden.

I also used the pollen of *R. haemaleum* to fertilise flowers of *R. venator*. Here again the very dark colour of the blossoms of the male parent has dominated in the majority of the seedlings. These I have named 'Hallali'—the cry of a French huntsman when his hounds have overtaken and killed their quarry.

To fertilise artificially any species of the Anthopogon Series is a very tricky job, and in order to mate *R. sargentianum* with *R. trichostomum* I was obliged to go down on all fours and employ a watchmaker's glass to see what I was doing. I cannot honestly say that the seedlings derived from this effort have proved any more beautiful than either of their parents, but I can say they are very definitely more vigorous and consequently easier to grow and to propagate.

Although I have tried time and again to breed a really first-class yellow-flowered hybrid, only two of my seedlings have so far been worth perpetuating. Both of these are children of *R. wardii*. The first was the product of a cross I made between *R. campylocarpum* and a variety of *R. wardii* formerly known as *R. croceum*. Its flowers are notably larger than those of either parent but in all other respects it does not differ materially from either of them. Until I discovered that the late Lord Aberconway had forestalled me by making a similar cross, and had named his plant 'Falvia', I called mine 'Crocam'—and, if the truth be told, I still do! The second yellow-flowered hybrid of which I certainly have no cause to be ashamed was the outcome of a cross I made between 'Mrs. Lindsay Smith' and the same variety of *R. wardii*. This is a singularly vigorous plant and has grown into a glossy-leaved, densely foliaged bush of pyramidal form. It has large, saucer-shaped flowers of a pleasing sulphur-yellow colour. I have called this very attractive hybrid 'Carolyn'.

Among the many azalea hybrids I have made, I suppose 'General Wavell' (Fig. 5) (since it is the only one that has been awarded an F.C.C. by the Royal Horticultural Society) must be regarded as the best. Actually, however, there are others of the same parentage (one of these being a typical example of *R. simsii* with brick-red blossom, the other a slightly tender form of that species with enormous flowers called 'Glory of Numazu') which are in their way just as beautiful. Unfortunately, if grown out of doors, most of these, which I have collectively named Muffet, are rather uncertain bloomers and on that account cannot be considered entirely satisfactory garden plants.

The result obtained by crossing the same brick-red form of

Photo: J. E. Downward

FIG. 5.—Rhododendron 'General Wavell'

R. simsii with the well-known white-flowered azalea, formerly known as *R. ledifolium* but now called *R. mucronatum*, was, to say the least, surprising. Having mated a white-blossomed plant with a red-blossomed one, I naturally did not expect their progeny would all have flowers of a purplish colour! But that is exactly what has happened. There is, perhaps, a fairly obvious explanation for this apparent phenomenon. We may, I think, safely assume that the white-flowered azalea that we have grown in our gardens for so many years is, in fact, an albino sport of a wild species which normally has purplish blossom and that that colour is a dominant Mendelian character. According to E. H. Wilson's *Monograph of Azaleas* the wild plant, from which the white flowered "*R. ledifolium*" was derived, is a native of the island of Shikoku and should be called *R. mucronatum* var. *ripense*. My presumed hybrid, registered in the Handbook as 'Margot' should, therefore, be known by that name and not by that of a cultivar since it has obviously reverted to the wild plant.*

* In the *Rhododendron Handbook* (1964) the pollen parent of 'Margot' is given as *R. micranthum*, a patent error for which I am no doubt partly to blame. The mistake arose from *R. simsii* (the aforesaid pollen parent) being at one time confused with *R. indicum*, a plant once frequently misnamed "Azalea macrantha".

A union between the Formosan mountain azalea, *R. rubropilosum*, and the Japanese *R. kaempferi* has yielded a crop of hardy, very floriferous little shrubs. All are attractive and even if they are not supremely beautiful are certainly worthy of a place in any garden. Another of my azalea crosses is one I made long ago between *R. reticulatum* and *R. weyrichii*. This cross has given me several showy plants, of which the best is one I have named 'Retrich'. Like its two parents, it is deciduous and, like them also, it produces its wine-purple blossom before the leaves appear. Proof of its *R. weyrichii* "blood" is indicated by the reddish tint in the throat of its innumerable flowers. These are sometimes borne in astonishing abundance, and when that is the case, 'Retrich' is not infrequently mistaken for *R. albrechtii*—an understandable mistake.

By mating 'Blue Diamond' with a deep purple form of *R. russatum* I have obtained a range of compact, free-flowering little bushes. The blossom of most of these is not unlike that of 'Blue Tit', but in the best forms it is of a rather darker and brighter blue colour. I have called the grex Rustic Maid.

Having so many of my own hybrids to accommodate, there is naturally not a great deal of room left in my garden for those of other people's making nor, regrettably, for as many species as I would like. I have, however, a few examples of true species that are worth mentioning. For instance, I believe my two plants of *R. yakusimanum* are among the largest in the country. If that be really so, it is certainly not because I have had them for a longer time than anyone else: it is merely because I have consistently resisted the temptation to take a toll of their young growth for propagating material which, I understand, other owners have not always done.

From a botanical, as well as a horticultural, point of view, I suppose my collection of naturally dwarf rhododendrons is perhaps the most interesting, though decidedly not the most spectacular, feature in my garden. Within an area of only a few square yards I have gathered together from here, there and everywhere, more than sixty different kinds of really miniature rhododendrons. Most of these are true species or their geographical forms—species whose small size has clearly resulted from the ecological condition prevailing in their mountain habitats. Only a very few of them are man-made hybrids. I grow these diminutive rhododendrons on a slightly raised bed made up of a tripartite mixture of sphagnum peat, leaf soil and sand—the last, as well

Photos: top left Alan Hardy; top right C. Ingram; centre left J. E. Downward; bottom left C. Ingram

PLATE 1—Rhododendron Hybrids at the Grange, Benenden. (*Top left*) 'Calfort' (*R. calophytum* × *R. fortunei*) raised by Capt. C. Ingram; (*top right*) 'Infanta' (*R. griersonianum* × 'Isabella'), raised by Capt. C. Ingram; (*centre left*) 'John Marchand', A.M., 22nd March, 1966, raised by John Marchand and exhibited by Capt. C. Ingram; (*bottom left*) 'Morfar' (*R. fargesii* × *R. morii*), raised by Capt. C. Ingram; (*bottom right*) Thomaleum g. 'Oporto', P.C., 19th April, 1966, raised and exhibited by Capt. C. Ingram

as the raised surface of the bed, I regard as perhaps the most important factors in their successful culture. A few judiciously placed stones to give the little plants a cool root-run—for most of them are rupicolous species—is also undoubtedly helpful.

My collection contains a number of distinct forms of *R. campylogynum*. Some have pink, others white, yellow, purple or red flowers. Several of these are so very distinct, not only in the size, shape and colour of their flowers, but also in their habit of growth, season of flowering and other respects, that one cannot help wondering why the pundits have now deprived some of the more distinctive varieties of their former specific rank. The Anthopogon Series is also well represented. The yellow-blossomed *R. hypenanthum* and *R. sargentianum*, and the snow-white one of the true *R. cephalanthum* are perhaps the most attractive of this group, although *R. cephalanthum* var. *crebreflorum* with its larger, shell-pink flowers, were it only more floriferous, would be even more desirable. The Lapponicum and Saluenense Series have also contributed to the collection some very choice dwarfs. This is especially true of the former series for carefully selected forms of *RR. fastigiatum*, *edgarianum*, *impeditum* and *scintillans* have flowers more nearly pure blue than any other rhododendron. The white-blossomed *R. microleucum* is also a very desirable little species.

The above are all fairly easily grown, which is definitely not the case with the type plant of the series, namely *R. lapponicum* of northern latitudes. On two occasions I have tried, and have signally failed to establish that species in my garden—once with plants brought me from Spitzbergen by my son, and once with some I collected myself in Arctic Lapland. I attributed the cause of my failures not so much to a difference in climate as to an irreconcilable discrepancy in light hours. I could not, of course, hope to give the little plants perpetual daylight in mid-summer and perpetual darkness in mid-winter, both of which conditions they are accustomed to experience in their native habitats.

Possibly the rarest, but certainly not the most beautiful, occupant of my raised bed is *R. proteoides*. Indeed it might almost be said to be devoid of ornamental value since we are told that it seldom or never flowers in cultivation. Why, then, did I take so much trouble to acquire a specimen? Partly, perhaps, because its rarity aroused my acquisitive instincts and partly because it had the reputation of being an exceedingly slow grower and would in consequence be an eminently suitable subject for a confined

space. In general appearance the plant is oddly like a diminutive edition of an ordinary large-leaved rhododendron, but with all its parts so greatly reduced in size that one might be looking at it through the wrong end of a telescope! It is, in short, more of an interesting curiosity than a thing of beauty. Found growing at heights of between 12,000 and 14,000 feet in Yunnan, it must, of course, be subject at certain seasons of the year to periods of very intense cold. During such periods obviously the ground must often be frozen to a depth sufficient to inhibit any shallow rooting plant from absorbing its normal requirements of water. It is presumably to enable *R. proteoides* to combat such conditions that Nature has endowed it with a very remarkable indumentum—a thick woolly vestment that covers the whole of the under-surface of its tough revolute leaves with a furry rust-coloured mat.

I have always admired the finer forms of *R. augustinii* and, thanks to the generosity of my friends, over the years I have managed to acquire some very lovely blue varieties. Happily, one of the best of these happens to be not only very floriferous but, at the same time, one of the hardiest. My oldest plant of this form has already attained a height of over fifteen feet and measures considerably more through its broadest diameter. It is a really superb sight when in full flower.

In one part of my garden there are several very large specimens of the once popular pink-flowered hybrid called 'Mrs. E. C. Stirling'. I mention these purely for a personal reason. The good lady after whom this variety was named was the wife of one of my uncles, Doctor (later, Sir) Edward Stirling, reputedly the first person to introduce northern hemisphere rhododendrons into Australia. These he grew very successfully, as I was able to see for myself in 1902, in his garden on Mount Lofty, a hill resort a few miles from Adelaide, South Australia.

Photos: J. E. Downward

FIG. 6—Rhododendron 'Leonard Messel', a hybrid of *R. brachyanthum*. A.M. May 23, 1966, when shown by the Countess of Rosse and the National Trust from Nymans (see p. 165)

FIG. 7.—Rhododendron 'Enborne' (*R. aberconwayi* × *R. anwheiense*). A.M. May 3, 1966. Raised and exhibited by the Crown Estate Commissioners, Windsor (see p. 163)

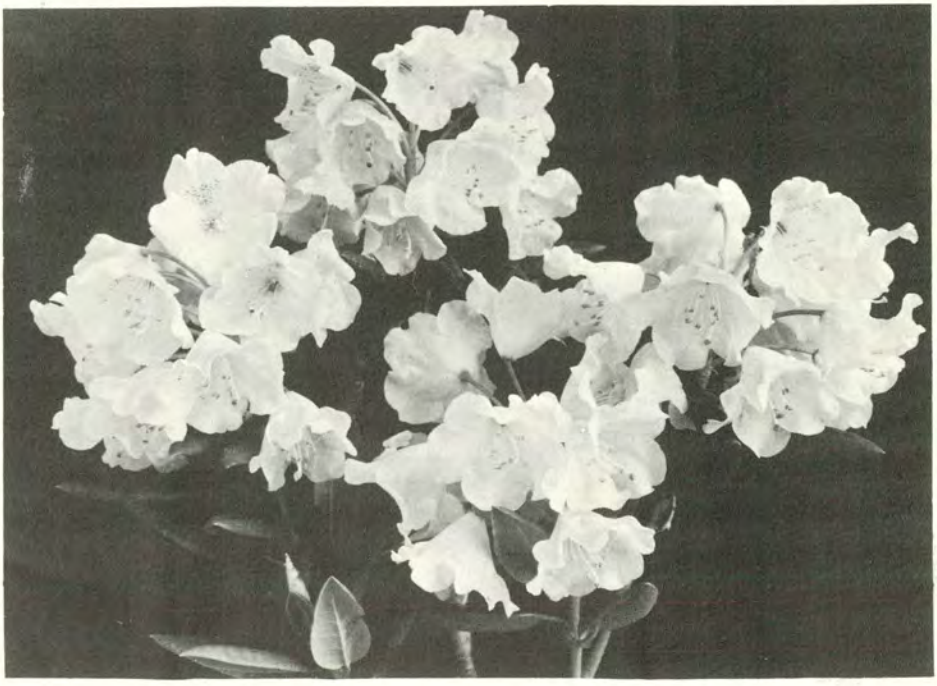


Photo: J. E. Downward

FIG. 8.—Rhododendron 'Caerhays Philip' (*R. concatenans* × *R. cinnabarinum* var. *blandfordiaeflorum*). A.M. April 19, 1966. Raised by the Rt. Hon. Charles Williams and Charles Michael and exhibited by F. Julian Williams, Esq., Caerhays Castle (see p. 163)

ARE THERE MORE RHODODENDRON SPECIES TO BE FOUND AND INTRODUCED?

By E. H. M. COX

OVER sixty years ago Sir Harry Veitch said to Ernest Wilson on the eve of his departure on his first expedition to China "Probably every worthwhile plant in China has now been introduced into Europe." After all these years and after the introduction of rhododendrons by Wilson, Forrest, Kingdon Ward, Farrer and Joseph Rock from Yunnan, Upper Burma and south-east Tibet you sometimes hear the same kind of remark made. I wonder!

It may be a trifle pedantic to speak of Forrest and the others as plant introducers rather than plant collectors, but a distinction should be made between them and the great French missionaries, Delavay, David, Farges and Soulié who collected herbarium material of many thousands of plants but actually introduced little into cultivation. For the French missionaries plant collecting was a secondary consideration. I doubt whether it was even suggested by the botanists in Paris; rather was it a means of reducing boredom, as apart from the medical side their missionary endeavours produced few converts in those very wild parts of China.

Boredom was certainly the reason why our great dendrologist Augustine Henry began to collect plants, boredom when he was posted to an out-of-the-way town as an employee of the Chinese Maritime Customs. He also collected much and introduced little, but he is important owing to the aid he gave Ernest Wilson before and during his first expedition. It was largely owing to Henry and the missionaries who settled for years in one particular area that botanical knowledge of certain districts is so complete compared to the country as a whole. For instance, Wilson was greatly helped when collecting in the small but botanically important border principality of Mupin by the work done forty years before by Père Armand David, one of the greatest naturalists in China, who had spent a year there. Wilson knew more or less what to

look for and where. The same applied to other areas in Yunnan and north-east Tibet in which missionaries had worked intensively.

The plant introducers differed in their methods of working: some like Wilson, Kingdon Ward and Farrer collected every plant and harvested every seed. This was partly the reason why so many fine forms in proportion to their total collections were introduced by them. On the other hand Forrest and to a lesser extent Joseph Rock collected more on a factory basis using numbers of native collectors, and so busy with the necessary paper work that they could not do much in the way of personal collecting of either herbarium material or seed.

But all of them had one factor in common. Either personally or through their native collectors journeys of hundreds of miles were undertaken every year. For instance, in the two years spent on his second expedition, 1903–4, Wilson travelled three times from his headquarters at Kiating, south of Chengtu, the capital of Szechuan, to Tatsien-lu on the road to Tibet, using a different route each time but each time more than three hundred miles. In addition, twice he made the long journey to Sungpan on the then Kansu border, another three hundred miles or more. In all these came to more than fifteen hundred miles on foot or mule-back, quite apart from subsidiary journeys.

It is almost impossible to work out the exact routes on a map of all the peregrinations of the various collectors, European or native, but if it were possible the map would look like an intricate spider's web. It is true that certain well-defined areas were thoroughly explored, Mupin, Mt. Omei, Wa-shan and Wa-wu-shan by Wilson (the last three because they were isolated mountains with fine floras in a small area), the Lichiang Range by Forrest, Kakarpo-razi and Imaw Bum by Kingdon Ward (again rather isolated areas) and Minya Konka by Rock.

On these long journeys much of the collecting must have been superficial. Mile after mile must have been useless botanically and on much of it collecting was almost impossible when the tracks were cut out of precipitous hillsides or where they ran through rain forest. They did not lack enthusiasm but physical difficulties were immense and the further west collectors went the more they came under the influence of the monsoon and the increase of rain forest and bamboo thickets. I know of this from experience. A Michelia seen in flower through field glasses and only about half a mile away as the crow flies was only collected after a day and half's hard hacking. Travelling west of the Mekong

is a wearisome business of up a ridge and down a ridge, perhaps two thousand feet up and two thousand feet down two or three times a day. The only means of progress are the few tracks leading from village to village, or higher up in the bamboo those made by game such as wild pig or takin.

Thus over long stretches I cannot see plant collecting as either possible or necessary until the collector reached more open ground at an elevation of more than ten or eleven thousand feet. In monsoon areas the difficulty is in reaching such an altitude. Passes with tracks fit for a mule are few and far between, as the hill tribes in these areas are not particularly friendly to each other and do not value close communications.

Thus I am afraid I cannot believe that Forrest's sixty or seventy native collectors could have searched very far from these mule tracks. They did not have the time. The season of rhododendron flower is even more condensed at those altitudes than it is here. April, May and June sees the start and finish of about 95 per cent. Farrer and I had experience of this, The Hpimaw Pass of about 11,500 feet was above us. We made a point of going to the top every three weeks or so and then spreading out a mile or two along the ridge above the bamboo. We always found something new. There had been political trouble between Burma and China at that time and we were not allowed to cross the frontier more than a few yards, a great disappointment, as we could see the track winding down to the Salween five thousand feet below, first through open scree, then in succession bamboo, open scrub, conifer forest and finally rain forest. One day in early May five of Forrest's native collectors turned up, stayed for three days and then made their way back to the Salween on the road to Tali. They reported that they had 'done' the frontier range above Hpimaw.

On looking back over the years I am amazed at the minute area we covered during these nine months of 1919. I am certain that the area in which we collected magnolias, primulas, meconopsis and rhododendrons did not come to 1 per cent. of all that welter of rain-forested ridges and valleys round Hpimaw. I should imagine that the total area we covered thoroughly was not more than sixteen square miles above 8,000 feet; and yet we found twenty-eight valid species of rhododendron in that relatively confined space. The next year almost two hundred miles further north where Farrer died he collected herbarium material which was sent home of a further twenty-four species which we did not

find at Hpimaw, as well as about another dozen species which were common to both areas.

The point is that the two main areas we covered, the Hpimaw Pass the Chimili valley, were only about twenty-five miles apart, and yet it was quite impossible in the time at our disposal to have searched the twenty or so miles that we had not covered. There was no track up to the heights from the valley below and no possibility of travelling along the main ridge with sufficient men to make a camp for the reason that is almost universal in these watershed ranges, lack of water at high altitudes. I believe that even to this day the much greater distance between the Chimili valley and the Chawchi valley in which Farrer died remains unexplored botanically, although both Forrest and Ward have collected on the Chinese side of the frontier.

Botanically rich though the frontier range between Burma and China certainly is, I cannot believe that it is not equalled elsewhere. And I am certain that there must be pockets in that huge area covered by the divides of the Mali Hka, N'mai Hka, Salween, Mekong and Yangtze which are yet untouched botanically. The short flowering season, difficulties of access and the long distances covered meant that much of the collecting had to be done within a short distance of established tracks. It would be easier to check exact areas covered if it were possible to work out the exact routes taken by collectors in the past, but, alas, that seems impossible.

If and when conditions settle, surveys by helicopter may simplify the finding and botanical exploration of new and untouched areas which I am certain exist. There are certainly many rhododendron species of wide distribution which would undoubtedly be found and refound over and over again, but there are a sufficient number with extremely localised distribution to make one believe that there are more fish in the sea.

CAMELLIAS AT LEONARDSLEE

By SIR GILES LODER, BT.

THE manner in which the old camellia plants flourished unattended during the war years invoked a curiosity to find out more about their history and names when peace time returned.

These old varieties, planted around the turn of the century, had, in many cases, assumed tree-like proportions. Despite their exposed positions, they had proved completely hardy, even if an occasional spring frost damaged their early blooms. Except for a few, their nomenclature was largely unknown, and trying to find some of their names set us off on a pursuit of various camellia localities.

Besides the West Country, the Channel Isles proved quite rewarding on their quest, as some of the varieties had come long ago from the Caledonian Nurseries in Guernsey. In particular the *C. reticulata flore pleno* form, which had flourished and grown to over twelve feet in height against an outside wall, came originally from that source, and it has since proved to have the early name 'Robert Fortune' and to be identical to the recently introduced Kunming *reticulata* 'Pagoda'.

France, Northern Italy and even the slopes of Vesuvius provided different *japonica* varieties. The wonderful collections in Belgium, Portugal and Madeira added to them, but frequently under different names.

The American Camellia Nomenclature book, coming from the West Coast, excited our interest, and a visit there some twelve years ago showed us their enthusiasm in camellias and the trouble they were taking with the nomenclature problem. It also showed how climatic conditions (heat, drought, etc.) could alter the characteristics of a flower compared with our cooler climate, besides inducing a large amount of variegation in some cases. We also saw, for the first time, plenty of the Yunnan *reticulatas* in flower, besides thousands of *japonica* seedlings being raised.

A couple of years later, a large tract of woodland was cleared here, paths made, and several hundred varieties planted out, with many raised from cuttings, generously given us on our various trips. Care was taken to label clearly the plants, so comparisons

can be easily made. During the past eight years, this "trial" ground—for no other species of plants is grown here—has fully tested out the different varieties. It has a lot of exposure, both to frost and wind; but it is noteworthy how some varieties are consistently good. Of the whites, 'Haku-rakuten' every year is covered with full-sized blooms: sometimes slightly browned by frost, rain and wind, but subsequent buds are undamaged.

Other whites consistently good are 'Alba Simplex', of the single flower variety, and 'Nobilissima', a peony form, if its early flowers do not coincide with frosts. Equally early is 'Gloire de Nantes', whose pink blooms are perhaps not quite so liable to frost damage as the former.

For garden effect, the small-flowered ones like 'Tricolor' yearly provide an excellent show. Likewise the 3 varieties of 'Lady McCulloch', propagated from our large, old bush, are consistent bloomers.

Other pinks that provide a good show annually are 'Donckelarii' and 'Eugene Lize'—its full peony form. Of the single varieties, 'Furoan' and 'Hatsu-zakura' have large flowers, whilst the well-known favourites 'Elegans' and 'Contessa Lavinia Maggi' are always good. Of the American varieties 'Claudia Phelps' and 'Monte Carlo' flower well in our climate. 'Lady Clare' and its variegated form 'Oniji' quickly develop their spreading habit even in open planting.

Perhaps the best of the red varieties is the semi-double 'Adolphe Audusson'. We have also the variegated form from the United States, but out of doors it seldom has more than a fleck of white in its flower. 'Altheaflora' is a good peony form of a brick red colour, whilst the formal doubles are well represented by 'Coquetti'. Other reds are 'General Leclerc', 'Kelvingtoniana', the rather similar group, 'Jupiter', 'Apollo' and 'Mars'. The American varieties like 'R. L. Wheeler' and 'Tomorrow' budded up well, with large buds, but the resultant flowers were no larger than other good English varieties when grown in similar conditions.

C. saluenensis proved on the border of hardiness. Badly cut in hard frosts, it shoots again vigorously after being well cut down. However, its progeny, the *williamsii* hybrids, are completely hardy here and, as might be expected, flower profusely and over a long period. 'Donation', 'J. C. Williams' and 'Mary Christian' (syn. 'Golden Spangles') being outstanding, whilst 'Inspiration', with its upright growth, is equally so if the rather blue tinge to

its flowers is not objected to. 'Barbara Hillier' (syn. *heterophylla*) both blooms and grows well out of doors. *C. cuspidata* has proved quite hardy, but for effect its offspring, C. 'Cornish Snow', displays an abundant profusion of white flowers regularly and seems a good garden plant. *C. sasanqua* have been planted against a wall. The single pink and red varieties flower some years profusely in November, whilst the others tend to flower during the winter and early spring, with 'Narumi-gata' being one of the best.

A few years later, a visit to the deep South of America showed us further striking *C. japonica* varieties in bloom, but it also demonstrated to us in unpredictable climates the superiority of protected blooms in size and texture. The white and pink types profited by shelter and the reds produced huge blooms. Induced partly by the heat and also the type of stock used for grafting, many heavily variegated blooms were seen, and in many quarters these are much prized. Equally induced by the heat, many flowers set seed from which a lot of seedlings were produced. These provide many new novelities and breaks—both in colour and form of flower.

To do justice to the many scions and cuttings given to us on our trips, we decided to build a cold house to plant out some of the larger-flowered varieties where they could bloom to their best, whatever our March and April weather can do.

A standard type of aluminium greenhouse, approximately 50 ft. × 40 ft., was erected over the site of some old potting sheds. Nearly 2 feet of rubble for drainage was first put down in the bottom, then a further 2 feet of good soil, with coarse sand for drainage and some manure well mixed in. The camellia plants were all planted in the soil with as much space as possible in between with some cement slabs as main paths. Over 100 varieties were thus planted and clearly labelled so the names could be read from afar.

The following notes have been compiled in the past two seasons, but more experience may well produce other equally good or better varieties.

Amongst the whites, the semi double 'Angel' produced 5 inch clear blooms, likewise 'Gauntletti', with 'Edelweiss' only slightly smaller. The 'Betty Sheffield' family is represented by plain B.S., white with red flecks, 'B.S. Blush', and 'B.S. Supreme', possibly the best with its deep pink frill to the white flower.

The pinks are probably the most interesting and outstanding varieties, as the paler colours do not fare so well out of doors.

First and foremost, 'Drama Girl' lives up to its name. A plant only 6–7 feet high, covered all over with blooms of up to 7 inches in diameter and for a period of 6 weeks, stands out from most of the collection. However, it is closely challenged by 'Augusto Pinto—the sport of 'Mathotiana' from Portugal, a magnificent formal double, and 'Hawaii', a fimbriated sport of 'C. M. Wilson', whose flowers, though perhaps smaller in diameter, are certainly thick in depth and very long-lasting into the bargain. Both these plants have a branch showing the original variety from which they had sported.

Of the very pale pink, 'Mrs. D. W. Davis' is always one that attracts attention, though the edges of her blooms, like the whites, are so easily marked by damp. Equally big are two other semi-double varieties, 'Guest of Honour' and 'Guilio Nuccio', the latter with a distinctive silvery edge. 'Saudade de Martins Branco', 'Reg Ragland' and 'R. L. Wheeler' all have flowers of at least 5 inches in diameter, whilst 'Tomorrow's' flowers of equal size are noteworthy both by their profusion and thickness. The weight of flower alone on a bush, of about 6 feet, must run into several pounds. Other particularly thick flowers are 'Pink Champagne' and 'King's Ransom'. Even in sheltered conditions, 'Mathotiana Supreme' has quite a different flower to the formal-double 'Mathotiana' grown in this country.

Hybrids grown include 'Bonnie Marie', which has 4 inch blooms over a very long period, 'Mildred Veitch' of equal size, 'Carl Tourjé', and the local variety 'Leonard Messel'. This, and the variegated form, provide lovely blooms of 5 inches in diameter over a stretch of time.

Also in the cold greenhouse some of the Kunming *reticulatas* have grown into bushy plants, in complete contrast to the spindly examples one sees against walls. They flower profusely and afterwards their young growth, almost as red in colour as *Pieris forrestii*, commands attention.

For cultivation the house is kept as cool and well ventilated as possible. A small heating system operates just to keep out the hard frosts; light shading of flour and water is sprayed on the glass in summer and two electric paddle-type fans circulate the air during hot spells. Watering is by ordinary garden hose, but an overhead mist system is operated on hot summer evenings to cool the house down and syringe the foliage.

Photo: J. E. Downward

FIG. 9.—*Camellia japonica* 'Drama Girl'. A.M. March 8, 1966. Exhibited by Sir Giles Loder, Bt., of Leonardslee (see pp. 28 and 167)

It should be realised that camellias are hardy out of doors; it is only to enjoy the full size and beauty of undamaged blooms that they are grown under glass. This also has the advantage of prolonging the individual flowering period.

CAMELLIAS IN MELBOURNE, AUSTRALIA

By A. W. HEADLAM

MELBOURNE is generally considered to be the most garden-minded city in Australia—practically every suburban home has its own garden and lawns—and camellias are probably one of the most widely grown shrubs. They bloom in the winter when other flowers are scarce, and are generally quite hardy and can be grown in almost any aspect.

Our climate, which comes in for a good deal of criticism, particularly from our friends in other States, is generally fairly kind to our gardens. We do not have any snow, and frosts are not severe enough to be of any consequence, the lowest temperature ever recorded in Melbourne being 28·2° F., in June 1929, and we enjoy each year a little over 2,000 hours of sunshine.

The rainfall, which averages some 26 inches per annum, is distributed fairly evenly over the year, approximating two inches each month, with a slight increase over the three months of spring. The most difficult times for camellias are the summer months when temperatures may often exceed 100° F. and the prevailing hot north winds rapidly dry the moisture from the soil. It is during this period when the buds are forming that it is necessary to maintain the moisture by mulching and use of the garden hose.

My wife and I first started growing camellias about ten years ago. Our garden, which is quite large as suburban gardens go (there would just be enough room for a tennis court at the back of the house), was somewhat overcrowded with trees, shrubs and fruit trees which had been planted without a great deal of thought for the future. Our idea was to remove some of the less attractive trees and replace them with camellias, and we duly visited a nursery and became the proud owners of two advanced plants, 'Elegans' and 'The Czar', which were both quite heavily budded. It was not long before the flowers opened, and this was the beginning of the end for many of the other trees—more and more camellias appeared and gradually other trees fell victim to the axe. We did, of course, leave a number of trees for ornamental and shade purposes—a white and pink flowering cherry, a Cheal's

pink standard cherry, three magnolias—'Soulangeana', 'Liliflora Nigra' and 'Lennei'—a flowering peach and two crab apples, *Malus spectabilis* and *Malus ioensis*, which, incidentally, provide a good supply of leaves for compost. We now have some seventy varieties of camellias growing in our garden.

There is a very wide range of soils in Melbourne, from sand in the seaside suburbs to sandy loam, heavy loam and very heavy clay in some of the eastern areas.

In the early days of reorganising I was advised of the importance of providing adequate drainage—the soil in our locality is a sandy loam to a depth of about fifteen inches, a layer of gravel and stone and then clay. Trenches were dug to the clay level and agricultural drain pipes were laid—these were drained by a gentle natural slope to an underground stormwater drain, and no drainage problems have since been encountered, even after prolonged rainfall.

The soil, though fairly light, has a tendency to pack down hard unless constantly worked, and as this is impossible with camellias and azaleas, owing to their shallow root systems, I found that digging in leaf mould, compost, lawn clippings and well-rotted cow manure well in advance of planting greatly improved the soil and assisted in forming a strong root system in the least possible time; in fact, it is apparent that thorough ground preparation before planting results in stronger growth and plants are better able to withstand adverse weather conditions. A ground cover of leaf mould, very coarse oregon sawdust and some pine needles helps to conserve moisture and protect the roots from the hot sun. This mixture is very effective, as it does not stop circulation of air and water penetrates it quite readily.

Despite the deciduous trees left for shade, there were some areas which lacked adequate protection, and a few camellias and quite a number of azaleas suffered some leaf burn caused by excessive heat in summer months. Three years ago I constructed a lath house with an area of some 2,500 square feet; the top was designed to reduce the light by about 40% and the north and western sides by 60%; the western side has some detachable panels which are removed each year after the hot weather has passed; the east and south sides have been left completely open. Whilst I am quite sure that camellias and azaleas would have grown without this shelter, there is little doubt that they have benefited by it.

I have a stock book in which I note the date of origin, size, and general description of each camellia, and have also recorded the

date of the opening of the first and last flower on each plant year by year.

The first camellias to flower are the sasanquas, which are grown in an open position, and commence as early as mid February, and the last are the late japonicas to the end of October, giving a flowering season of some eight months overall. It is interesting to compare the dates of the first flowers.

After a settling down period of a year or two, many varieties flower almost to the day each year, whilst others may vary by two or three weeks, depending upon weather conditions. Good summer rains result in a slightly earlier season, whilst after a long dry summer, such as we encountered in 1965, when the rainfall for the three months January, February and March was only 102 points, the flowering season was delayed by about three to four weeks.

Our longest flowering and most prolific specimen is undoubtedly 'Ville de Nantes Red', a seven year old grafted plant which is about five feet high and five feet through, and whose average flowering season over the last five years has been 4½ months. In 1960 it flowered from May 1st to October 15th, a period of 5½ months, during which time this camellia produced an enormous number of flowers.

Others which flower over a long period are 'Great Eastern' 4½ months, 'Donckelarii', 'Daitairin'* (syn. 'Hatsu Zakura') and 'Elegans' each four months, whilst most of the other japonicas flower for at least three months.

When the peak of the flowering season is reached in August, we have as many as forty varieties flowering at the one time, and a very considerable amount of the credit for this display must be given to my wife for her patience in keeping the weeds under control and the many hours spent watering our family during the hot summer months.

We have not the room to keep pace with the numerous new varieties appearing each year, and this perhaps is a good thing, as it makes one become very selective. Two years ago I was given scions of 'Drama Girl' and 'R. L. Wheeler' and grafted both on to a five year old *sasanqua* stock (in situ); both have grown vigorously, are now about four feet high and are quite bushy and flowered heavily last year—this is one way of overcoming

* *Note*: 'Daitairin' (Syn. 'Hatsu Zakura'). In the 1959 Year Book, p. 102/3, Professor Waterhouse wrote that he found it difficult to determine which of the above two names had priority. It is invariably referred to as 'Hatsu Zakura' in the Year Book, whilst in Australia the name 'Daitairin' is given priority.


Photos: A. W. Headlam

PLATE 2—Camellias in Melbourne. (*Top left*) *C.* 'Phyl Doak'; (*top right*) *C.* 'E. G. Waterhouse Var.'


Photos: David Feathers

PLATE 3—Camellias in California. (*Centre left*) *C.* No. 6144, a 'Sylvia May' seedling; (*centre right*) *C. reticulata* 'Trewithen Pink' × *C. granthamiana* hybrid; (*bottom left*) *C.* 'Lady Vansittart Red' × *C. reticulata* 'Crimson Robe'; (*bottom right*) *C.* 'Satan's Robe' (see p. 48)


Photo: A. W. Headlam

FIG. 10.—*Camellia japonica* 'Daitarin' in Melbourne (see p. 32)

the space problem when growing camellias in a suburban garden.

Many of the older varieties are still popular favourites and can hold their own in any collection. 'Donckelarii', though somewhat slow in growth is, when in flower, one of the most attractive specimens in our garden, whilst 'Elegans' and 'Gauntletti' are too well known to require any further description. 'Ville de Nantes', both the self-coloured and variegated varieties, are also in the top bracket.

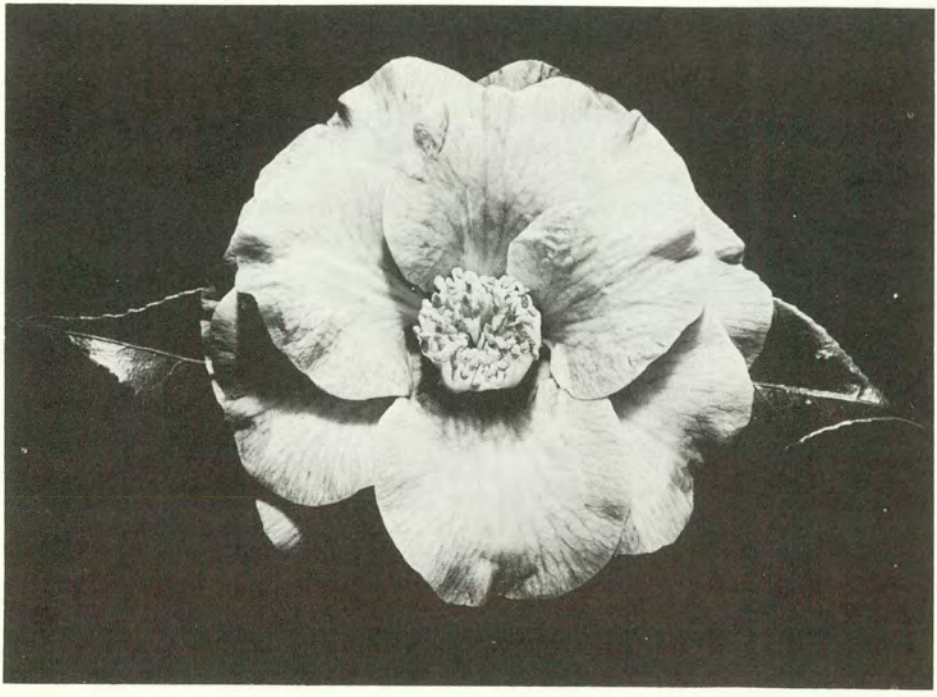
'Lady Clare' does extremely well in Melbourne, and is quite sun hardy. It has the characteristic dark green leaves and somewhat pendulous habit. 'Donation' is, of course, a must in any collection—it flowers for three to three and a half months without fail and produces, as do all of the 'Donckelarii' progeny, a very large number of flowers.

Some years ago 'Donation' was an extremely difficult camellia to obtain, only a few nurseries having very small stock plants. I eventually obtained quite a small plant on its own roots from Mr. Walter Hazlewood of Sydney, and this was carefully planted in a specially prepared position. Although it flowers quite prolifically,

Photos: A. W. Headlam

FIG. 11.—*Camellia japonica* 'Red Ensign' in Melbourne (see p. 35)

FIG. 12.—*Camellia japonica* 'The Czar' (see p. 35)



its growth has been extremely slow. I later obtained a grafted plant which proved much more vigorous in habit. Grafting is probably the most used method of propagating 'Donation', and by grafting to a virus affected stock a variegated form of this camellia has been produced. We have such a plant which produces a great number of flowers with varying amounts of variegation. Instead of having distinctly defined blotches, the pink merges into the white, resulting in a very pleasing pastel-like effect.

'Debutante', a soft pink informal double, is one which appreciates a fairly sheltered position without too much sun. We have one growing under these conditions and it flowers quite heavily over a period of three to four months. The flowers keep remarkably well when floated, and those on the tree drop when spent.

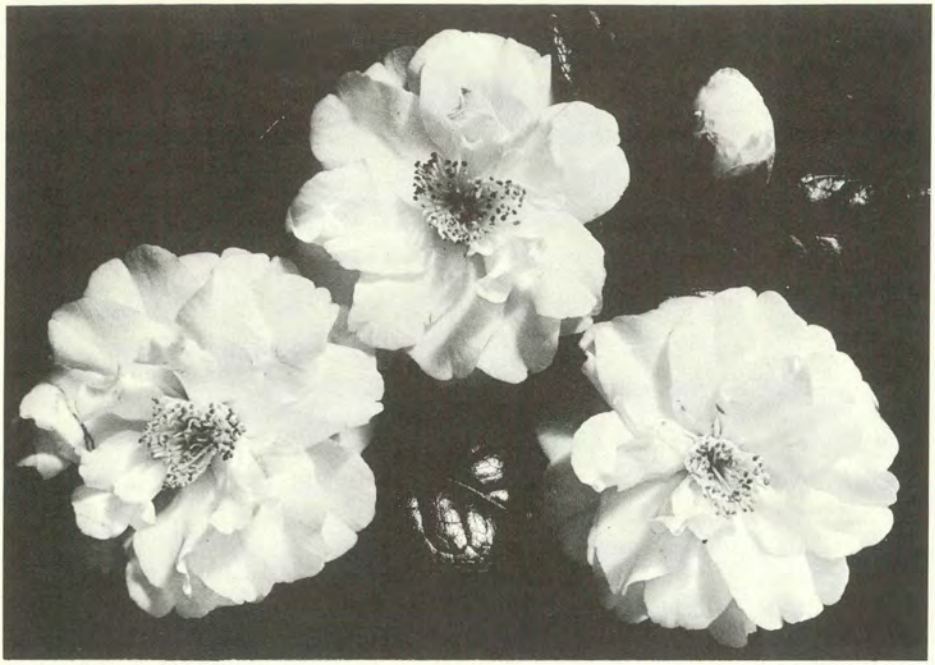
One of our most vigorous growers is 'Margaret Waterhouse', a *saluenensis* seedling first raised by Professor Waterhouse of Sydney. I have grown this camellia as an espalier with quite good results. Whilst it has been found to be subject to some dieback in Sydney, I have never had this trouble, nor have many friends in Melbourne who grow it. It is quite sun hardy and, in fact, I have observed that plants grown in full sun set considerably more buds than ones growing in more sheltered positions.

Some other Australian raised camellias worthy of note are 'The Czar', a large carmine to bright red semi-double with prominent yellow stamens—the petals are somewhat crinkled and fold back at the edges; the plant is compact growing and the flowers are attractively displayed and fall of their own accord when spent. On our plant the flowers usually take on a deep purple tone near the end of the season.

'Jean Lyne', a large semi-double, white striped rose pink, blooms profusely and sports 'Edith Linton', a large semi-double rose pink, and 'Nancy Bird', a medium to large pale to silvery pink. We have a plant of 'Jean Lyne' which periodically sports both of these varieties.

'Great Eastern', a large dark red semi-double, often showing purple tonings, particularly on early flowers. It is quite hardy, is of vigorous growth and many large specimens are to be seen growing and flowering profusely in suburban gardens.

'Red Ensign', a large bright red semi-double with prominent yellow stamens and large crimped petals with occasional petaloids; the flowers are from 5½ to 6 inches in diameter and are particularly attractive when the sun is shining on them—this is a



Photos: A. W. Headlam

FIG. 13.—*Camellia japonica* 'Ubane' in Melbourne

FIG. 14.—*Camellia japonica* 'William Honey' (see p. 37)

seedling from 'Gauntletti', which it resembles in growth and habit.

'William Honey', a medium to large white informal double, prominently striped carmine with stamens interspersed with petaloids. This is a prolific flowerer of vigorous and somewhat pendulous habit and makes a very attractive garden plant—it originated in the Melbourne Botanical Gardens and is of unknown parentage.

Two camellias which originated in New Zealand are of considerable interest. 'Ellen Sampson', a very large deep carmine red semi-double with two rows of large waved petals surrounding high standing petals and petaloids intermixed with golden stamens. The flowers last well and are attractively displayed on a compact growing plant. The other is 'Phyl Doak', a *saluenensis* × *reticulata* 'Captain Rawes' hybrid. This was raised by Dr. Doak and is quite a large soft pink semi-double with large waved outer petals. Growth is upright and vigorous and the flowers are occasionally muted white. (Pl. 2).

We have four *reticulatas*: 'Captain Rawes', a seven year old grafted plant which is some six feet high and six feet across and is, for a *reticulata*, quite dense in foliage (it invariably sets three and sometimes four buds on each terminal and has to be heavily disbudded each year—this was not done one year, with somewhat detrimental results to the following year's growth); and 'Crimson Robe', which I cleft grafted to a sasanqua stock (*in situ*) about a month after mid-winter. It made one growth of some eighteen inches and in the spring developed twelve side shoots which all grew quite vigorously—with this number of branches so near the ground it is developing into a very compact plant.

'Willow Wand' and 'Confucius' are the other two *reticulatas* recently grafted and both are making very favourable progress. We have a number of friends in Melbourne who have established plants of some of the Yunnan *reticulatas* and generally they are quite vigorous in growth and flower prolifically. However, 'Willow Wand', in particular, produces heavy foliage variegation, generally in alternate growth cycles, but this does not affect the flowers. These varieties appreciate some shelter during the summer months to prevent leaf burn and subsequent leaf drop, and also to encourage a second growth cycle, which is not unusual with the Yunnan varieties.

Generally we are not troubled by many pests in Melbourne. A spray of white oil emulsion in the late spring and when necessary with an insecticide to destroy leaf-eating insects is usually

all that is required. Some minor damage to foliage is caused by opossums, which are quite numerous in the suburbs. These small animals do not usually attack camellia foliage, but in their nocturnal prowlings for fruit and berries they run along the top of dividing fences where they will occasionally pause and have a nibble of the new growth when it is within their reach.

Camellia enthusiasts were quite well catered for in 1965. Firstly, there was a two day show held in St. John's Hall, Toorak, in which a large number of varieties was exhibited. This was arranged by the Australian American Association (Women's Group), assisted by the Australian Camellia Research Society.

Then came the Royal Horticultural Society of Victoria's Camellia and Daffodil Show, held in the Malvern Town Hall, 19/20th August. This is near the peak of the season and numerous varieties were displayed, new releases and many of the older favourites vying with each other for pride of place.

A feature of this show was the named variety section in which some 500 blooms were exhibited. These were arranged in alphabetical order, giving visitors full opportunity of choosing their favourite specimens from some of the 200 varieties exhibited. Then there was a very attractive and comprehensive trade exhibit by Camellia Lodge Nursery of Noble Park, and visitors, after having made their choice from the show benches, could readily obtain information as to availability of plants and advice regarding cultural requirements.

In fact, a visit or several visits to the nursery in the flowering season should not be missed by camellia and garden lovers. The main feature at the nursery throughout the season is the continual flower show held in a modern glazed sales annex. Here numerous varieties of camellias are exhibited on the bench, and the prospective purchaser can then view the stock plants growing in the nursery display gardens, many under cover and some in open garden conditions, where growth and flowering habits can be readily observed. From here it is but a few yards to the sales section where all selling stock, which is container grown and is available in several sizes, is grouped in alphabetical order for convenient selection. Information is readily available as to selection of suitable varieties for specific needs. One of the main difficulties is to make a choice from the numerous specimens on display, particularly new releases, which are in heavy demand. A comprehensive selection of Yunnan reticulatas is also available and it often requires a number of trips from the show bench to the

display garden before a final choice can be made; invariably one seems to end up carrying away two or three specimens where the intention was to purchase one and only one camellia.

To end the season is the Box Hill Show, held in early September. Here one is able to see the later flowering varieties displayed. Early rhododendrons are also one of the attractions at this show, and it is on this note that the camellia season bows out to make way for the first of the rhododendrons, culminating in the main rhododendron shows held in the Dandenong Ranges in early November.

Photo: J. E. Downward

FIG. 15.—Rhododendron 'Romance' (*R. elliottii* × R. 'Jacquetta'). A.M. May 23, 1966. Raised by Lord Aberconway. Exhibited by Lord Aberconway and the National Trust, Bodnant

(see p. 165)

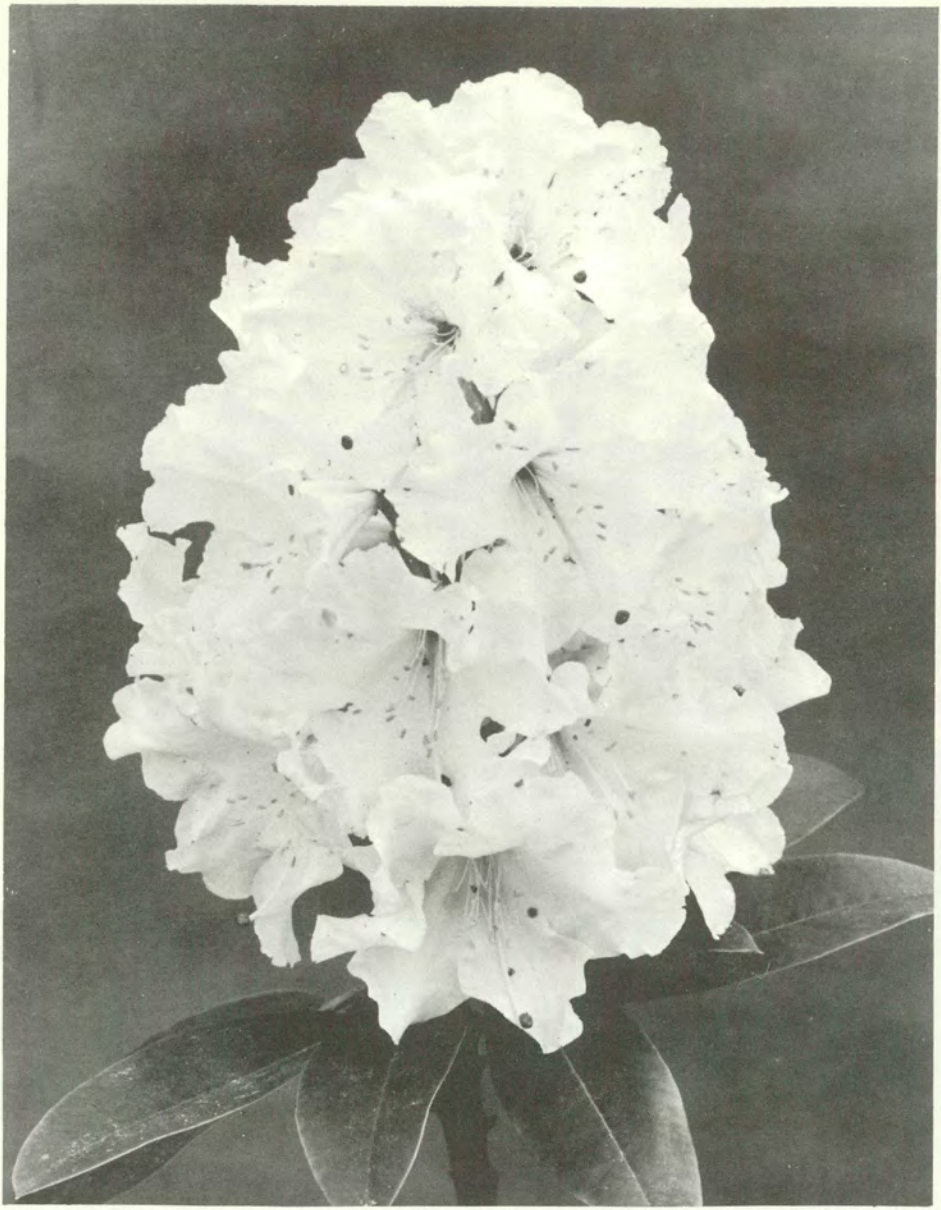


Photo: J. E. Downward

FIG. 16.—Rhododendron 'Jungfrau'. A.M. May 23, 1966. Raised and exhibited by Edmund de Rothschild, Esq., Exbury (see p. 164)

BENCH GRAFTING OF CAMELLIAS AND RHODODENDRONS

By GEOFFREY R. WAKEFIELD

IT was during one of his far too infrequent visits that John Gallagher saw us at work on grafting rhododendrons and camellias and asked me if I would be willing to demonstrate the method at the I.C.S. Conference at Torquay. At that time I didn't anticipate being unable to give the demonstration, but fate decreed that I would, at the time of the conference, be 'Somewhere in Mid-Atlantic', and even with the marvels of the modern age be unable to be with the members in anything but spirit.

Graftage is a method of propagation which has attractions for the nurseryman and objections, especially to the more perfectionist gardeners. The pros are: it offers a fairly certain method of reproducing varieties which are difficult from cuttings and is faster than layers. Plants make up to a saleable size quickly: one has the benefit of a vigorous rootstock for weak growing varieties and the convenience of being able to utilise material at times when it is unlikely to root from cuttings. The cons are: the ever present threat of the understock out-growing (suckers) to weaken the scion, the possible (and in some cases definite) alteration of characteristics of a variety when grafted, the possible transmission of disease from stock to scion or vice versa. A good example of this being the variegation virus of camellias which certainly can be induced. Lastly, many gardeners just don't like grafted plants. However, the fact remains, graftage is one of the most satisfying methods of reproduction for the propagator and one in which he can best show off his skills. It calls for judgment in the selection of scion material, skill in production of a good and suitable understock, experience in the timing and performance of the operation and care and patience in the aftercare.

The method I saw practised in Belgium so took my fancy that I spent some time and care in finding out as many details as I could, committing them to a note-book. The main difference in this method to that mostly used in U.K. is that a length of the understock is left ABOVE the point of graftage to act as a "sap drawer". That is, it continues to draw sap up past the graft,

ensuring an adequate supply of sap for the scion at all times until such time as union is sufficiently complete for the scion to be able to draw sap for itself. The same method is practised for both rhododendrons and camellias, and a small experiment we carried out suggests that it may be just as good for hollies.

Preparation begins with the production of a suitable number of understocks. For camellias they may be either seedlings or cuttings of a healthy and vigorous variety. Sasanquas seem to be especially good. These are grown on in 3 or 4 inch pots to the requisite size and until they have a good strong root system, almost to the point of being root-bound.

Rhododendrons may be wild seedlings pulled or dug from their natural peat beds or seedlings grown on in frames. The best compost for this is pine needle peat. There is some difference of opinion between whether the stocks should be grown on hard, or quickly and soft. I have found that the hard grown stocks are better able to withstand attacks from Die-back (and other troubles), but they are harder to work and union takes a little longer than on soft stocks.

Stocks of both should be brought into a warm house four to six weeks before they are needed for grafting. They are placed in a close case or frame on the greenhouse bench. The walls of the case should be some twelve inches deep and of sufficient size to accommodate the number of grafts required. A rough guide is 4 inches square for camellias ex 3 or 4 inch pots and 6 inches for rhododendrons.

Make sure of adequate drainage and place an inch or two of moistened peat on the bottom for the plants to sit on. More peat is worked round the rootballs as the stocks are packed, fairly tightly, into the case. Water in very thoroughly to settle them in and spray over once or twice a day if temperature and weather permits. Try to maintain sixty to sixty-five during the day and fifty at night. Not easy in a small house during December and January, but don't worry too much if you get an occasional dip to forty on cold nights. The more even you can keep the temperature at around the range given the quicker the stocks will be ready. The colder they are allowed to get, the longer it will take.

Early in the new year, those brought in six weeks ago should be making plenty of young new roots and the foliage buds should be swelling. This indicates that they are ready to take a scion.

The scions may be gathered then or they may have come from the cool storage of the vegetable compartment of the

fridge, where they will be safe for up to six weeks if kept in a polythene bag and at a temperature of just above freezing. They do not need to be forwarded but can be quite dormant. In fact we had good results from scions gathered in a completely frozen state in 1963, once they had thawed out. Camellia scions should be about 4 to 8 mm. across (some varieties such as 'Ville de Nantes' will inevitably be smaller) and rhododendrons should be around 6 to 12 mm. Some of the large varieties, especially those with *R. auriculatum* and *R. discolor* blood, will be rather thicker. The run of the mill varieties will be about the thickness of an ordinary pencil.

As with all vegetative propagation, the prerequisite is a good knife sharpened to an absolute razor edge. Select stocks and scions of as near matching size as possible, so that the matching of their cambiums will be that much easier. Carefully remove the lower leaves for three or four inches up from the soil, clean off any loose outer bark and any blemishes, being careful not to damage the main bark. Insert the knife just *above* a leaf node, cutting inwards and downwards towards the centre of the stem. Do not cut more than half-way through the stem, extend the cut downwards for something over an inch, and it can be a little longer than the cut on the scion will be. Try to work as near the soil as you can, but begin three or four inches from the soil, and as you become more proficient you will be able to work within an inch of the soil. Leave a few leaves and three or four inches of stem intact above the graft to act as the sap drawer, the remainder can be removed.

The scion is now prepared. Three inches is about the best length for camellias (longer scion material can be cut in half and both pieces used) and four to six inches for rhododendrons. Remove one or two lower leaves and sharpen the end to a flat spade wedge, beginning the cut immediately *below* a leaf node. This spade end should be around an inch long; some finer material will be shorter and heavy rhododendrons rather longer. If it is considered necessary to reduce further the leaf area, cut the tips from the remaining leaves for up to half their length. Try to keep a fair leaf area intact.

Now carefully insert the sharpened end of the scion into the prepared cut on the stock, pushing downwards trying to keep the cambiums of both matching until the tops of both cuts are also matching. It will now be seen that the nodes where both cuts were begun are now almost coinciding, which means that this

area of rapid cell activity is being made the maximum use of and that union is likely to be quicker.

Binding of this type of graft is less particular than the difficult saddle and other types of graft. On the continent a few turns of a fine twine or knitting wool is used. We tried raffia but found it rotted too quickly in the close case. Strip polythene is a far better material, as it gives with the growth. It may be used in $\frac{1}{2}$ inch strips either bandage fashion or wound into a sort of twine. Bind just sufficiently to hold the scion firmly in place for the entire length of the cuts, but not too tightly as to strangle nor so much as to smother.

The grafted stocks are now returned to the case as before, watered in and now covered over completely with a sheet of glass or polythene resting on the sides of the case. Little shading will be needed at this time of the year, but by mid-February bright days can occur, when it may be wise to cover with a sheet of newspaper. Little watering also should be required, as most of the moisture in the case will be evaporating to condense on the polythene and drip back. This positive high humidity is the real secret of the close case.

Progress may be observed through the covers, but it is as well to check over once or twice a week for any mould formation.

Union begins with the formation of callus material from the cambiums of both stock and scion cuts. This callus eventually meets, unites and at last sap flows from one to the other and union can be said to be complete. After a few weeks, dormant buds on the stocks will be making growths. These should be rubbed out to allow more sap to flow to the scion. Growths made from the scion are indicative of union being made. A little air can be admitted to the case for a few minutes a day, increasing the amount and duration as long as no signs of distress are observed. Once the covers are completely off the plants are ready for lining out in a frame, the camellias to be potted off. Before this is done, the portion of stock above the union must be very carefully pruned off, leaving a neat joint. Do not remove the bindings, but if it is thought necessary they may be loosened slightly once the plants are in their new quarters.

Some formation of 'sucker' buds will take place and these are best rubbed out as they form. After a while the scion should be drawing most of the sap, this nuisance should abate, and a good supply of plants be your reward.

RECENT DEVELOPMENTS IN ARTIFICIAL LIGHT

By BRIAN CLANCY

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REMARKABLE results have been achieved in plant growth with scientifically designed artificial light. *Camellia reticulata* seedlings have been flowered in Melbourne in eighteen months instead of the normal 5–6 years, orchid flowering from seed has been reduced from 7 to 2½ years, and the juvenile phase of rhododendrons appreciably reduced.

Experienced rhododendron growers are fully aware that the development of a plant depends upon a number of factors, the most important of which are light (its intensity, colour and duration), temperature, humidity, the amount of carbon dioxide in the air, nutrients and the composition of the soil.

The fact that light is one of the important factors in the life of a plant is generally recognised, whilst the use of artificial light on plant growth is not new. What is new is the ready availability of improved artificial light which makes its application simple, efficient and inexpensive.

A modern development in the electric light field is the fluorescent lamp, the efficiency of which is much greater than the incandescent lamp. For example, a 40 watt fluorescent lamp will produce the same amount of light (measured in lumens) as a 150 watt incandescent lamp. The better control of colour of light and improved efficiency are causing a widespread changeover to fluorescent lamps for domestic, industrial and agricultural purposes.

Light is composed of the colours of the visible spectrum, extending from extreme violet through blue, green, yellow and orange to extreme red. The various colours of the light spectrum do not have the same effect upon plants, and further, every light source does not produce the same amount of light of each colour or wavelength. Research into the field of plant growth has established that a light rich in blue and red is the most beneficial for enhancing vegetative growth.

The standard fluorescent tube of the "Daylight" type contains a good percentage of blue, whilst that known as "Warm-white" contains a large amount of red, yellow and orange. Used together these standard fluorescent lamps would give good results for horticultural purposes. However, a fluorescent lamp has been specially designed for stimulating plant growth. It is known as the "Gro-lux" fluorescent lamp and provides in the one lamp a suitably balanced radiation in both red and blue. The peak of the red band is at 6,600 angstroms and the blue peak occurs at 4,500 angstroms. With this energy distribution the "Gro-lux" lamp produces good photosynthesis in plant life.

Those who have seen plants growing under "Gro-lux" lamps immediately realise the potential of the lamps from the intense green colour of the foliage and the healthy glow of the plants.

Experience has shown that in the juvenile phase, rhododendrons can be grown 24 hours a day, thereby achieving normal one-year-old size in three months. In this regard, Knaphill Azalea seedlings were exposed to "Gro-lux" light outside daylight hours and reached a height of four to five inches in three months from

FIG. 17.—
Rhododendrons
under artificial light

Photo: J. E. Downward

germination. In addition to good top growth these seedlings also had good root systems, and this is typical of plants grown under "Gro-lux" lamps. Figure 17 shows twin two-year-old rhododendron seedlings which were grown under identical conditions, with the exception that in addition to normal daylight the plant on the right was exposed to four hours of "Gro-lux" light each day for a period of twelve months. As the photograph shows, this plant is more than double the size of the control plant.

"Gro-lux" lights are being used in the U.S.A. to break into growth rooted cuttings of deciduous Azaleas which previously had proved difficult to grow-on in the Spring. As soon as good roots have formed the young Azalea plants are placed under "Gro-lux" lamps where they are induced to break into growth before going dormant in the Winter. They then grow-on in the Spring without trouble.

In the home "Gro-lux" lamps are excellent for all types of indoor plants and more particularly for displaying container-grown rhododendrons which normally deteriorate in the house. With "Gro-lux" lights, however, the plants actually thrive and the rhododendron blooms and foliage are displayed to the best advantage.

The "Gro-lux" lamp is the equivalent of other standard fluorescent lamps in electrical and dimensional characteristics. It is available in standard sizes and operates in the same fixtures that take standard fluorescent lamps of the same wattage. The 40 watt, 4 ft. long "Gro-lux" tube (ordering abbreviation F40/GRO) retails at 30/-, but this price is not excessive when spread over the average life of 5,000 hours of a fluorescent tube. The 40 watt "Gro-lux" lamp will operate for approximately eight hours for one penny.

In addition to the composition of the light, the intensity of radiation also plays a major part in photosynthesis and experience has shown that one 40 watt "Gro-lux" lamp will adequately illuminate 4 sq. ft. For optimum growing conditions the lamps should operate 12–15 in. from the top of the plants and from 6–8 in. for the germination of seed.

"Gro-lux" is the only readily available lamp which has been scientifically designed to promote plant growth. It makes a "Light Garden" practicable for everyone. Why not try it yourself? The results will surprise you.

INTERNATIONAL CAMELLIA SOCIETY CONFERENCE

TORQUAY — APRIL 1 to 3, 1966

By J. T. GALLAGHER

LOOKING back over the month of April during which most of the country was covered in deep snow followed by the heaviest rainfall since 1931, it is hardly credible that 130 delegates were able to attend our Conference at Torquay and enjoy two days of spring weather in some of the loveliest gardens in England.

Most of the members arrived on Friday in time for afternoon tea served in the hotel lounge, which had a delightful view over Tor Bay. Opening the Conference, Mr. Charles Puddle, V.M.H., welcomed many old friends and members who had not been able to attend in previous years. This year we were fortunate in having a major contribution from California in the form of a series of slides and notes sent by Mr. David Feathers on the subject of the hybrid camellias being bred and tested in his garden at Lafayette. In 1961 an article appeared in this Year Book in which Mr. Feathers described some of his original crosses and many of these are now in their second and third generations. Slides showing crosses between *C. reticulata* and *C. japonica* were almost commonplace amongst such wide crosses as *C. reticulata* 'Trewithen Pink' × *C. granthamiana* (Pl. 3), *C. granthamiana* × *C. japonica* 'Spencer's Pink', *C.* × *williamsii* 'William's Lavender' × *C. reticulata* 'Crimson Robe', *C.* × *saluenensis* × *hongkongensis.*

Mr. Paige, who is Mr. Feathers' friend and neighbour, included some slides of his hybrid seedlings. Mainly derived from C. 'Sylvia May', many of these also have yet to be named. (Pl. 3). Mr. Harold Hillier, V.M.H., told the Conference that he had come to Torquay determined that there were too many named cultivars, but seeing Mr. Feathers' slides had caused him to have serious second thoughts. Mr. Frank Knight, V.M.H., queried whether many of these wide crosses had in fact taken, as although the slides clearly showed the flowers, there was insufficient detail of leaves and

plant habit for the delegates to be able to make a final judgment. Mr. Puddle, V.M.H., assured the Conference that most of these seedlings were in fact true hybrids, as Mr. Feathers had sent many of his better plants to Bodnant for trial.

To many of us the name of Hillier is more of a horticultural institution than just another firm of nurserymen. Most of the great gardeners of the century have eventually ended up browsing in one or another of Mr. Hillier's many nurseries and after dinner some of these great men were brought to life by Mr. Hillier in a kindly and intimate way. Even discounting the fact that the second world war had just been declared, few of us would like to settle down to plant the Winchester by-pass, but for my own part Mr. Hillier asking the late Mr. Lionel de Rothschild to work out his own bill, as he was rather better at money matters, is a picture which will long remain with me.

The evening ended with a talk by Mr. Leslie Riggall on new trends in camellias. Using some excellent model aids, Mr. Riggall covered many aspects of culture and hybridising objectives, including embryo grafting, and stimulated considerable discussion with his views. Perhaps most controversial was his statement that camellias cannot be grown successfully in Britain without the aid of a greenhouse.

After breakfast on Saturday morning the delegates all set off to Dartington Hall for the first of the garden visits. In spite of considerable help and guidance from the Automobile Association and instruction at the hotel before we left, some of us managed to get well and truly lost. It was only later that we discovered the Local Authorities had chosen the previous night to unveil a completely new system of one way traffic in one of the suburbs of Torquay.

The Dartington Hall Estate is today a charitable trust, purchased in 1925 by Mr. and Mrs. L. K. Elmhirst. The original Hall was built in the 14th century by John Holland, Duke of Exeter. When we arrived we were welcomed by Mr. and Mrs. Elmhirst in the Great Hall. Mrs. Elmhirst explained to us that in restoring the gardens she and her late husband had used trees and shrubs to intensify the natural properties of the site and to link the gardens with the surrounding countryside. Before joining our guides, Mrs. Bryans proposed a vote of thanks to Mr. and Mrs. Elmhirst and presented a camellia on behalf of the members of the Society.

Leaving the Hall, a remarkably large tree of *Acacia dealbata*

was much admired, together with some fully grown specimens of various cedars on the Great Lawn. Working our way through Valley Field up into the Glade, where various corylopsis were in flower, we found bird damage to many of the flowering trees was particularly noticeable, resulting in the tips of many of the branches being completely defoliated. It was fascinating that Mrs. Beatrix Farrand, the American garden designer, was responsible for the layout of the Camellia and Spring Walks and members were soon absorbed in naming many of the old and well tried varieties. It is impossible to do justice to this serene and beautiful garden in which its designers have so successfully harmonized the present with the past.

Looking down at the sunlit ancient Tournament lawn screened by stately yews, one could not help but think back to the jousting and tilting it had seen in the early history of the Hall, and yet a little further on a delightful modern bronze figure of a donkey must surely form one of the most attractive and friendly ornaments in the garden. Mrs. Elmhirst very kindly allowed the delegates to eat their packed lunches in the Art Centre and provided an inexhaustible supply of hot coffee and cold drinks.

With the exception of Mr. Hillier's new garden at Ampfield, all the gardens we have visited on our Conferences have been established for some considerable length of time. It speaks highly for the skill and singlemindedness of Mr. and Mrs. Lionel Fortescue that in a mere 21 years the Garden House has become widely known as a plantsman's treasure trove. Mrs. Fortescue greeted all the delegates as they arrived at the entrance to the Garden and answered questions about an extensive group of *C. williamsii* cultivars which lined the drive. Further down Mr. Fortescue was waiting for us and Miss Godman presented a camellia to him on behalf of the Society. With the presence of so many genuine experts among so many rare and unusual shrubs and trees it was not long before a consultation was in progress, during which all the botanical symptoms of an unfortunate plant were examined and its true identity diagnosed. To the novice like myself these examinations proved very informative and add greatly to one's appreciation of the finer details of a good garden plant.

Standing on one of the grey stone terraces and looking down over the garden, I could not help but admire the way in which Mr. Fortescue had allowed his keen sense of colour to influence him in the selection and placing of many of his plants, a talent

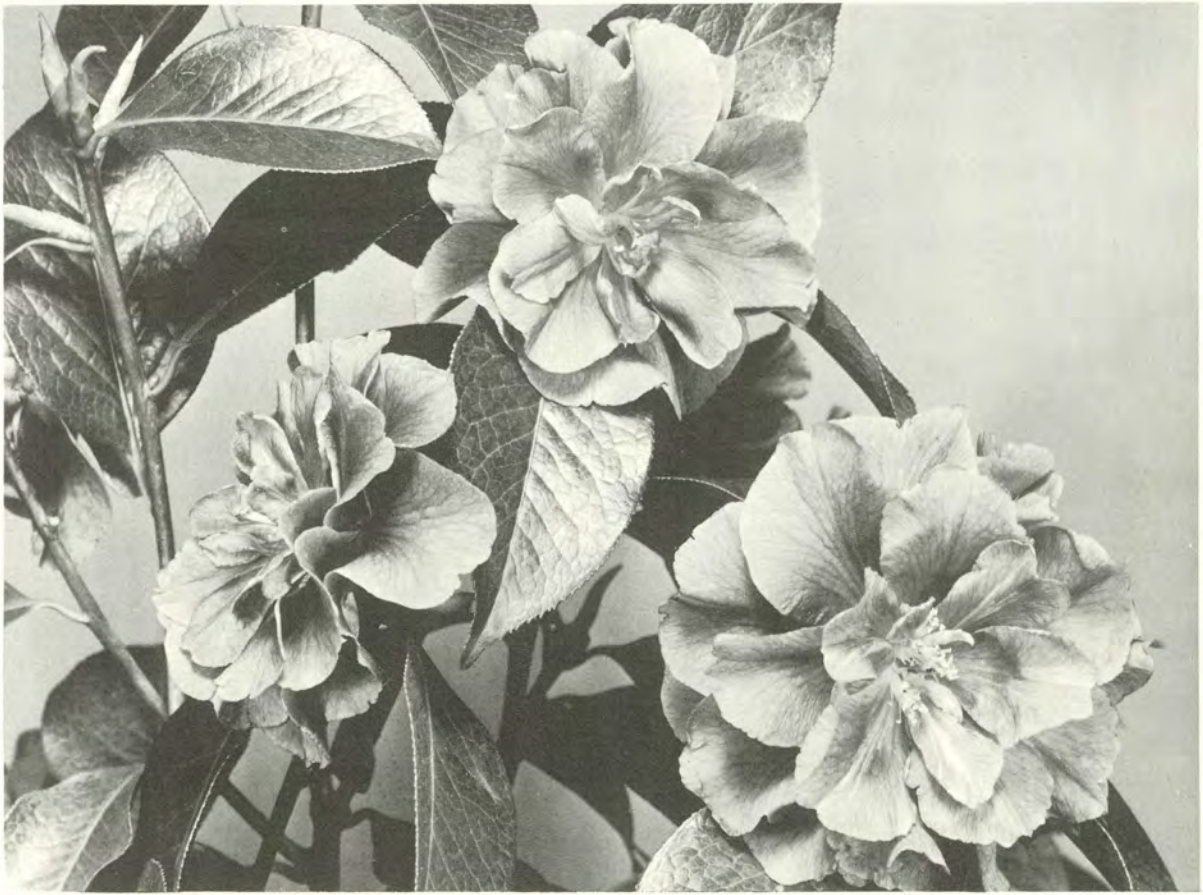


Photo: J. E. Downward

FIG. 18.—*Camellia reticulata* 'Purple Gown'. A.M. March 22, 1966. Exhibited by Sir Giles Loder, Bt., Leonardslee (see p. 167)

no doubt inherited from his father, a well-known painter of the Newlyn group. A splendid display of *Rhododendron* 'Elizabeth' left many in little doubt that this must be one of the finest hybrids Bodnant ever raised. On the top terrace below the house the size of a tree of *Magnolia wilsonii* caused the delegates to marvel at the rate at which many of the fine plants had thrived. Against the wall a young plant of *C. reticulata* 'Purple Gown' was making good progress and at the back of the house a magnificent plant of C. 'Gauntletti' in full flower was one of the best camellia plants we saw on the Conference.

Returning to the hotel, the evening's activities began with the Conference banquet at which the owners of the gardens and their gardeners and friends were our guests. The health of Her Majesty the Queen was proposed by Mr. Harold Hillier, after which Mr. Mann spoke.

The lecture for the evening was given by Sir John Amory on his gardens at Knightshayes and consisted of a series of very beautiful colour slides of shrubs looking at their best in his garden throughout the year. Sir John's fascinating commentary soon left us in no doubt as to his profound knowledge about all the plants he grows and his strict evaluation of their performance under the conditions in his garden. After numerous questions the meeting was thrown open for general contribution and comments from delegates. Miss Godman commented on some of the problems of nomenclature of new cultivars, which is a subject we are hoping to take up in more detail at a separate meeting later this year. Mrs. Kitson showed some slides of Cornish camellias and Mr. Mann of Fisons Ltd. showed a fascinating film on no soil type composts.

Mr. Ayling brought along an 8 mm. cine film which he had taken at our Conference in Brighton and which, considering the weather and large size of the hall, showed up many of the highlights of the Brighton conference very well. Perhaps the proof of the real success of the evening was the number of delegates still laughing and talking after midnight.

It appears that camellia enthusiasts are all very early risers, as we had no difficulty in getting a full quorum for breakfast on Sunday.

The first visit of the day was to Killerton, which has now been presented to the National Trust. It was also the first time many of the delegates had visited this garden and driving through pleasant parkland to the house there were no clues about the

wonderful garden in store for us. We were welcomed by Sir Richard Acland, Mr. Gaze of the National Trust and Mr. Godfrey, the Head Gardener, and set off in parties round the garden. Opposite the chapel there were some particularly fine tulip trees and the tree surgery carried out in recent years to maintain them in good health and support some of the extremely large boughs was warmly praised by our professionals. The chapel had been very beautifully restored under the guidance of Lady Acland, who is herself an architect.

Coming back towards the house and on to the lawn one could but marvel at the foresight with which the designers had planted their shrubs. Behind the house was steeply sloped and grassed and on to this canvas it was as if the designers had placed full-grown shrubs and trees to their best advantage. It was fascinating to be able to see the outlines of so many of these plants in such a perfect setting. This applied also to a fine collection of magnolias which are now reaching maturity and will undoubtedly flower better and better as the years go by. Climbing up the bank and wandering along the walks among the shrubs, one was rewarded

FIG. 19.—Rhododendron 'Zyxya' (R. 'Barclayi' × R. 'Elizabeth'). A.M. April 19, 1966. Raised and exhibited by Maj-Gen. E. G. W. W. Harrison, Tremeer (see p. 166)
Photo: J. E. Downward

by some particularly fine views of the beautiful Devonshire countryside. Sir Richard and Lady Acland and the National Trust very kindly allowed us to eat our packed lunches in the house and provided a most welcome supply of hot coffee. Mr. Close-Brooks thanked Sir Richard and Lady Acland on behalf of the Society and presented a camellia to be grown in the garden as a reminder of our visit.

Arriving at Knightshayes Court, we were greeted by Lady Amory and conducted round the garden by Sir John himself. To serious gardeners Knightshayes must surely be Utopia, and there were plants that many of us had only read about before, being completely new to us as living specimens. Here the needs of every plant seem to have been studied, even a delightful Topiary Fox on one of the yew hedges near the house had been thoughtfully provided with an entrance to its earth.

Sir John's lively commentary as we went round the gardens soon had all the delegates in a happy mood and our various experts were put to the test in our host's attempt to try and name some of his many treasures. It is impossible to do justice in this short account to this extraordinary garden, certainly all descriptions so far have failed to convey the extent of the plantings and the progress which has been made in a mere 25 years. Any gardener visiting Devon should certainly try to synchronize his visit with one of the days the garden is open.

At the end of the tour Lady Amory very kindly invited the delegates to afternoon tea, which was served in the beautiful hall of her home. Amid the most wonderful arrangements of flowers a very lovely portrait of Lady Amory lent colour to a very lovely room. Sir John and Lady Amory's hospitality was truly in keeping with the motto of the house painted in latin over the entrance door—Pax Intrantibus, Salus Exeuntibus.

After tea, Mr. Grimaldi, on behalf of the members of the Society, presented a camellia to Sir John, who quickly passed it on to his wife for planting.

Once again our Conference was drawing to a close, and one by one the delegates thanked our hosts and made their farewells, the more fortunate to carry on to Chevithorne Barton, the delightful old world garden owned by Mrs. L. Heathcoat-Amory, and the less lucky of us having to journey home until another year.

NEW SPECIES AND VARIETIES OF CAMELLIA AND THEOPSIS OF CHINA

By HU HSEN-HSU

(*Institute of Botany, Academia Sinica, Peking*)

Reproduced by permission of Dr. Hu from *Acta Phytotaxonomica Sinica*, Vol. X, No. 2, April, 1965.

1. Camellia chekiangoleosa

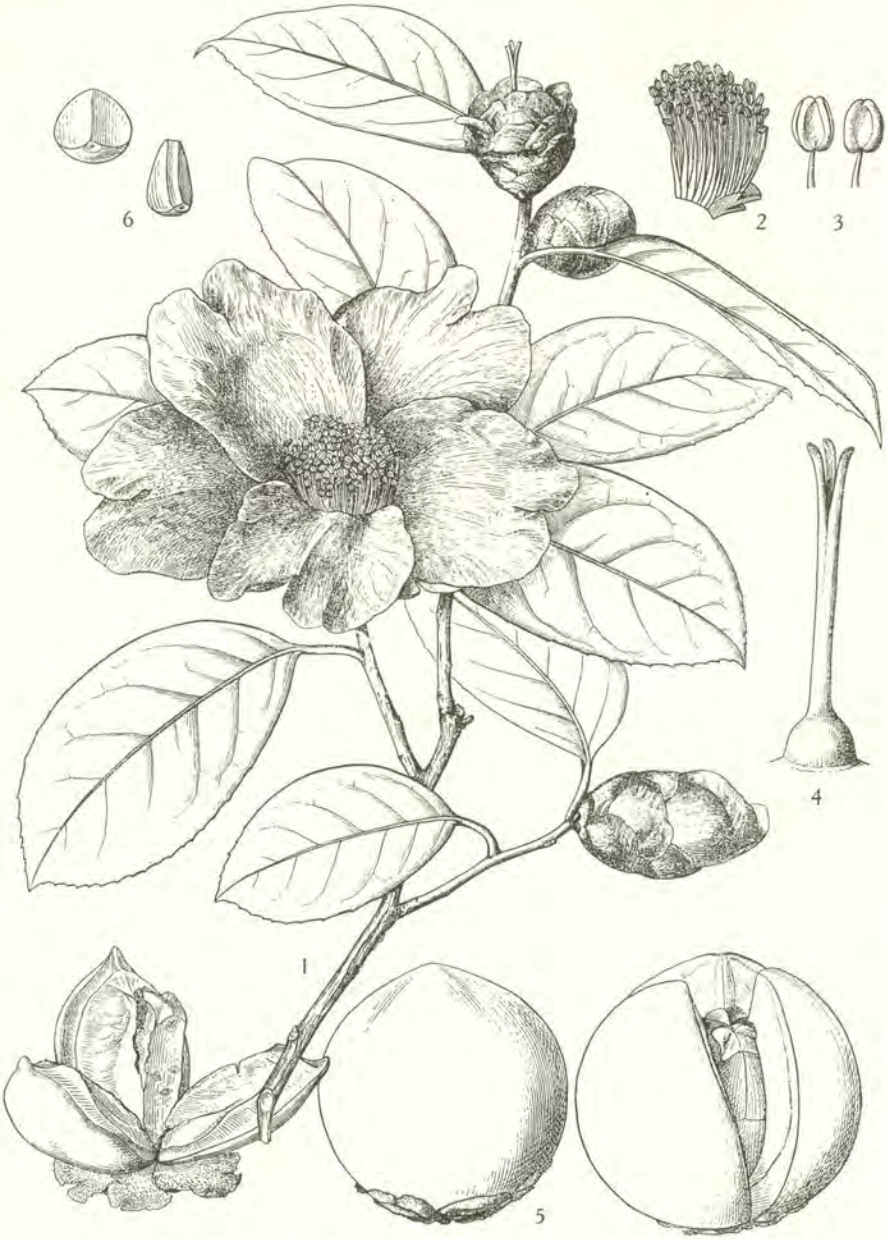
This species differs from all others hitherto described from China in its exceedingly beautiful, very large red flowers with many subpersistent bracteoles, sepals silvery-sericeous on the outside, and in the very large 3–5 celled woody capsule with 3–8 seeds in each cell. It may be compared with *C. semiserrata* Chi, which differs in the very large leaves serrate only on the upper half of the margin, in the smaller, usually funnel-shaped red flowers. From the cultivated *C. reticulata* Lindl. it differs in non-reticulate leaves and silvery-sericeous sepals. From *C. japonica* L. it differs in large fruits, with subpersistent bracteoles and sepals which are silvery-sericeous outside.

This species is also cultivated for its oil, but the oil is slightly inferior to that of *C. oleifera* Abel. So far, it is known to grow spontaneously in the mountains of southern Chekiang, southern Anwhei, north-eastern Kiangsi, southern Hunan, and northern Fukien, ranging from 600–1,400 m. in altitude.

Camellia chekiangoleosa Hu, sp. nov. (Fig. 20)*

Tree up to 6 metres high, *trunk* 6–10 cm. in diameter, bark ashy-white or brown, smooth; branchlets terete, ash-grey, glabrous. Leaves coriaceous, wide oblong or obovate—elliptic, 8-12 cm. long, 2·5–5·5 cm. broad, apex shortly acuminate or caudate-acuminate, base cuneate, wide cuneate or almost rounded, margins except at the base serrulate with black-tipped teeth, intense lustrous green above paler below, both surfaces quite glabrous, midrib lightly raised above, prominently so below, lateral nerves about 8 pairs conspicuous above, scarcely apparent

* Descriptions translated from the original Latin.



浙江红花油茶 Camellia chekiangoleosa Hu sp. nov.

1. 花枝 × 2/3； 2. 雄蕊及花瓣的一部分 × 2/3； 3. 花药 × 2； 4. 雌蕊 × 2； 5. 果 × 2/3； 6. 种子 × 2/3。

（冯晋庸绘图）

FIG. 20.—*Camellia chekiangoleosa*. 1, a flowering shoot, two-thirds natural size; 2, part of the androecium, two-thirds natural size; 3, anthers × 2; 4, gynoecium × 2; 5, fruits, dehisced, undehisced, and just opening, two-thirds natural size; 6, seeds, two-third natural size.

below, anastomosing some distance from the margin, both surfaces loosely reticulate; *petioles* stout, semiterete, 1–1·5 cm. long glabrous. *Flowers* red, subterminal or axillary, solitary, 8–12 cm. in diameter; *bracteoles* and *sepals* 14–16, persistent, subrotund 6–23 mm. in diameter, margin scarious and ciliolate, densely silvery-silky outside, sparsely so inside; *petals* 7, the two outer obovate 3–4 cm. long, 2·5–3·5 cm. wide, densely white silky at the apex outside, the others broadly obovate two-lobed at the apex 5–8 cm. long, 4–5 cm. wide, red veined glabrous; *stamens* numerous, in three series, outer filaments connate up to 7 mm. from the base and attached to the petals, the inner free, 3–3·5 cm. long, very sparsely hairy, anthers yellowish; *ovary* subglobose glabrous 4 mm. in diameter, styles 2 cm. long 3–5 lobed at the apex glabrous. Capsule woody, ovoid-globose shortly beaked at the apex, about 4–6 cm. in diameter glabrous, covered at the base with subpersistent bracteoles and sepals, silvery-silky outside, valves 3–5 thick-woody tawny-brown; central column 3–5-angled broadly club-shaped, up to 3 cm. long, 1 cm. wide at the apex. Seeds convexly-angular 3–8 in each loculus, up to 2 cm. long, 1·8 cm. thick, chestnut-brown.

Chekiang: Kaihwa Hsien, alt. 1,100 m, *Wang Chin-Hsiang 0001* (Type) Apr. 4, 1955; Li Shiu Hsien, Tien Tang Shan, cultivated, *Wang Chin-Hsiang* without number, Mar. 28, 1956; Kiangsi: Yiishan Hsien, alt. 600 m, small tree or large shrub, *Bureau of Forestry of Kiangsi*, without number, 1956. Fukien: Chungan Hsien, alt. 1,000 m, small tree, flower red, *Wang Ming-Chin 3381*, Apr. 11, 1955; Futin Hsien, shrub, flower red, *Chow Tao-Gao 703*, Mar., 1957; Tseyung Hsien, Puyang village, on hill slope, small tree, 2–3 m. high, bark pink-brown, smooth, *Ling Lay-Kuan 1373*, May 12, 1954. Hunan: Nanyao Mountain, near Fang-Kwang temple, alt. 7,000 m, small tree 2·5 m, bark smooth brown, flowers large, red, *Chi Chung-Gin 0025*, Sept., 1957.

2. Camellia albogigas

This interesting white-flowered new species of the section *Heterogenea* is somewhat related to *C. granthamiana* Sealy, differing in long acuminate glabrescent leaves with glabrous petioles, and in smaller flowers with outer stamen filaments connate nearly to the apex and with 5 distinct grey-pilose styles.

This remarkable camellia of great ornamental value, yielding edible oil as well, should be more extensively cultivated.

Camellia albogigas Hu, sp. nov.

Tree up to 8 m. high, *trunk* 12 cm. in diameter; branchlets of the current year terete, striate, dark grey, glabrous. *Leaves* coriaceous, obovate or oblong, 6·5–11 cm. long, 2·5–4.5 cm. wide, long-acumunate at the apex, subrotund at the base, margins slightly revolute with minute and dense thick teeth, becoming glabrous, somewhat shining green above, paler below, midrib and nerves impressed and reticulate above raised below, the lower surface with sparse black warts, lateral nerves about 8 pairs, diverging at an angle of 45° from the midrib and joining up some distance from the margins; *petioles* flat on the upper surface, 5–10 mm. long, glabrous. *Flowers* white, subterminal, solitary, sessile; *bracteoles* and *sepals* coriaceous, about 17, spreading, broadly ovate, increasing in size inwards, the largest up to 2·5 cm. long, 3 cm. broad, densely covered with silvery-ash-grey hairs on the back, persistent; *petals* about 10, spreading, obovate, up to 5 cm. long, 3 cm. broad, shortly connate at the base, quite glabrous; stamens numerous in several series, up to 2 cm. long, filaments white, minutely hairy, outer series irregularly connate for two-thirds their length, inner free, anthers yellow; *ovary* 5-locular, densely grey villose; *styles* 5, 2 cm. long, free, densely long grey-villose. *Capsule* oblong-ovoid, 5·5 cm. long; *valves* woody, up to 5·5 cm. long, 2·8 cm. broad, up to 9 mm. thick, brown, exterior densely covered in warts; central column thick, 2·8 cm. long, 8 mm. thick at the apex, broadly winged; sepals up to 3 cm. long and 3·5 cm. broad when in fruit. *Seeds* not seen.

Kwangtung: Fengkai Hsien, Hwang-Kang Shan, Ling-Chen, tree 8 m. high, 12 cm. in diameter, flower white, petals spreading, on road-side, rare, *Chun Shao-Hsing 18405* (Type), Dec. 9, 1963, seed expressed for edible oil, kernel edible, but with some bitter taste; wild plants few, somewhat planted in the village.

3. Camellia gigantocarpa

This spectacular species of the section *Heterogenea* is closely related to *C. crapnelliana* Tutcher, differing in its larger thinly coriaceous leaves with coarser more divaricate teeth, in its larger flowers with minutely hairy filaments and styles, and especially in its large red capsule 7–12 cm. in diameter with very thick woody valves, thick central column, and large dark-brown seeds to 22 mm. long and broad.

It is cultivated for expressing edible oil from its large seeds.

博白大果油茶 Camellia gigantocarpa Hu et T. C. Huang sp. nov.

1. 花枝 × 2/3; 2. 雄蕊及花瓣的一部分 × 2; 3. 花药 × 2; 4. 雌蕊 × 2; 5. 果 × 2/3; 6. 种子 × 2/3。

(冯晋庸绘图)

FIG. 21.—*Camellia gigantocarpa*. 1, flowering shoot, two-thirds natural size; 2, part of the androecium × 2; 3, anthers × 2; 4, gynoecium × 2; 5, fruits, undehisced and just opening, two-thirds natural size; 6, seeds, two-thirds natural size

Camellia gigantocarpa Hu and T.C. Huang, sp. nov.

Tree 5–10 m. high, *trunk* 25–40 cm. in diameter, bark pale ashy-green, smooth; branches of the current year terete, striate, glabrous, brownish-green. *Leaves* thinly coriaceous, oblong, broadly oblong or obovate, 7–13 cm. long, 3–9 cm. wide, shortly and obtusely cuspidate at the apex, base cuneate or roundish, margins mucronulate-serrulate, glabrous, intense lustrous green above correspondingly green beneath, midrib and nerves impressed above raised below and reticulate, lateral nerves in 9–10 pairs diverging at an angle of 60°–80°, joining up at the margins, minutely warty between the nerves; *petioles* 6-8 mm. long, channelled above, glabrous. *Flowers* subterminal, solitary, nearly sessile, large, white, 12 cm. in diameter; *bracteoles* and *sepals* 10–12, increasing in size from the outer to the inner, obovate, chestnut-brown, exterior silky with pale tawny hairs; *sepals* 23 mm. long, 25 mm. broad, marginate, ciliate; *petals* 6–7, obovate, connate for 4 mm. from the base, 3·8–6·5 cm. long, 2–4·3 cm. broad, apex emarginate, white and tinged pale green. *Stamens* numerous, arranged in 5–6 series, attached to the petals at their base, filaments 10–18 mm. long, downy; *ovary* somewhat globose, 2·5 mm. long, 3-locular, with 5–9 ovules in each loculus; *styles* 3, free, 8–15 mm. long, green minutely pilose. *Capsule* large, globose or pear-shaped, tawny-red, 7–12 cm. in diameter, 300–500 gr. in weight, valves mostly 3, 1–2·5 cm. thick, warty; central column club-shaped, 4–5 cm. long, 13–17 mm. wide at the apex. *Seeds* 9–25, convex-angled, shining dark brown, 18–22 mm. long and wide.

Kwangsi: Bobeh Hsien Kiang-ning, Yunfei-Dahsia village, alt. 250–500 m., tree 5–9 m, 20–25 cm. in diameter, bark greyish-brown, flowers white, capsule red, *Huang Tso-Chieh 2026* (Type), June 27, 1956.

4. Camellia octopetala

This species of the section *Paracamellia* is closely allied to *C. oleifera* Abel, differing in much larger leaves and flowers with 8–13 petals, numerous stamens minutely pilosulose along the filaments, densely sericeous ovary and style, and especially in very large, pyriform, 3–6-celled capsules, 6–9·5 cm. diameter.

It is a high oil-yielding species. The seeds yield 40 per cent good quality edible oil.

Camellia octopetala Hu, sp. nov.

Tree 3–7, more rarely 10 m. high, *trunk* 4–6 up to 20 cm. in diameter, bark grey or greyish-white, smooth; branchlets terete, striate, glabrous, grey, smooth, with scattered minute elongated black lenticels. *Leaves* coriaceous, elliptic, elliptic-oblong or obovate-oblong, 10–15 cm. long, 3·4–7 cm. broad, apex acuminate, base cuneate, margins lightly revolute and serrulate with thick, black teeth, upper surface intense shining green, paler below, glabrous; midrib impressed above markedly raised below, lateral nerves 8–12 pairs, widely spaced, curved, joining together at the margins, diverging at an angle of 45°–80°, slightly raised above distinctly so below; *petioles* 1–2 cm. long, grooved above, glabrous. *Flowers* white, subterminal, solitary, 4–5 cm. in diameter; *bracteoles* and *sepals* 7–8, soon falling off, almost similar but gradually becoming larger, the inner more or less round, 12 mm. long, 17 mm. broad, moderately widely margined, minutely silky on the back; *petals* 8–13 united for 1–2 mm. at the base, obovate-oblong, notched at the apex, 3 cm. long, 1–1·5 cm. broad, silky in the middle on the back; *stamens* 340–540, about 2 cm. long, filaments of the inner free, the outer connate at the base and attached to the petals, minutely pilose; *ovary* 3–6 locular, densely silky; *style* 15 mm. long, densely white-silky stigma 3–5-lobed. *Capsule* woody, pear-shaped or flattened subglobose, 6–8 cm. long, 6·5–9·5 cm. in diameter, brownish-grey, valves 3–6, 1·5 cm. thick covered with small warts; central column club-shaped, 3·5 cm. long, 1 cm. thick at the apex. *Seeds* 14–21, chestnut- or black-brown, ellipsoid, 2 cm. long, 1 cm. broad.

宛田紅花油茶 Camellia polyodonta How in sched. sp. nov.

1. 花枝 × 2/3； 2. 雄蕊及花瓣的一部分 × 2/3； 3. 花药 × 3/2； 4. 雌蕊 × 3/2； 5. 果 × 2/3； 6. 种子 × 2/3。

（冯晋庸绘图）

FIG. 22.—*Camellia polyodonta*. 1, flowering shoot, two-thirds natural size; 2, two petals and part of the androecium, two-thirds natural size; 3, anthers × 1·5; 4, gynoecium × 1·5; fruits, undehisced and just opening, two-thirds natural size; 6, seeds, two-thirds natural size.

5. Camellia polyodonta

This species of the sect. *Camellia* differs from other large, red-flowered Chinese species in its leaves being densely setose-serrulate along the margins, and especially in its very large capsules with very thick wooden valves and large seeds. The serrature of the leaves suggests those of *C. grijsii* Hce.

This species is cultivated in Linkuei and Lungshen Hsien for expressing oil from its seeds.

Camellia polyodonta How in sched., sp. nov.

Small tree up to 8 m. high, *trunk* 10–15 cm. in diameter, bark yellowish-brown, blackish-brown or grey-brown; branchlets stout, terete, striate, grey-white or brown, glabrous, bark with longitudinal fissures finally shed. *Leaves* obovate-elliptic or oblong or broadly oblong or widely lanceolate, 10–14 cm. long, 3·8–6 cm. broad, apex suddenly acuminate or caudate, base wedge-shaped or somewhat round, margins slightly revolute, except at the base densely serrulate with fine black teeth, shiny-green above and sparsely beset with white hair, lower surface opaque yellowish-green in the dry state, sparsely beset with white hairs and densely minutely warty; midrib slightly raised above, prominently so below and sparsely beset with white hairs, lateral nerves 7–8 on each side, curved and joining together some distance from the margins, diverging at an angle of 45°–60°, clearly impressed on the upper surface like the reticulation of veins, slightly raised below; *petioles* 7–13 cm. long, channelled above, becoming glabrous. *Flowers* rose and tinged white or intense rose, subterminal, subsessile, solitary, 7–10 cm. in diameter, bracteoles and sepals 15, subsimilar but gradually becoming larger, coriaceous, broadly obovate, widely margined, 2·5–2·8 cm. long, 2·1-3 cm. broad, grey-tawny-silky outside; *petals* 5–7, two outer obovate 1·8–2 cm. long and 1·2–1·5 cm. wide, five inner obovate 3–4 cm. long, 2·5–3·5 cm. wide, densely white-or yellow-silky outside, connate at the base in a short tube; *stamens* numerous in 5 series, outermost connate two-thirds their length, inner free, filaments white—pubescent below the middle; *ovary* 3-locular, subglobose, densely white-woolly, style 2 cm. long, 3-lobed at the apex for two-fifths its length, white-tomentose at the base, stigmas black. *Capsule* globose or pear-shaped, brown, 4·5–10 cm. in diameter, valves thickly woody, minutely warty outside, sparsely white-pilose, 1·2–2 cm. thick; central column thick three-angled club-shaped, up to 3 cm. long, about 1 cm. broad at the

apex. *Seeds* 9–15, convexly angled, black, glabrous, up to 3 cm. long, 2·5 cm. broad.

Kwangsi: Linkuei Hsien, Western district, in open woods, on slope, tree 5–8 m., flowers purplish red, *Huang Tso-Chieh 2084* (Type), Feb., 1957; Lungshen Hsien, Hung-Mao-Tung to Ho-Yeh-Tang, in forest, small tree 1·5 m. high, bark brown, flowers red, *Tsoong Chi-Hsin 9104*, March 9, 1955.

6. Camellia semiserrata Chi in Sunyatsenia VII, No. 1–2 (1948) 15, pl. 4; Sealy, Revis. Genus Camellia 217 (1958).

Var. **semiserrata**

Kwangtung: Kwang-Ning Hsien, Sui-Sing Ling, in bamboo grove, tree 8–12 m. high, *H. Y. Liang* 61842 (in flower), Dec. 25, 1932; and many other localities; Feng-Kai Hsien, Hwang-Kang Shan, Li Pan-Keng, shrub 3 m. diameter 7 cm. flower red, *Chun Shao-Hsing* 18403, Dec. 11, 1963, vernacular name, Ngiu-Kao-Tsa; same locality, Hwang-Kang Shan, Yangerhling, tree 4 m. flower deep red, *Chun Shao-Hsing* 18443, Dec. 14, 1963, common name: Red-flowered oil-tea plant, same district, Nan-Feng Commune, near Li-Swe Brigade, tree 5 m., flowers purplish red, fruit when mature attaining a weight of 1 catty and 12 ounces, oil yellow, clear, fragrant, edible, *Chun Shao-Hsing* 18461, Dec. 15, 1963, common name: Red-flowered oil-tea plant.

Though botanically discriminated only in recent years, this plant was recorded in ancient books under the name of Nan-Shan-Cha or Southern Camellia, reported with fruits as big as a fist. It is really strange that such a beautiful, and at the same time economically important species, well-known in ancient times, had not been detected until such a late date, resulting in the misapplication of its vernacular name to the Yunnanese *C. reticulata* Lindl.

7. Camellia semiserrata var. magnocarpa

This new variety differs from the type variety mainly in its flowers, usually with sepals glabrous on the outside and glabrous ovary and style. Its fruits and seeds are the largest found in this genus.

This variety has been found in several other districts of Kwangsi, in cultivation in Teng Hsien and probably other localities as well.

Camellia semiserrata var. *magnocarpa* Hu et T. C. Huang, var. nov.

Tree up to 8·5 m. high, *trunk* 50 cm. in diameter; branchlets terete, grey-brown, glabrous. *Leaves* large, coriaceous, obovate-oblong or broadly elliptic-oblong, 12–22 cm. long, 4·5–8 cm. broad, margins widely black-mucronate-serrulate except at the base or only in the upper part, lateral nerves manifestly raised on the under-surface; *petioles* 2–2·5 cm. long, glabrous. *Flowers* rose-red; *sepals* glabrous or silky on the inside; *petals* 8–9, broadly obovate, 3 cm. long, 4·5 cm. broad; *stamens* in 5 series, filaments sparsely pilose; *ovary* glabrous, styles 2.5 cm. long, divided in 3 at the apex, glabrous. *Capsule* large, globose, up to 12 cm. in diameter, purplish-brown. *Seeds* 15, convex-angled, up to 3·5 cm. long, 2·2 cm. broad, shining black-brown.

Kwangsi: Tsangwu Hsien, alt. 275–350 m. tree 8·5 m. high 40–45 cm. in diameter, flowers bright rose, fruit dark purple, *Huang Tso-Chieh 2088* (Type), July 7, 1956; Teng Hsien, tree 3·5 m., flowers red, *Feng Chin-Yung 1014*, Jan. 1, 1963.

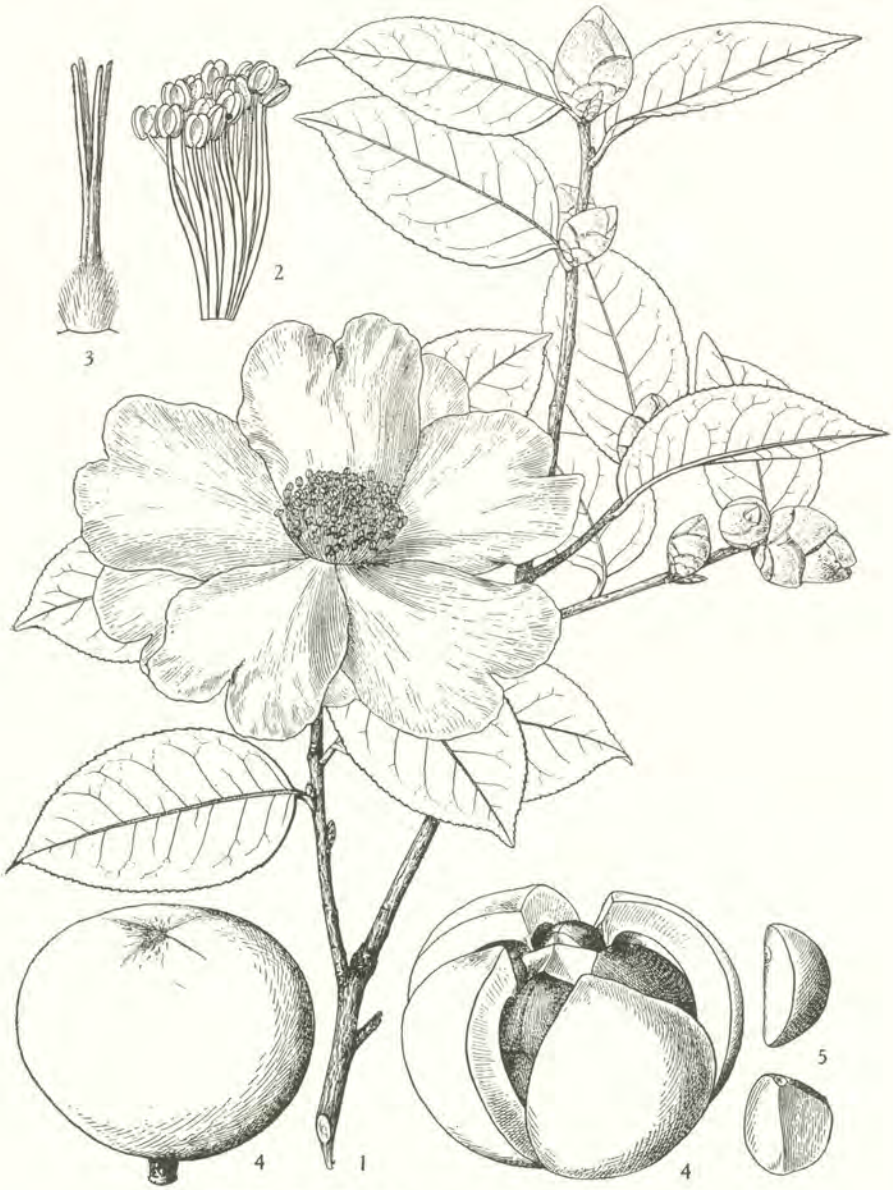
8. Camellia semiserrata var. albiflora

This variety differs from the type variety mainly in its white flowers. Its fruits are reported as being larger than those of the typical variety and maturing about two weeks earlier.

Camellia semiserrata var. *albiflora* Hu et T. C. Huang, var. nov.

Tree 6 m. tall, branchlets terete, striate, glabrous, ash-grey. *Leaves* coriaceous, obovate-oblong or oblong, 9·5–14 cm. long, 3·5–6 cm. wide, apex shortly or long cuspidate, base cuneate, margins sparsely mucronate-serrate in the upper $\frac{1}{3}$ or $\frac{1}{2}$, lateral nerves prominently raised below; *petioles* 1–2 cm. long, glabrous. *Flowers* white, 5 cm. in diameter; sepals grey-pilose on the back. *Capsule* large (fide collector).

Kwangtung: Feng-Kai Hsien, Nan-Feng Commune, near Li-Swe Brigade, tree 6 m., flowers white, anthers yellow, *Chun Shao-Hsing 18468* (Type), Dec. 21, 1963.



越南油茶 Camellia vietnamensis T. C. Huang sp. nov.

1. 花枝 × 2/3; 2. 雄蕊 × 2; 3. 雌蕊 × 2; 4. 果 × 2/3; 5. 种子 × 2/3。

(冯晋庸绘图)

FIG. 23.—*Camellia vietnamensis*. 1, flowering shoot, two-thirds natural size; 2, stamens × 2; 3, gynoecium × 2; 4, fruits, undehisced and just opening, two-thirds natural size; 5, seeds, two-thirds natural size

9. Camellia vietnamensis

This showy species is closely allied to *C. gigantocarpa* Hu et Huang in the characteristics of the flowers, but the fruits are much smaller, so are the leaves. Its 3–5 free styles sometimes connate up to its upper ⅓ to ¼, but the species should be still considered to belong to the section *Heterogenea*. From *C. crapnelliana* Tutcher it differs in larger flowers. From *C. granthamiana* Sealy it differs in its smooth and not reticulate leaves, and in fruits not subtended by persistent sepals.

This species has been cultivated in southern Kwangsi for a long time. It is considered to be introduced from Vietnam, though its original locality is unknown.

Camellia vietnamensis T. C. Huang, sp. nov.

Tree 4–8 m. high, trunk 9–30 cm. in diameter, bark brown or grey-brown; branchlets of the current year terete, striate, sparsely tawny- or grey-white-pilose, finally glabrous, longitudinally fissured. *Leaves* coriaceous, oblong, elliptic, obovate or ovate, 5–12 cm. long, 2–5 cm. broad, abruptly acuminate at the apex, base cuneate or almost rounded, margins serrulate with thick black teeth, glabrous or very sparsely and minutely hairy below, intense glossy green and smooth above, a similar colour below, midrib slightly raised above, prominently so below, lateral nerves 10–11 pairs, diverging at an angle of 45°, impressed above and reticulate, indistinct below, both surfaces minutely warty; *petioles* about 1 cm. long, channelled, minutely pilose. *Buds* 1–2, terminal or axillary, ovoid, bracteoles greenish-white or white, 6–12 mm. in diameter. *Flowers* large, bracteoles and sepals 9, almost similar but gradually increasing in size, coriaceous, broadly ovate, 5–23 mm. long, 4–18 mm. broad, notched at the apex, glabrous on the back, margins ciliate; *petals* 5 or 7, spreading, obovate, 4·5–6 cm. long, 3–4.5 cm. broad, bilobed at the apex, white or tinted green; *stamens* numerous, arranged in 4-5 series, 12–17 mm. long, the outer connate for 1–2 mm. at the base, the inner free, filaments glabrous; *ovary* subglobose, 3·5 mm. in diameter, covered densely with long white hairs; styles 3–5, free or connate and 3–5-cleft above the middle, very sparsely pilose. *Capsule* globose, depressed subglobose, or elongate subglobose, 4–5 cm. high, 4–6 cm. wide, red or pale yellow, valves 3–5, woody, 5–9 mm. thick, minutely pilose on the outside; central column club-shaped, 3·5 cm. long, 1 cm. thick at the apex. *Seeds* 6–15 convex-angular or flat-convex, 2 cm. long and broad, brown.

Kwangsi: Liucheng Hsien, Stang forest Station in cultivation, tree 3–4.5 m, 7–9 cm. in diameter, *Huang Tso-Chieh 2042* (Type), July, 1956; Lu Tsuan Hsien, in suburb, Wang village, alt. 100–250 mm., tree 5–7 m., flowers white, fruit red, *Huang Tso-Chieh 2033*, July 18, 1956.

10. Camellia yuhsienensis

This species of the section *Paracamellia* is closely allied to *C. oleifera* Abel, differing in much larger, thinner, broadly obovate leaves and in smaller capsules with very thin valves.

This shrub is now extensively cultivated in Hunan province. Its seeds yield edible oil similar to that of *C. oleifera* Abel, and is used in the same way.

Camellia yuhsienensis Hu, sp. nov.

Shrub up to 2 m. high, bark grey-white, smooth; branchlets terete, striate, glabrous, pale brown. *Leaves* coriaceous, broadly obovate-elliptic or elliptic or oblong, 5·5–10 cm. long, 3–5·5 cm. broad, shortly obtusely acuminate at the apex, widely cuneate at the base, margins serrulate with thick black teeth, glabrous, intense shining green above, paler beneath, lateral nerves 7–9 pairs, diverging at an angle of 45°–60°, joined together at the margins, impressed above, raised below, veins faint; *petioles* 8–12 mm. long, channelled above, glabrous. *Flowers* white, fragrant subterminal, solitary, 5 cm. in diameter; bracteoles and sepals 8, almost similar but gradually becoming larger, broadly ovate, broadly marginate, thinly silky in the centre outside; *petals* 5, obcordate, 3·5 cm. long, 2–2·5 cm. broad, sparsely covered above with long hairs, minutely white silky below; stamens numerous 7 mm. long, filaments connate up to 4 mm. minutely hairy; *ovary* subglobose, densely silky; styles 3–4, free, glabrous. *Capsule* subglobose, 1·5–3 cm. in diameter, valves thin, coriaceous, brown; central column club-shaped, three-angled-winged, 1·8 cm. long, 6 mm. broad. *Seeds* 1–2 in each locule, semi-globose or convex-angular, 1·5 cm. long, 1·1–1·5 cm. broad, black-brown.

Hunan: Yu Hsien, alt. 100 m., on hilly country, shrub 0·7–2 m., bark greyish-white, flowers white, fragrant, capsule 1·5–3 cm. in diameter, *Yang Tseng-Heng* and *Cheng Chuan-Jan 62101* (Type) Jan. 11, 1962.

11. Theopsis chrysantha Hu, sp. nov.

This interesting species differs from all other Chinese species chiefly in its rather large, fragrant golden-yellow flowers with 3–4 distinct glabrous styles and rather large capsules. Its long, narrow-oblong to lanceolate leaves are also distinctive.

This species has very high horticultural value, as it may be used to hybridize with other varieties to produce yellow, fragrant-flowered varieties of camellias.

Theopsis chrysantha Hu, sp. nov.

Shrub 2–3 m. high, bark grey-white; branchlets terete, ash-grey, becoming glabrous. Leaves coriaceous, narrowly oblong, obovate-oblong or lanceolate, 11–16 cm. long, 2·5–4·5 cm. wide, caudate-acuminate at the apex, cuneate at the base, rather widely and minutely thick-serrulate, shining above, intensely green, glabrous, paler beneath, becoming glabrous and with black spots, midrib and nerves impressed above, prominently raised below and laxly reticulate; petioles 7–11 mm. long, glabrous. *Flowers* golden-yellow, fragrant, axillary solitary; *pedicels* 1 cm. long; bracteoles 5 scattered on the pedicel, broadly ovate, sub-rotund at the apex, gradually increasing in size, 2–3 mm. long, 3–5 mm. broad; *sepals* 5, unequal, ovate, 4–8 mm. long, 7–8 mm. broad, sub-rotund at the apex, connate at the base, with wide crisped margins, minutely pilose; *petals* 8–10, sub-rotund, 1·5–3 cm. long, 1·2–2 cm. broad, rounded at the apex, with wide and ciliate margins, shortly connate at the base; stamens numerous, in 4 series, the outer joined for a short distance to the petals; filaments 1·2 cm. long, minutely pilose; *ovary* subglobose, glabrous, 3–4-locular, styles 3–4 free, glabrous, 1·8 cm. long. *Capsule* depressed, three or four-angled-subglobose, 3·5 cm. high, 4·5–5 cm. broad, depressed at the apex, greenish-white, glabrous; valves woody, 5 mm. thick; central column 2 cm. high, 3–4 winged, thick at the apex and 3–4 lobed; pedicels stout, 1 cm. long, sepals recurved. *Seeds* 6–8, flat-convex or flat-angular, about 2 cm. long, lustrous pale blackish-brown.

Kwangsi: Yung-Ning Hsien, Keng-Sa, under forest, in valley, shrub 2–3 m., bark greyish-white, flowers golden-yellow, *Kwangsi Pbarm. Instit. 17530* (Type), Dec. 25, 1960; same district, shrub, fruit greenish white, *Gao Ru-Chun 17628* (in fruit), July 23, 1964.

12. Theopsis euonymifolia

This species differs from other Chinese species with hairy ovary in the thinly coriaceous broadly elliptic opaque-green leaves with dense minute sharply mucronate teeth, and usually cuneate base, in the caducous bracteoles and sepals, in the 4 spatulate petals, and in the minutely pilosulose filaments, those of the outer 2 series shortly connate, inner series 8 being free.

Theopsis euonymifolia Hu, sp. nov.

Shrub 2–4 high; branchlets terete, striate, densely dark-hairy on the present year's growth, becoming glabrous at length. *Leaves* thinly coriaceous, broadly elliptic, obovate-elliptic, ovate-oblong or oblong, 3·5–5·5 cm. long, 1·5–3 cm. broad, obtusely apiculate at the apex, broadly cuneate or roundish at the base, margins lightly revolute and densely serrulate with minute black mucronulate teeth, opaque green above and very sparsely hairy and with black glands, paler below and very sparsely hairy, midrib raised on the upper surface and slightly tomentose, raised below and sparsely pilose, nerves and veins reticulate on both surfaces; petioles channelled above, 1–2 mm. long, dark hairy. *Flowers* white, subterminal, solitary, nearly sessile, 1 cm. in diameter; bracteoles and sepals dropping off early and not seen; petals 4 (always?), spatulate, 8 mm. long, apex emarginate, shortly connate at the base, sparsely pilose; stamens numerous, in 3 series, outer filaments connate for one-fifth of their length, minutely pilose, 8 interior ones free and quite glabrous; anthers yellow; ovary subglobose, 1·5 mm. high, densely covered with long grey hairs, style 5 mm. long, glabrous, 3-lobed for three-fifths its length. *Fruit* unknown.

Yunnan: Jintung Hsien, Hsiao-Chang-Chien, alt. 1050 m., under mixed forests, shrub 2–3 m., flowers white, occasional, *M. K. Li 1506* (Type), Dec. 3, 1939.

13. Theopsis longipedicellata

This interesting species differs from all others in its rather large long-pedicelled white flowers, highly connate hairy outer filaments, and glabrous ovary with 3 free long styles.

Theopsis longipedicellata Hu, sp. nov.

Shrub 1·5 m. high; branchlets of the current year slender, terete, dark green, tomentose, becoming glabrous the following year, ash-grey. *Leaves* coriaceous, obovate-elliptic or broadly ovate, 4–4·5 cm. long, 2–3·2 cm. broad, apex abruptly and obtusely acuminate or somewhat obtuse, base cuneate more rarely nearly rounded, margin widely denticulate with thick black teeth, upper surface shining green becoming glabrous, paler below, becoming glabrous but sparsely minutely black warty, midrib and nerves slightly raised above, prominently so below, lateral nerves 5–7 pairs, joined together near the margin, diverging at an angle of 45°–60°–70°, veins reticulate above, indistinct below; petiole 2 mm. long, channelled above, minutely hairy. *Flowers* white, terminal solitary (always?), 4–5 cm. in diameter, borne on slender pubescent pedicels 12 mm. long; bracteoles 6, ovate or broadly ovate, 1·5 mm. long, glabrous, scattered in the tomentum close to the pedicel; sepals 7, unequal, united at the base into a 2 mm. long tube, broadly ovate, 4–7 mm. long, 7–9 mm. broad, obtuse, narrowly marginate, glabrous outside; *petals* 9, obovate, 2 outer coriaceous but petal-like, 11 mm. long and broad, the remainder up to 3·2 cm. long, 2 cm. broad; *stamens* numerous in 4 series, 11 mm. long; all the filaments shortly hair, the inner ones free, the outer irregularly united up to two-thirds their length; *ovary* subglobose, 2 mm. in diameter, glabrous, styles 3 free, 3·5 mm. long, glabrous. *Capsule* unknown.

Kwangsi: Hsincheng Hsien, Beh-Gen village, shrub 1·5 m., flowers white, *Lan Hsiang 99* (Type), Feb. 15, 1959.

14. Theopsis lungyaiensis

This species is close to *T. punctata* (Kochs) Hu, differing from it in small, thin setaceous-serrulate leaves reticulate on both surfaces, and larger flowers with yellowish tomentose ovary and shorter style.

Theopsis lungyaiensis Hu, sp. nov.

Shrub ?; branchlets of the current year terete, slender, striate, densely and minutely hairy, the bark shed at length. *Leaves* thinly coriaceous, obovate-oblong or oblong, 3–4 cm. long, 1–2 cm. broad, obtusely apiculate at the apex, base cuneate, margin

bristly-serrulate, opaque green on both surfaces, densely warty, glabrous, above except the midrib minutely hirsute, glabrous below, midrib and nerves on both surfaces raised like the vein-reticulation; petioles 5 mm. long, channelled above, minutely hirsute. *Flowers* white, in pairs up to 2 cm. in diameter, shortly pedicellate; bracteoles and sepals coriaceous, gradually increasing in size from the outer to the inner, broadly ovate, 2 mm. long, 3 mm. broad, emarginate, glabrous outside; *petals* 7, obovate, up to 2 cm. long, 1 cm. broad, emarginate at the apex; stamens numerous, in many series, up to 2 cm. long, outer filaments connate in the lower half, inner free, minutely pilose; *ovary* sub-globose, 3 mm. in diameter, densely tomentose with yellowish hairs, style 8 mm. long, 3-lobed at the apex, very minutely downy. *Capsule* unknown.

Fukien: Lungysi Hsien, Boping Shan, *Tsoong Pu-Chun, 4418* (Type) Nov. 13, 1934; Sha Hsien, Tung Tian Yai, *Chen Chin Lien 148*, June 11, 1930.

FIG. 24.—Rhododendron 'Pink Pebble' (*R. williamsianum* × *R. callimorphum*). Selected for trial at Wisley. Raised and shown by Maj.-Gen. E. G. W. W. Harrison, Tremeer, on April 19, 1966

Photo: J. E. Downward

NOTES ON RHODODENDRON HYBRIDS AT THE GREAT PARK, WINDSOR

T. H. FINDLAY, M.V.O., V.M.H.

AFTER making some 275 rhododendron crosses, it is interesting to look back and reflect on some of the results over the past twenty years. One always, of course, hopes for a winner from every cross, and it does happen that many good hybrids will come from one deliberate cross.

The late Mr. Lionel de Rothschild made a cross between *R.* Lady Bessborough and *R. wardii* which produced *R.* Hawk A.M. A clone from this family, 'Crest', one of the best yellows, received an F.C.C. in 1953, and it was at the Rhododendron Show in that year that we were very kindly given a truss for breeding purposes. I remember well bringing this truss home and making nine deliberate crosses between it and both species and hybrids. These were *R. wardii* and *R. litiense*, two beautiful species, especially *R. litiense*, a good strong yellow that we had obtained from Messrs. Slocock some years before. Those between hybrids were with *R.* China (A form), *R.* Penjerrick, the yellow form, *R.* Jalisco, *R.* 'Loderi Julie', a pale creamy yellow, *R.* 'Loderi Venus', *R.* Idealist and *R.* Damaris, a good yellow, a form better than the Logan form.

Most of the crosses made with *R.* 'Crest' have produced something outstanding. It is our policy to grow approximately fifty seedlings on to flowering size (if that number has germinated) and then to select and keep only the best. On an average it takes ten years to see and appraise a new variety. Rarely do we name a rhododendron unless it has had an Award of Merit, a P.C. or has been selected for trial at Wisley.

To revert to the nine crosses. The most outstanding are the China × 'Crest' hybrids. Although this cross is between two hybrids, the two hybrids have three species and one hybrid in their make-up (namely, *fortunei*, *wightii* and *wardii* and the hybrid Lady Bessborough) which have produced a level lot, very vigorous and with large trusses. One of the best of these, *R.* 'Binfield', received an Award of Merit in 1964. This plant also won, in 1964, the Loder Cup for the best hybrid in the Rhododendron

Show. *R.* 'Binfield' is a vigorous grower with leaves six inches long and seventeen-flowered trusses of primrose yellow. Another good clone, a sister seedling similiar in habit but, I think, a better plant, won the Loder Cup in 1965. This and others are as yet unnamed.

R. China was bred and introduced by Messrs. Slocock. I must refute the statement made in the report on the 1965 Rhododendron Show on page 107 of the Rhododendron Year Book, 1966 that the seedlings shown by Messrs. Slocock were sister seedlings of the Loder Cup winner *R.* 'Binfield'. Messrs. Slocock made a similar cross but used, I think, a different China as one parent. In any case we still hold the original seedlings. From the 'Penjerrick' × 'Crest' we have another yellow range, and an Award of Merit was given to one of these in May, 1966. This has been named 'Theale', a primrose yellow with a slight flush of cardinal red. (Pl. 6). This rhododendron holds its flowers like 'Penjerrick'; beautifully poised, it has ten flowers to the truss.

In the batch from the 'Loderi Julie' cross some very lovely forms have appeared, and one, named 'Arborfield', was given an Award of Merit in 1964. This type follows the Loderi parentage in all but colour.

When using 'Crest' as a parent we were, of course, trying to breed good yellow rhododendrons, and I think we have achieved this in the *litiense* cross with 'Crest'. Many clones of this cross are really deep yellow and of dwarfish stature. They should make good garden plants for the small garden. One, named 'Clewer', received a P.C. in 1966.

To date from what we have seen of the flowers of the *wardii* and Idealist hybrids (not all have flowered yet) I would say these are very good. They have flowers of good texture and sit well on the bush.

The Jalisco cross has produced nothing worth keeping, as I think was to be expected, and the Damaris hybrids, good flowering yellows, but nothing worth naming. So on the whole *R.* 'Crest' is a very good pollen parent.

BALLYWALTER PARK AND WOBURN LODGE

TWO RHODODENDRON GARDENS IN THE ARDS PENINSULA, COUNTY DOWN, NORTHERN IRELAND.

By ARTHUR PACK-BERESFORD

IRELAND is traditionally a hospitable country, and since the end of the 1939–45 war there has been a remarkable and welcome increase in the number of visitors. Many of these have had specialized interests, and to those of us who have been concerned with the less formal aspects of gardening, and in particular with rhododendrons, it has been a source of particular pleasure that private individuals, members of British and international learned societies, and tourist groups generally, have paid us the compliment of being curious as to our achievements. Tours, individual or collective, tend to fall into stereotyped patterns, so one of the purposes of this article is to call attention to a part of Ulster which, though lacking the obvious appeal of say the Ring of Kerry or the Glens of Antrim, yet possesses a charm and individuality of its own.

The Ards peninsula, as may be seen from the map, lies to the south-east of Belfast. The extensive sea inlet of Strangford Lough to the west and Belfast Lough to the north combine to produce island conditions and a mild climate. Precise frost and rainfall statistics are not available at the time of writing, but those curious may refer to various articles in the R.H.S. Journal by the late Edith, Marchioness of Londonderry, concerning Mount Stewart, which is quite close to both properties. It will be apparent, however, from what follows in this article that plants flourish in the Ards which are impossible, or doubtfully hardy, in mainland Down, even in gardens so favoured by nature and skill as Rowallane and Castlewellan.

The gardens under review have various points in common. Both lie on the seaward side of the peninsula, in both a principal

enemy is east and north-east wind, and consequent salt spray, but both, by the nature of the terrain, have in recent years been spared the worst effects of westerly gales, which have caused serious damage in gardens and estates further west in this Atlantic island. Both also are comparatively modern gardens, dating from the thirties, though formed in an ancestral heritage of woodlands, and the trees and shrubs which our various ancestors wisely planted from the early 19th century onwards.

This article is therefore addressed to an interested visitor who has a day or two to spare. Any visitor, if wise, should not be in too much of a hurry, and should take time, if possible to explore the long coast line of the Ards, its bays of golden sands alternating with low, rocky headlands, while from any eminence (notably Scrabo Hill, near Newtownards) an incomparable view presents itself, on a clear day an extraordinary stretch of the coast across the Irish sea being visible, from the Paps of Jura in the north, to the Isle of Man in the south, to say nothing of our own Mountains of Mourne, and other features in the west. It has even been recorded that on rare occasions the hills of Cumberland in England, and Snowdon in Wales, have been discerned.

To the south of the village of Ballywalter is found an entrance gate to Ballywalter Park, and the avenue leads directly to the mansion house, where there is ample parking space for cars. Built over, and indeed encasing, an earlier house, in 1849 (architect Sir Charles Lanyon), this fine example of mid-Victorian splendour has in recent years been extensively modernised and improved by the owner, Henry, 4th Lord Dunleath. While he has maintained, and indeed improved, with the active assistance of his wife, the present Lady Dunleath, his horticultural inhertance, the creator of the gardens we are about to visit was his father, Charles, 3rd Lord Dunleath, who died in 1956.

Accordingly the writer hopes that this article may serve as a tribute to the memory of a man who, distinguished in many wider fields, devoted a part of his considerable intellectual powers to the formation of a remarkable collection of plants.

Badly wounded in the first world war, Charles, Lord Dunleath, before succeeding to the family estates, spent some years in Australia. Here his innate love of plants expressed itself in the despatch home of seeds and other plant material; various magnificent specimens of eucalyptus, grouped in various areas of the park, testifying to this early enthusiasm. It was not, however, till the mid thirties that he really concentrated on rhododendrons.

With meticulous regard for detail, he kept elaborate records, happily preserved, showing the provenance, disposition and history of his various species and hybrids. He experimented freely in planting in many parts of the estate, but for present purposes, and for the convenience of the general visitor, two main zones will be described, Ballyatwood Avenue (Fig. 25) and Rose Hill.

With the foregoing as the general background of Ballywalter Park, let us now start our walk from the house towards the avenue mentioned, which is one of the principal ones radiating outwards from the house. After about two minutes' walk, one of the first large hybrid rhododendrons on the right-hand side may well stop us in our tracks, particularly if it is early June, and covered with its scented shell-pink flowers. Now 20 feet in diameter and 15 feet high, this is labelled *R. auriculatum* × Loderi (pink) × *decorum*, and is confirmed by the records as such and as a gift from Sir W. Milner in 1938. Well set back from the roadway, as are many of the specimens along this avenue, with a generous mown grass verge in front, the dark foliage of a screen of Ilex at the back makes the perfect neutral foil for this noble plant.

FIG. 25.—Rhododendrons in Ballyatwood Avenue at Ballywalter Park

Photo: J. K. Mullowney

On the opposite side, just past the left-hand fork of another short avenue leading towards the farm buildings, are 3 plants of *R. lanatum*. Originally introduced by Hooker, this fine species is difficult to grow well and rare in cultivation. The largest of this group is about 8 feet high, from Exbury seed, sown 1939. Flowering here from mid-March onwards, they are decorative at all seasons, with bright yellow flowers, and the woolly indumentum of the leaves in texture like a kid glove.

One should perhaps here observe that, to keep to some sort of timetable, one must hurry past features that in a lesser garden would merit attention, and only such as appear to the writer to be outstanding, either by virtue of rarity, for being particularly well grown, or well placed in relation to the landscape, will be selected for special mention.

Thus, some 75 yards along the avenue, on the same left-hand side, past a swamp cypress, an antique-looking *R wardii* catches the eye. About 4 feet high only, it covers a large area, having layered out from the original stem. Over 30 years old, under No. KW. 5736, it has considerable vigour, and where light penetrates its leaves, new young growth may be seen coming from the old wood. Another *wardii*, nearby, is of more conventional erect form. Behind a thicket of *Rhododendron* 'Lady Rosebery' and 'Lady Chamberlain' are vast clumps of *R. crassum*, flowering very freely in semi-shade. This does very well in this part of the world, and most useful and decorative it is, too, flowering from early June onwards, after the main flush of species is over, the fragrance from its white fleshy flowers scenting the air for yards around. The art of growing *R. crassum* well appears to consist in choosing the right degree of shade from direct sunlight, as in too open a position the flowers brown and drop quickly. These are under No. KW. 5448, those at Woburn Lodge being from a later collection (KW. 7259), but both seem to share the same idiosyncracies. Here also may be found *R. cerasinum* (KW. 6923), several thick bushes of it, in a particularly good form of this variable plant, the campanulate flowers off-white with a brilliant cherry-red band round the edge.

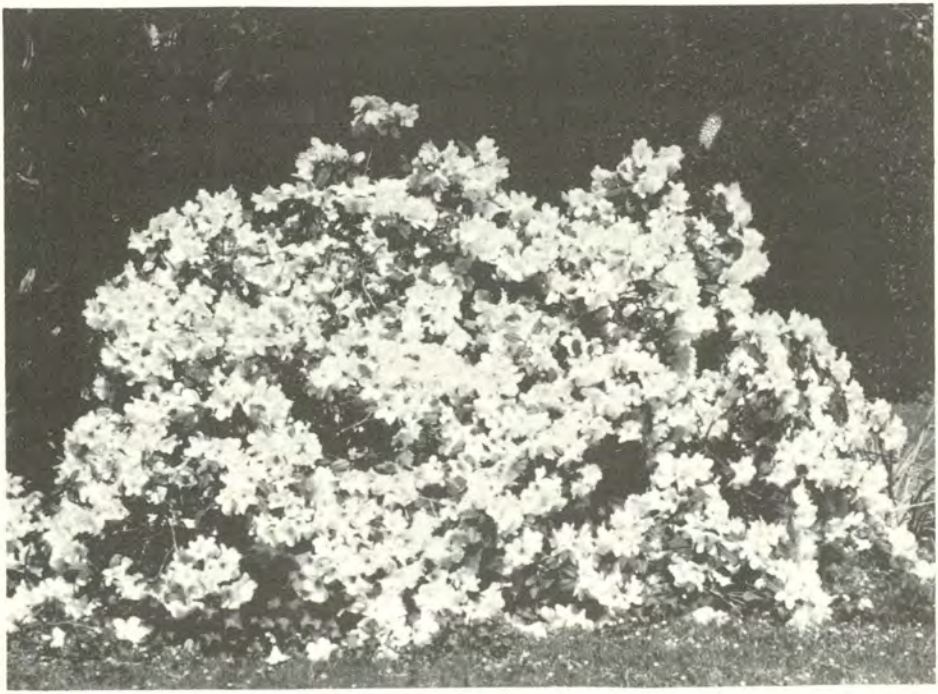
The considerable luxuriance of the rhododendrons in this particular area—only a few have been picked out—may in part be attributed to complete shelter from cutting winds, and ground draughts, with a backing of *R. ponticum*, Escallonia 'C. F. Ball' and other dense material.

Back to the avenue again, left round a 20 ft. wall of clipped

Photos: J. K. Mullowney

FIG. 26.—Lawn with Eucalyptus at Ballywalter Park

FIG. 27.—Rhododendron *johnstoneanum* hybrid at Ballywalter Park



Portuguese laurel, and a few paces forward, and on the opposite side stands an isolated and healthy specimen of *R. mallotum* in marked contrast to the tangled profusion we have just left—the classical as against the romantic. No expert on the various insect predators that attack rhododendrons, preferring birds to chemicals for control, the writer was struck by the perfect form and texture of the leaves of this plant. This was in early June, and though the blood-red flowers were over, it made a charming picture, the olive green of the young foliage standing well above the older leaves, with their thick rusty-red indumentum. On a few yards, a solid clump of *R. leucaspis* (KW. 6273) provides a welcome reminder in late March that spring has come, its flat, white flowers, with chocolate anthers, escaping all but exceptional frosts. Just across the avenue, again on the left, an elegant 20 ft. specimen of *R. arboreum* displays the columnar habit typical of this species. This is a form with silvery indumentum. Visiting experts can interest themselves by determining which one it is, as Lord Dunleath's notes show that this species came from 12 different sources, and our experts will be in the best of company, as leading figures in the rhododendron world have examined many of the plants at Ballywalter. In any case, it is a handsome plant, well clothed with healthy foliage to the ground.

We may now leave 4-star rhododendrons for two hundred yards or so and walk under the shade of some tall forest trees to a spot where a vista has been made, giving a splendid view of the house. Here a personal choice may be made as to whether or not to explore an interesting area, in rough woodland, off the main avenue. It is reached by a grassy path on the left, indicated by a marker, between the last *R. arboreum* described, and the view of the house. If one is pressed for time, or in wet weather, it could be missed out, but such considerations will hardly deter the enthusiast. Some of this area is difficult of access, some clear-felling and replanting of timber having been done in recent years. As is appropriate, the star feature is an extensive grove of *R.* 'Lady Dunleath' (*arboreum* var. *kermesinum* × *elliottii*), fuller particulars of which may be found in the Rhododendron Handbook, 1964, part 2. This hybrid was named after the present Dowager Lady Dunleath, widow of Charles, Lord Dunleath, hence mother of the present owner, and living now in Co. Antrim, not too far from her old home, and the writer takes this opportunity of recording how much these gardens owe to her interest and encouragement over the years. This grove is a fine sight in

Photo: J. E. Downward

PLATE 4 — *Rhododendron glaucophyllum* var. *luteiflorum* 'Glen Cloy', F.C.C., 22nd March, 1966. Exhibited by the National Trust for Scotland, Brodick Castle Gardens, Isle of Arran

(see p. 161)

Photo: J. E. Downward

PLATE 5 — *Rhododendron magnificum* 'Kildonan', A.M., 22nd February, 1966, as a tender flowering plant. Exhibited by the National Trust for Scotland, Brodick Castle Gardens

(see p. 161)

late June, as the hybrid seems to have inherited the good qualities of both parents, particularly in the very deep brilliant scarlet flowers. To reach it bear right on entering the woodland.

In early June, *R.* 'Lady Stair' ('Albatross' × *griersonianum*) 3 ft. high in 1939, and a gift from Lady Stair, makes a splendid show, and its distinctive pastel-pink shade clashes with none of its neighbours. There are fine plantings of *R. euchaites* and in early May its blood-red flowers are most arresting. Lord Dunleath intends further to open up this woodland. Returning to our rendezvous point at the vista to the house, we find another rhododendron to be specially admired, and that is a vast specimen of *R.* 'Polar Bear'. It is quite one of the show pieces of Ballywalter Park, flowering from late July into early August.

We now turn off the main avenue and walk down a grassy lane to the right for about 50 yards, turning right through a wicket gate in a protective fence. Here we enter an entirely different type of ground, in part lawns fronting the house, in part a lightly wooded hill; from the point of view of the rhododendron specialist the latter area is the one of main interest. Up to this point the writer has endeavoured to give a rather precise direction as to the location of the various plants of interest. It would be quite impossible to give more than a very general indication in the notes that follow, of what plant is where, further than to say that the whole walk is in a general clockwise direction, and taking right turns where appropriate, eventually these lead back to the house. So, with this warning, and bearing in mind that Lord and Lady Dunleath, though kindness itself, cannot always guarantee to send out search parties for lost visitors, let us set forth again.

Through the gate, one finds oneself on a little forest lawn, grass in the centre, and ringed round by some excellent rhododendrons. To name a few there are *R. schlippenbachii*, *xanthostephanum*, *sinogrande*, *lanatum*, *tephropeplum* and *williamsianum*. The *williamsianums* are a group of 5, and though not particularly large—there is a perfectly enormous one further on that we will come to—are of the most perfectly symmetrical shape the writer has seen. *R. xanthostephanum* makes a big untidy bush, quite hardy in growth, but gets frosted in the bud on occasion. The *R. sinogrande*, about 10 feet, is making fast growth; we shall see many large-leaved species later on.

We now turn left through a dark romantic tunnel of laurel, cross a small burn and eventually find ourselves on another lawn,

notable more for specimen trees and shrubs than for rhododendrons. Here are most of the *Eucryphias* commonly grown in Irish gardens, the best being *E. nymansensis* at about 35 feet, not quite so tall as the one at Woburn, though in fuller sunlight, and rather better in habit, it must be regretfully admitted. There are fine *Nothofagus*, in particular *N. cliffortioides*, nearly 60 feet, also a good *N. cunninghamii*, the Tasmanian Bay Myrtle. Also one may notice here—and I must give credit to the observant Sir George Campbell of Crarae for pointing this out to me—how very close together Eucalyptus can grow, and yet make fine ornamental lawn trees. We must, however, press on to more rhododendrons, and taking for a sign-post a large brake of *Desfontainea spinosa*, the Chilean Holly, we penetrate between this and a large *R. arizelum*, growing quite well in dense shade, and with some gratitude find under a huge *Cupressus macrocarpa* three cast-iron seats of pleasant Victorian design. Here the writer himself intends to pause for breath, and advises the visitor to do the same.

Without moving from this agreeable sylvan retreat, we may see the immense plant of *R. williamsianum* before referred to. It is fully 6 feet in height, with a 12 feet spread, and in late April is a very fine sight when covered with its shell pink flowers, and later with its bronzy young foliage. This species was obtained by purchase from the late Mr. Smith's nursery at Daisy Hill, Newry, Co. Down, in 1936. Also in view are plants of *R. lacteum*. These look quite healthy, were raised from seed (KW. 13750) in 1939, have flowered rather sparsely and do not unfortunately appear to be a very good form, the yellow being rather pale. Sad also it is to record that the magnificent *R. dalhousiae*, described and illustrated by the Dowager Lady Dunleath in the 1960 issue of the Rhododendron Year Book, has died back. It may come again, and nearby are layers of this fine plant which will eventually take its place.

We can now look up towards the wooded hill and consider the reason why these fine and often difficult species flourish so well here. For what it is worth the writer's opinion is that the reasons are threefold: first, the sharp slopes ensuring perfect drainage; second, the perfect shelter from wind; third, the natural leaf-fall from the light canopy of trees overhead. These factors, combined with original very careful planting, have combined to give remarkable results.

As one wanders up this hill, there is only space to pick out a

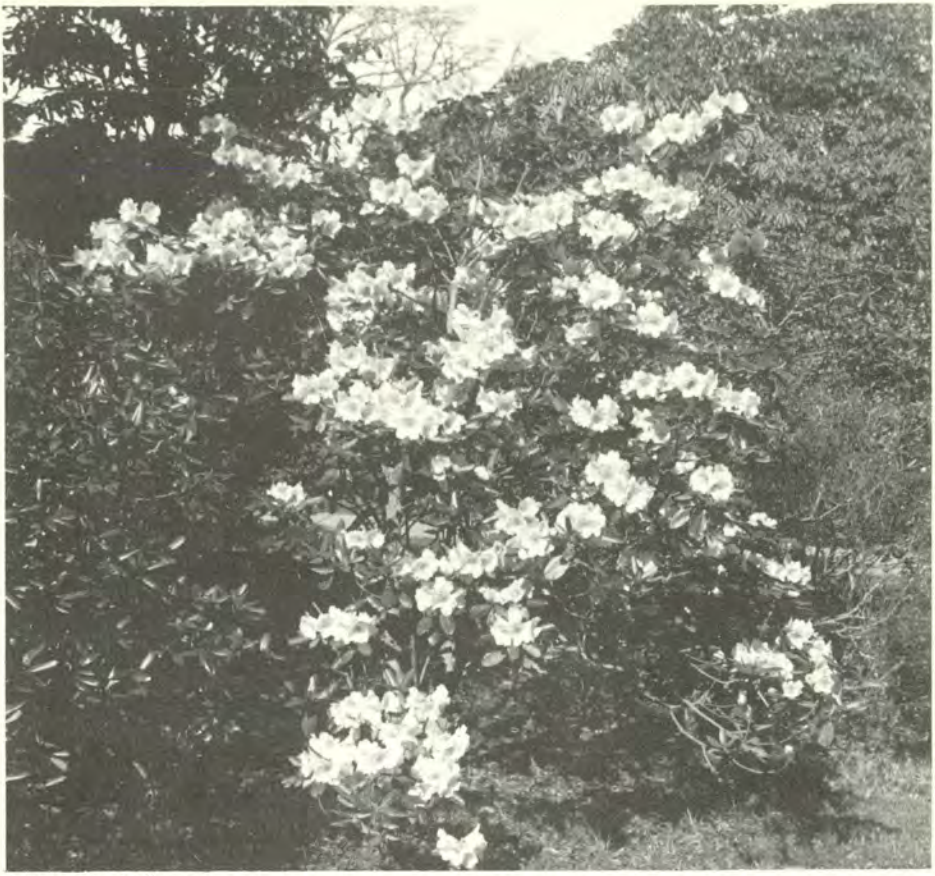


Photo: J. K. Mullowney

FIG. 28.—*Rhododendron lanatum* at Ballywalter Park

few of the more noteworthy species. A magnificent *R. calophytum*, 15 feet high, with a 24 feet spread; *R. barbatum* flowering freely, and at its semi-maturity of 30 years featuring its remarkable smooth, satiny bark, in texture not unlike *Acer griseum* but without the habit of shedding it, characteristic of that fine maple. Here also *R. sperabile* var. *weihsiense*, a tall, thin shrub running up to 12 feet; a clump of *R. spinuliferum*, that curious un-rhododendron-like shrub; *R. macabeanum* in variety; a medium sized *R. griffithianum*, quite hardy here, flowering regularly and profusely; *R. kyawii*, its blood red flowers at their best in August. One could prolong this list but exhaust the reader's patience and deprive him or her of a two-fold pleasure, that of the sense of exploration and discovery, and of writing to the author saying

such and such an important plant has been missed. So we will conclude this expedition with one of the most remarkable Ballywalter rhododendrons, *R. sinogrande*, at the very top of Rose Hill. This plant is, unfortunately, almost impossible to photograph, to do it justice, so the reader must imagine a plant about 15 feet in height, flattish topped, with bare stems, looking extremely venerable, although only planted some 30 years ago. It would appear that *R. sinogrande* belongs geologically to the remotest antiquity, contemporary with the emergence of vegetation from the primaeval swamps, and, to paraphrase a current saying, one might say that the Dunleaths have dinosaurs at the bottom of their garden.

We may now say farewell to the rhododendrons and follow a broad grassy slope gently downhill, observing as we go thickets of *Embothrium longifolium* to the left and of *Acacia dealbata* to the right. A pleasant walk across the main expansive lawns takes us back to the house, and to rejoin our cars.

Before leaving for our next destination, those who knew the late Lord Dunleath might care to walk down to see his grave. This may be found a few hundred yards along a grassy lane, appropriately planted by his son with species and hybrids of his own raising, south-east of his old home, and between it and the sea. A peaceful and happy resting-place.

So we leave Ballywalter Park, and a 3 mile drive along the coast road, towards Millisle, 600 yards up the Woburn Road, via the marked turn to the left, takes the visitor to Woburn Lodge. There is a term current in Ireland, with which a normal reader of these notes would scarcely be familiar, viz "Gate-lodge Protestant", meaning a member of the former Protestant landlord ascendancy, living in the gate-lodge, the mansion house either having been burnt during the "bad times", razed to the ground by the State, or put to some other patriotic use. To this class the writer, in a sense, belongs, as his old home is now H.M. Borstal.

In another part of the estate, easily found as indicated by following the demesne wall round to the left, a small modern house has been built in a clearing of trees along one of the old avenues. To the south of this are some 5 acres of the old Victorian arboretum, and it is here that rhododendrons and other trees and shrubs are planted.

To the north lies a woodland dating from the early 19th century, bisected by a small stream, beyond which some 10 acres

have been planted for future effect, mainly with species *Betula*, *Sorbus*, and *Acer*, through a 12 year old plantation mainly composed of Norway spruce and beech.

It is with the rhododendrons, however, that we are mainly concerned, and the area being comparatively small, it is not necessary to indicate an elaborate route. The visitor can just wander about. The owner has a predilection for species as against hybrids, of which there are few. It is, of course, all on a much smaller scale than Ballywalter, and a disadvantage is that the ground is inclined to flatness, hence drainage is a problem, but, on the credit side, there is peat moss on the estate, and peat and leaf-mould are available in quantity, as also farmyard manure. There are specimen rhododendrons here and there, but the smaller species are planted in prepared beds.

A few old plants still flourish from the early part of the century, if not before. Of these the most showy and notable is *R.* 'Jean Stearn', now out of commerce, an old *campanulatum* hybrid, about 25 feet high, with a large spread and semi-double light lavender flowers in mid-May. An attractive feature is the reddish shaggy bark. In a prepared bed in front of this veteran are a few younger plants, selected to blend with it in colour, such as *R. augustinii*, *R.* 'Saffron Queen', and some of the smaller species, including *R. myrtilloides*, *R. russatum* (*cantabile*) and others. Ground cover, which is made extensive use of in this and other beds, includes the foam flower (*Tiarella cordifolia*) species of *Ourisia*, and ferns, including *Blechnum tabulare* (*Lomaria magellanica*), and the walking fern, *Woodwardia radicans*.

It was in 1933 that the writer started planting rhododendrons, and other trees and shrubs, seriously. From this period dates a group of *R. sinogrande* and *magnificum*. Also in this area are two forms of *R. giganteum*, differing from each other in the scales on the under-leaf, a fact of which the writer would have remained in ignorance had it not been pointed out to him by Mr. H. H. Davidian, of the Royal Botanic Garden, Edinburgh. Indeed, without Mr. Davidian's wise help and guidance this article would probably never have been written. One can scarcely say that *R. giganteum* is a plant for anyone in a hurry; after 33 years there has never been a sign of a flower. It is here the most frost tender of the large-leaved species, having in one hard winter been almost completely defoliated.

More rewarding, in the *Grande* Series, is *R. sidereum*. The largest of these is now a good solid plant, some 15 feet high, has

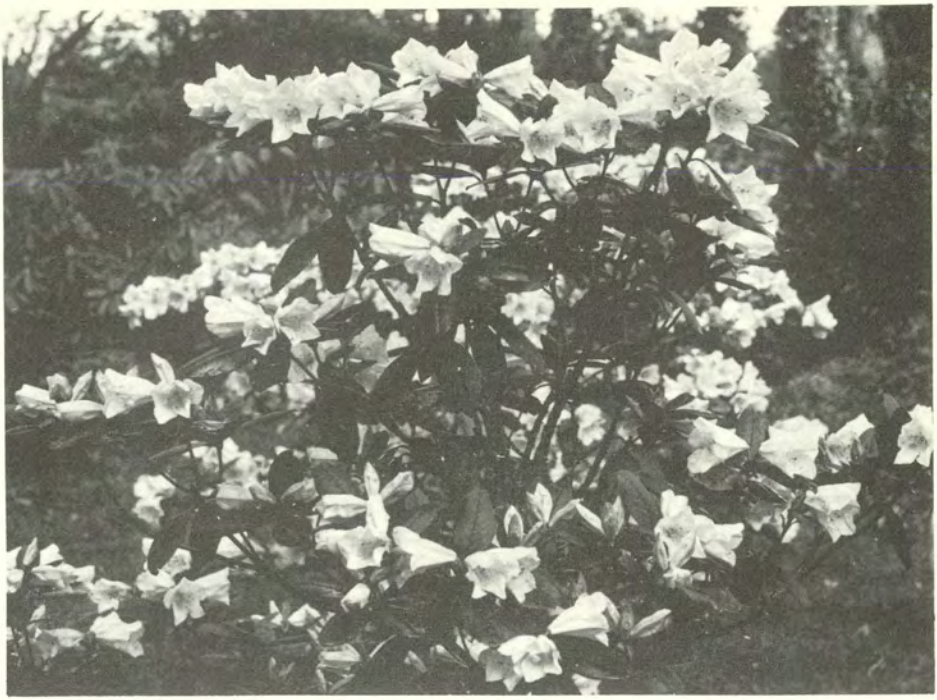
attractive long pointed leaves with silvery indumentum, producing its clear yellow flowers much later than most of its associates in the large-leaved group, usually in early June.

Plants at Woburn seem to run to size. Also dating from before the 1939–45 war, other than rhododendrons, is *Eucryphia* 'Nymansay', nearly 40 feet, and a fine solid mass of *Guevina avellana*, the Chilean hazel, up to 25 feet with immense spread, which produces its rather wispy white flowers in abundance, but has so far failed to give us its edible nuts.

Another fairly successful pre-war planting is in a circular bed, including *R. johnstoneanum*, in various forms, *R.* 'Lady Alice Fitzwilliam', a most successful hybrid here, *R. manipurense*, and others. The senior of the *johnstoneanums* is now quite a stately plant, some 12 feet high, showing in age a distinctive reddish shaggy bark. Chaffinches occasionally nest in this rhododendron, which would appear to indicate that it has "arrived". *R. edgeworthii*, an epiphytic member of the *Maddenii* Series, has been planted to grow through this particular group, and its attractive pink white-scented flowers emerge in unexpected but welcome places. A few seedlings from *R. johnstoneanum* have been raised at Woburn, one of which (Fig. 29), is particularly attractive and probably has an *edgeworthii* strain in it.

In more recent years a good many of the *Maddenii* Series have been tried. Failure must be recorded with *R. sinonuttallii*, but this may well be due to bad drainage rather than frost. Success with these tender plants depends in part on siting them where a thin canopy of trees protects the buds from morning sunshine after a hard frost. Successes include *Rhododendrons lindleyi*, *rhabdotum*, *megacalyx*, *scopulorum*, *polyandrum*, and *taggianum* (Fig. 30). Of the hybrids *R.* 'Victorianum' and 'Tyermannii' appear to flourish, though they have not yet flowered. A particularly attractive close relative of *R. crassum* is *R. calophyllum*, not very common in cultivation, a good flowerer, distinguished from *R. crassum* by its distinctive leathery foliage.

This woodland garden owes a lot to the generosity of the writer's cousins, Sir George Campbell, Bt., of Crarae, and his son, Mr. Ilay Campbell. From this source a batch of seedlings of *R. sulfureum* arrived some years ago, and these now are beginning to make an attractive group in another bed not far from the house. The butter-yellow flowers are as yet produced sparingly, but one has hopes for the future. Also a good yellow are various



Photos: J. K. Mullowney

FIG. 29.—A hybrid of *R. johnstoneanum* at Woburn Lodge

FIG. 30. —*R. taggianum* at Woburn Lodge

forms of *R. burmanicum*, some of which flower much later than they are supposed to, thus causing some concern to the experts.

A successful plant here, and one that cheers the February scene, with pink flowers like apple-blossom along its thin, whippy branches, is *R. virgatum*, a group of seven plants having been layered to cover quite a large area. In another bed, home-raised seedlings (Rowallane seed) of *R. moupinense* will, one hopes, serve the same purpose in a year or two, various species of native ferns, given by generous friends, being used for ground cover. For later effect, the writer so far overcame his prejudice against hybrids by planting such as *R.* 'Fusilier', a few *eriogynum* hybrids, and others, and a good splash of colour these make in early June. Other good plants (other than rhododendrons) include *Stewartia pseudo-camellia*, *Cornus capitata* (seed collected in a war-time voyage to New Zealand), *Acers griseum* and 'Ozakazuki', and some flourishing and large Embothriums.

Seven different species of ornamental pheasant are kept at Woburn, some in aviaries, some at liberty, and these brightly coloured birds fit rather well into the rhododendron scene, as they mainly originate from Central Asia, where so many of our best species come from.

It would be pleasing, but not quite accurate and a little pretentious, to record that the various pheasant species choose for roosting at night the particular species of rhododendron endemic to their habitat in Central Asia.

Finally, an effort here has been made to avoid being dominated by the genus rhododendron, and a corner near the house has been reserved for Antipodean plants and their associates, such as *Callistemons* (Bottle-brushes), *Telopea truncata*, *Dianella tasmanica* as ground cover, *Acacia baileyana*, all of which seem quite hardy and content in our climate. It therefore only remains for the writer to hope that this little walk round two gardens in the Ards peninsula has been enjoyable.

PRECOCITY OF RHODODENDRONS, 1966

By GEOFFREY GORER

IN the sixteen years that I have grown rhododendrons in this fairly protected garden in East Sussex, there has been no parallel to the precocity of the rhododendrons, and particularly in the blues and scarlets, to the intensity of the colour in early 1966. The antecedent conditions seem to have been a very wet spring in 1965, so that the growth was completed, and, the buds formed, early; this was followed by a dry autumn, a little cold in mid-winter (22° F. was the lowest temperature recorded) and a very mild, damp February; on many nights the temperature did not fall below 50° F. By March 5th there were 23 species and 21 hybrids in flower. I am using the convention of one asterisk to indicate that some trusses were fully developed but most still in bud; two asterisks indicate that most of the flowers had already fallen.

Species out on March 5th, 1966: *R. argipeplum*, *barbatum*, *chaetomallum*, *chaetomallum* var. *hemigymnum**, *chamae-thomsonii* var. *chamaethauma**, *coryphaeum**, *dauricum***, *erubescens**, *forrestii* var. *tumescens**, *fulvum**, *fargesii*, *glischrum**, *haematodes**, *hunnewellianum*, *leucaspis*, *lutescens* 'Bagshot Sands'*, *meddianum*, *moupinense***, *mucronulatum***, *oreodoxa* var. *reginaldii*, *praevernum*, *pocophorum*, *strigillosum*. Hybrids out on the same date: 'Alix', 'Bo-peep', 'Bric-à-Brac', 'Choremia', 'Christmas Cheer', 'Cilpinense', 'Crossbill'*, 'Eldorado'*, 'Eureka'*, *irroratum* × *calophytum**, 'Nobleanum', 'Praecox', 'Redwing', 'Rocket', 'Seta', 'Shilsonii', 'Snow Bunting', 'Tessa', 'Tessa Roza', 'Yellow Hammer', 'Yeoman'*.

On March 13th the weather changed; there were 4 degrees of frost that night (28° F.) which browned all the open flowers; the same temperature was registered the next night; and on March 20th there were five degrees of frost. But as soon as the nights warmed slightly, the rhododendrons resumed their precocious blooming, many of them being 4 to 6 weeks ahead of their normal flowering time. On March 29th, the following species were added to the list: *augustinii** (one clone only), *caloxanthum*,

ciliatum, *cuneatum*, *davidsonianum** (one clone only), *euchaites*, *fletcherianum*, *johnstoneanum**, *niveum*, *pemakoense***, *pseudochrysanthum**, *pubescens*, *racemosum*, *sperabile**, *sperabiloides*, *strictum**, *thomsonii*, *uvarifolium*, *wardii* (one clone), *williamsianum* (one clone). The hybrids out on that date were 'Adelaide**', 'Asteroid', 'Augfast'*, 'Avalanche', 'Barclayi Robert Fox', 'Blue Diamond', 'Brocade*, 'Carex', 'Comely'*, 'Cornish Cross', 'Elizabeth', 'Exbury Cornish Cross', 'F. C. Puddle'*, 'Ibex', 'Ilam Violet', 'Janet', 'Matador'*, 'Moonstone', 'Orestes'*, 'Rosa Mundi', 'Sir George Sansom', 'Sussex Bonfire'*, 'Valaspis'.

By mid-May the species and hybrids which had not already flowered seemed to be coming out at their customary season, apart from *R. griersonianum* which was flowering at least 4 weeks earlier than usual.

As the list shows, some of the species of which I have more than one clone responded very differently to the preceding year's weather. The *R. augustinii* (out of 4 clones), which was so early, has a few red markings; in growth and habit it does not seem to differ from the other clones in the garden. The *R. davidsonianum* was the Bodnant pink form; this is a relatively tender plant in this garden. The mauve form flowered in May. The *R. wardii* was bought as *R. croceum*; it is a low, very slow-growing form, but a quite reliable flowerer, often producing some autumn trusses; the three other forms in the garden did not flower till May. The *R. williamsianum* clone is a relatively loose-growing form, and the young growth is not brightly coloured; we like it least of the three clones we grow.

Among the early hybrids, I think the two *R. hookeri* crosses are extremely good garden plants. R. 'Alix' (*R. barbatum* is the other parent) is in this garden a much better plant than the similar and much more widely planted R. 'Shilsonii' (*thomsonii* × *barbatum*); the flowers are a clearer red, very freely born and well held; the plant has most beautiful cinnamon-coloured bark and the new growth has striking scarlet bracts. R. 'Eureka' (*R. arboreum* is the other parent) is the nearest approximation that I know to the blood-red *arboreum*, which I cannot grow; its buds are remarkably frost-resistant. Although all the flowers out when the frost came were destroyed, the buds, even those showing colour, were unmarred; the plant made a striking show throughout April. Both these plants were raised in Exbury. Similar bud-hardiness was shown by the Bodnant cross 'Redwing' ('Barclayi' × 'Shilsonii'); this has most of the qualities of 'Barclayi', apart

from leaf-shape, is very much hardier, and has a long flowering period. 'Snow Bunting' (*arboreum* × *sutchuenense*) is an elegant, rather slow-growing, Caerhays hybrid; it too seems more frost-resistant than either parent.

None of the hardy hybrids I grow flowered prematurely.

Judging by my single plant, *R. hunnewellianum* is under-rated in the 1963 Rhododendron Handbook. Its pale pink campanulate flowers are as attractive as any form of *R. fargesii* or *R. oreodoxa* which I have seen; and its foliage and habit are vastly superior. The narrow oblanceolate leaves have a snowy indumentum only surpassed by its sister in the sub-series, *R. argyrophyllum*; this indumentum is already developed on the young foliage whose upper surface is a vivid apple green. The old leaves are persistent for up to 3 years; in the late season the plant resembles *R. makinoi* or *R. metternichii*. I have no reason to suspect it is not completely hardy.

The conditions which produced such precocity in the rhododendrons did not affect the majority of the other spring-flowering shrubs I grow; the various corylopsis, magnolias, mahonias, pieris and stachyurus flowered in their normal form at their normal season. The cultivars of *Camellia japonica* were affected disastrously; a few singles apart, the flowers were under-sized, often distorted, sparse and relatively late. There was considerable bud-drop. I am inclined to blame the dry autumn and wet and warm early spring, which suited the rhododendrons so well.

KURUME AND MALVATICA HYBRIDS FOR THE SMALLER GARDEN

By T. H. FINDLAY, M.V.O., V.M.H.

I PROMISED the Editor that I would select what I thought were the best half dozen Kurume or Malvatica hybrids for the smaller garden, or for the week-end gardener who often has to garden without labour and wants plants well tried, hardy and free flowering.

Some 160 named varieties of Kurume and Malvatica hybrids are to be found up and down the country. Some absolutely hardy, others hardy but bud tender. Many plants of this type are subject to bark splitting during frosty weather, and I would advise anyone purchasing even the hardiest types to see his plants are bushy and compact, rather than to go for height. If the main stem is protected by its own foliage, young plants will easily get over quite hard frosts.

The varieties I am going to mention I have known for twenty years, both in large gardens and in small ones, and most of them have been well tried out in the permanent Rhododendron Trials at Wisley.

This type of rhododendron should never be planted alone. They should always be in association with the greens and reds of such subjects as Enkianthus, maples, both red and green *palmatum* types, and *Styrax japonica*. Even camellias give a variation in foliage and contrast in colour.

My first choice is the wonderful free flowering Kurume 'Hinomayo'. A very compact grower, it loves to grow in full sun and, if left alone, i.e. not pruned, not even for a show, it will form wonderful clumps in odd and sometimes fantastically tiered shapes. Plants growing in the open which I know to be at least thirty years old are still only 3 feet high and as much through. This soft pale pink Kurume was introduced about 1910 from the Emperor of Japan's garden in Tokyo. Its award of an F.C.C. after trial at Wisley in 1945 and the Award of Garden Merit in 1954 show this plant's worth.

My next is a Kaempferi hybrid, namely, 'Kathleen', which has been around since 1922. It is a very free flowering plant of bushy

habit, and in old bushes forming a mushroom-like mound. The flowers are, of course, larger than the Kurumes and are phlox pink, but added to this is a distinct red throat, making the flowers glow and giving depth of colour. It is a wonderful bush to see in the evening. A.M. after trial at Wisley.

No. 3 is 'Palestrina', a *kaempferi* hybrid. It is ivory white with pale green foliage. This plant is at its best if not over-flowered, the leaf formation and flower go so well together. I like it much better than the very good Kurume 'Kure-no-Yuki', which is much dwarfer growing but a good white hose in hose flower. 'Kure-no-Yuki' may be more useful for the garden with limited space. 'Palestrina' is rather upright in habit and will soon reach 4 to 5 feet. Introduced in 1926, it received an A.M. in 1944.

My fourth and fifth choice are both Kurumes, namely, 'Irohayama' and 'Kirin'. The first was introduced by E. H. Wilson from Japan and one of the Wilson 50, number 8, in fact. It is a lovely white with the petals margined pale lavender; a charming colour combination. A.M. in 1952 after trial at Wisley and now offered by most Rhododendron Nurseries. Perfectly hardy and sunproof.

'Kirin', a deep rose pink hose-in-hose, is also a Wilson 50, number 22. A very reliable and floriferous Kurume which stands the weather well. It is compact in habit and sometimes known as Coral Bells, which is very descriptive of the flowers. This also had an A.M. in 1952.

'Orange Beauty' comes last on the list but could fit in anywhere after No. 3. This is an old variety well known to the Trade. It is a hybrid between 'Hinodegiri' and *kaempferi* and is a really bright orange in colour. It looks its best when growing in shade and will stand deep shade. 'Orange Beauty' will grow quickly and is inclined to be rather spreading in habit. Very free flowering, it received an A.M. in 1945 after trial at Wisley.

These, then, are the six evergreen Azaleas I would plant, but this is just a personal choice.

EVERGREEN AZALEAS

By P. WISEMAN

THE Evergreen Azaleas are a large and important group of plants, giving us colour and form in our gardens. Their habit of growth, general hardiness, colour range and freedom of flower make them ideal garden plants. They are of relatively easy culture, thriving in most open lime-free soils within a pH range of 4·5 to 6·0.

A few evergreen azaleas have been known to us since the middle of the 19th century, and some of them are still to be found in one or two of our older gardens.

Between the two World Wars many varieties were produced in this country, on the continent, and in the U.S.A., but it was not until after World War II that they really came into their own.

In 1918–19, E. H. Wilson, a noted plant collector, sent to the Arnold Arboretum, Massachusetts, U.S.A., a collection of 50 varieties of evergreen azaleas selected from the large number of cultivated varieties he found growing around the city of Kurume in Japan. Some were also sent to this country and the continent.

These "Kurume" azaleas are generally regarded as being cultivated colour forms and hybrids of the two variable rhododendrons, *R. kiusianum* and *R. obtusum amoenum*. If a packet of mixed seed from Wilson's original 50 is sown and the plants grown on to flowering size, among them will be found a few very slow-growing dwarf and compact plants with tiny evergreen leaves and small flowers, pink or lilac in colour. These agree closely with the published description of *R. kiusianum*.

Over the years hybridists have crossed these plants with other hardy and not so hardy evergreen azaleas with the object of increasing the size and colour range of the individual flowers as well as extending the flowering season and also improving hardiness.

Azaleas generally prefer an open lime-free soil rich in humus, that does not readily dry out in summer or become waterlogged in winter.

Most lime-free garden soils can be made suitable by adding liberal dressings of humus-forming material such as leaf-mould,

woodland peat and moss or sedge peats. Compost made with a commercial activator should not be used, but compost made with sulphate of ammonia as an activator can be used with peat in the proportion of one part of compost to three parts of peat. Well-matured cow or stable manure can also be used, especially on poor soils.

Soils should not be made too rich, as this induces soft, sappy growth, which is certain to suffer frost damage during hard weather. The aim should be to encourage firm, twiggy growth that will ripen and set flower bud early. Any gross sappy shoots appearing on the plants should have the tips pinched out early to check exuberant growth and induce bushiness and early ripening.

In planting, make a hole larger than the root ball by first taking out the top soil. Remove some of the subsoil and break up the bottom to a depth of 12 to 16 inches, according to the size of the plant. Replace the top soil and add enough humus-forming material to fill the hole. Mix this well with the soil, at the same time adding a little bone meal—a small handful for plants 9 to 15 inches and more in proportion for older and larger plants. Lightly firm the soil in the hole then scoop out a pocket large enough for the roots. Avoid planting too deep. Place the plant so that the roots will be from ½ to 1 inch below the surface when finished. Firm the soil up to and around the root ball but avoid treading on the root ball itself. If the soil is on the dry side leave a basin-like depression round the plant and give a good soaking. Allow the water to drain away and then level off with loose soil. Never plant an azalea if the root ball is dry, but soak it in water, stand it aside to drain, then plant.

Azaleas benefit by periodic mulching. Dried bracken and autumn leaves are both useful where available, but the leaves can only be used where the plants are close enough together to prevent them being blown away or where other methods are used to achieve the same result. A coarse grade of sedge peat is useful in the smaller garden. It should be put on about an inch thick towards the end of October. Where peat is used, it is advisable to give the plants a little sulphate of ammonia in liquid form about the second week in April and again at the end of May. Use ¾ of an ounce to each gallon of water and give each plant from ⅓–½ a gallon of the liquid according to size. Fairly old and large plants should each be given 1 gallon each.

As a general fertilizer the following can be used: 1 part by

weight of sulphate of ammonia, 3 parts of superphosphate and ½ part of sulphate of potash. These should be well mixed together just before use and dusted evenly over the root area, keeping clear of the main stems. Established plants about 1½ to 2 feet should be given ¾ to 1¼ oz. each, older plants 2 to 3 feet can be given 1½ to 2 oz. according to age and size. When applied it must be well watered in. This is best accomplished by giving three fairly copious waterings in succession. The second may come after the first has soaked in, and so on. The object is to dilute and distribute the fertilizer in as much of the soil mass occupied by the roots as soon as possible to avoid any damage to the root system.

From the many cultivars of Evergreen Azaleas available, the following is a fairly representative selection.

Early Flowering Cultivars

'Blaauw's Pink'. Bright pink, hose-in-hose flowers, fairly compact habit. 2½–3 ft.

'Hatsugiri'. More spreading than tall. Makes a flat bush around 3 ft. with bright magenta flowers.

'Hinodegiri' (Wilson's 42, 'Red Hussar'). Bright fiery-red. Makes a neat bush some 4 ft. high. Flowers tend to burn in the sun.

'Hinomayo'. A delightful pink shade, one of the best of this group. Makes a neat bush 2½ to 4 ft.

'Kirin' (Wilson's 22, 'Coral Bells', 'Daybreak'). Compact growing plant with small hose-in-hose flowers, rose with a silvery sheen, attains 2–2½ ft.

'Kure-no-yuki' (Wilson's 2, 'Snowflake'). White hose-in-hose flowers. Compact grower, attaining 2½–3 ft.

'Amoena' (*obtusum amoenum*). One of the oldest and best known, rich magenta in colour, growing 5 feet or more.

'Ima-shojo' (Wilson's 36, 'Fascination'). Small vivid red flowers, slow and compact in growth. 2½ ft.

Mid-Season Cultivars

'Addy Wery'. Makes a nice bush 3½ to 4 ft. with brilliant scarlet flowers.

'Atalanta', a rather rounded bush some 5 feet in height with soft lavender-purple flowers.

'John Cairns'. A compact bush growing 3 to 3½ ft. high with vivid red flowers, burns in the sun.

Photos: J. E. Downward

PLATE 6—*Rhododendron* 'Theale', A.M., 3rd May, 1966. Raised and exhibited by the Crown Estate Commissioners, The Great Park, Windsor (see p. 166)

PLATE 7—*Rhododendron* 'Jubilant', A.M., 23rd May, 1966. Raised by the late Lionel de Rothschild and exhibited by Edmund de Rothschild, Esq., Inchmery House, nr. Southampton (see p. 164)

'Fedora', upright in habit, attaining some 5 feet, with large rose-pink flowers.

'Marie'. A rather rounded bush up to 4 ft. with vivid cerise-pink flowers.

'Orange Beauty'. One of the best with vivid orange flowers, makes a neat bush 3½ to 4 ft.

'Palestrina'. A splendid white variety with light green foliage growing some 4 feet high.

'Rosebud'. An American variety with soft pink double flowers. A good grower; its ultimate height is not known.

'Vuyk's Rosyred'. The rosy-red flowers show to advantage on the rather broad, neat growing bush attaining 2½ to 3 feet.

Late Flowering Cultivars

'Bungo-nishiki'. Semi-double flowers of a rich terra-cotta shade. Makes a plant rather broader than high, attaining some 2½ ft.

'Chichibu'. A rather flat growing variety with large white flowers, attaining 2½ feet. Odd flowers appear with rose-coloured "flashes". These should be cut out.

'Mother's Day'. Bright rosy red flowers of medium size, fairly compact habit up to 3 to 3½ feet.

'Vida Brown'. Forms a neat, compact bush 2 to 2½ft. high. Flowers are hose-in-hose of a deep rose pink.

NOTES ON NEW GUINEA RHODODENDRONS

By MICHAEL BLACK

IT may be of interest to report upon the behaviour under cultivation of the rhododendrons which I collected in New Guinea last year, and to jot down a few personal theories and observations.

First must come the results of the analyses of the soil samples which were prised from rhododendron roots in the localities noted. Peter Crooks, of the Soil Science Department of Edinburgh University, was kind enough to analyse them for me.

Locality	*pH*	*Loss on Ignition**	*Texture*
Edie Creek	5·6	9·4	Clay
Riverbank of Fatima River	5·5	5·3	Gravel
Riverbank of A1 River	5·4	10·0	Fine Sand
Topsoil at Tupisenta	4·6	7·4	Clay
Mairi Creek	5·8	9·8	Clay
Fork of Podocarpus, Fatima River Valley	4·4	72·0	Peat

* A measure of the organic matter content as a percentage of air dry soil.

Further analysis of the sample from Mairi Creek by Don Stanton, of Wollongong, New South Wales, revealed the following trace elements:

Main constituents: Iron, Aluminium, Silica (as Aluminium silicate).

Major trace elements in the order of 1,000 parts per million: Magnesium, Manganese, Titanium, Nickel.

Minor trace elements in the order of 50 to 100 parts per million: Vanadium, Molybdenum, Tin, Copper, Zinc, Cobalt, Chromium.

The enormous variation in the percentages of organic matter content and texture are notable, as is the low pH of the sample from the roots of an epiphytic *R. rarum* growing in a Podocarpus fork. The same species was equally at home growing terrestrially by the A1 River where the pH was 5.4.

One of the difficulties with collected plants, as opposed to seed or cuttings, is in recording them individually under the collector's number in the usual sense of the word. Often they are small seedlings or well pruned skeletons of larger plants from which it was impossible at the time of collection to take material for the Herbarium. It may be advisable from the horticultural point of view to prefix the collector's initial and number of such plants by the bracketed letter 'O' (Original). Layers and cuttings from them would go under the same designation. Plants grown from 'selfed' seed would go under the collector's initial and number only, the plant presumably having been identified by this time with specimens deposited in the Herbarium. This would be in keeping with the scheme of things when rhododendron seed was sent back from Asia in greater quantity than will probably ever again be possible, or indeed necessary.

The snags to collecting seedlings in the wild are not nearly so numerous as the advantages. The most important drawback is that one may not be getting a good form. Typical or even superior in foliage, certainly, but in flower possibly inferior. Fortunately, New Guinean plants have flowers of a fairly uniform high quality, but occasionally one meets an exceptionally fine one such as the *R. macgregoriae* I found near Wabag. Cuttings are obviously the answer to this one, as they are to the plant of exceptional botanical interest, perhaps a unique natural hybrid, which, even if it were possible to dig up, should be left where it sprung up. It is often difficult to find plants of a suitable size to fly home. Apart from the fact that larger ones neither transplant or adapt themselves nearly so well as small ones—I should say three or four year old plants are ideal—the cost of flying home large specimens is so much higher. Cuttings travel well if they are decently packed initially, and in the future it will be a question of determining if one can obtain an 80 per cent 'strike' to compare with the percentage of healthy live plants I am left with after growing them for a year in this country. I reckon this percentage could reach 90 per cent after more experience and experiment in packing methods. Boskoop report that out of 46 species sent to them as cuttings they struck 30.

Seed, although it germinates readily enough when first collected, loses its viability very quickly, certainly after the first six weeks. Furthermore the seedlings are slow to get away. I germinated mine in plastic boxes on shredded peat, and contrary to expectations had little success with sphagnum, though Australian

friends inform me it was satisfactory under their conditions. Several growers in Australia and the United States report that the incorporation of rotted wood in the growing on compost speeds up the growth rate, as do, of course, additional lighting and the application of fertilizers with a high organic content. In Boskoop seedlings are transplanted twice yearly. Once the young plants reach about an inch, they grow away readily.

As I related last year, most of the plants were planted outdoors on arrival from Manchester Airport in raised beds of bracken soil. Here they remained until the first week of November, when they were moved into a cool house with a minimum temperature of 50° F. I had intended to leave several plants outdoors against a tall south wall, and in fact did, but when a couple of inches of snow fell a few weeks later I thought better of the experiment and moved them into an unheated greenhouse. *R. hooglandii*, *R. konori* and, surprisingly, *R. rarum*, were among those who survived this treatment and have grown away again this summer without any damage to the young shoots.

Even better results could probably be obtained by planting immediately upon arrival in a shaded house with a temperature range from 50°–80° F. and with about 80 per cent. humidity.

It was noticeable when the plants were uprooted for the second time in the year, prior to their transfer indoors, that they were beginning to develop adventitious roots from their generally large thickened radicles—a quick adaptation to a new environment. Those planted in the house were put directly into beds of bracken soil and peat sloping at about 30 degrees, and with a foot to eighteen inches of broken rock and gravel beneath to ensure really good drainage. The bracken roots were left in the soil and the whole mixture kept light and open. As the bracken fronds have grown this year they have been cut off and left as a mulch on the beds. I am encouraging moss—much of it from New Guinea—to cover the soil, as the plants seem to enjoy it, and it does have a certain aesthetic appeal. In fact *R. hooglandii* rather hung fire until I remembered where I found it, in beds of sphagnum, so a living carpet was layed down for it to grow through, since when it hasn't looked back. Generally these bedded plants are happier than those I potted up. As an example, I would quote the case of *R. inconspicuum*, which grew twice as quickly in the beds and began to grow away promptly as soon as it was depotted. A good cross section of the plants put on new growth last autumn before they were moved indoors, and odd ones put

out new shoots during the winter. Perhaps more would have done so had I kept the atmosphere damper from December to April. All of them are now growing strongly in July and are being copiously watered. At last they are beginning to look like a collection of rhododendrons rather than a conglomeration of sticks. I must emphasise that they are much easier to manage than one would imagine, and given the same conditions as some of the Maddeniis, with slight frost protection, are perfectly amenable to cultivation. They are not hot house plants, and I still maintain that some of them will prove hardy on the Western Seaboard. The young foliage is most interesting, with its gold and silver scales. When the scented ones bloom we will have plants really worth growing. It was not idle chatter when Dr. Beccari wrote of *R. konori*, "Essa e forse la piu bella specie di Rhododendron dell' Archipelago"*, and he had only seen a fraction of those which are now known.

I should say that 50 per cent of my collection remain to be identified. At the moment we do not have anyone in this country like Mr. Davidian to whom we can look for a positive identification, and it does not seem satisfactory to leave such work to an amateur botanist like myself who finds the difference between a botanical specimen and the living plant as striking as that between a meadow in high summer and a bale of hay.

Plants which have flowered here so far include *R. aurigeranum* (Fig. 33), *R. rarum*, *R. macgregoriae*, *R. leptanthum* (Fig. 31), *R. commonae*, *R. beyerinckianum* (Fig. 32), *R. gracilentum*, *R. inconspicuum*, and a couple of other unidentified species. Of these *R. leptanhum*, *R. beyerinckianum*, *R. gracilentum* and *R. inconspicuum* have set seed. *R. leptanthum* was in flower last November and the seed is just mature now in July, a longer period of maturation than in the wild one would imagine. *R. gracilentum* began to flower in October and continued to show a bit of colour throughout the winter until June, simultaneously putting on new growth at a leisurely rate; now in July it is putting out shoots full blast. I should like to see it flower all over instead of these dribs and drabs of colour, though a lot may be forgiven in view of the exquisite charm of the individual flower. It is an easy plant, though *R. rarum* is probably the easiest of the lot, and has put up with conditions here comparable to a severe drought and has stood under a leaking tap for a fortnight, apart from the cold house treatment last winter.

* It is perhaps the most beautiful species of Rhododendron of the Archipelago.

Photos: Michael Black

NEW GUINEA RHODODENDRONS

FIG. 31.—*R. leptanthum*

FIG. 32.—*R. beyerinckianum*

FIG. 33.—*R. aurigeranum*

This is surprising for a plant from only 8,000 feet. *R. aurigeranum* would probably like a bit more heat, as one would expect from a 2,000 footer, but a potted plant has been outdoors here since early June and is growing away well. In Grasmere we are fortunate in our high rainfall—up on 100 inches—which takes a good deal of the strain out of watering. *R. macgregoriae*, the "ponticum" of New Guinea, seems easy and versatile here. There is a broad variation in foliage among the seedlings from the different localities, generally the greater the altitude the smaller the leaf.

It is good to see shapely leaves after the disfigured ones in New Guinea. Dr. J. P. Doncaster, Keeper of Entomology at the British Museum, kindly identified the caterpillars I collected eating rhododendron leaves. Although it was impossible to determine them as to species, they were Lepidopterous. The eggs of these butterflies would hatch overnight while the plants were in the press, and by morning had breakfasted upon half the foliage. The mites I found coating the stigmas of rhododendrons on Mt. Manduil are species of a genus near *Neocypholaelaps vitzthum*. Mites of the genus *Neocypholaelaps* have been described in six species, and appear to be pollen feeders, although details of their biology and the part, if any, they play in fertilization remains to be determined. The weevils would make fine fare for birds, though I did not see any at the altitudes at which they were collected. Could it be that the insects themselves act as pollinating agents?

In Australia a great deal of hybridisation is going ahead using New Guinea species. Already several hybrids have been made between them and *R. lochae*. Recently I received from Don Stanton, of Wollongong, some seedlings labelled *R. maddenii* × *R. christianae*. It sounds improbable until one remembers that *R. griffithianum* was crossed with the "Javanicum" hybrid 'Princess Royal' (*R. jasminiflorum* × *R. javanicum*) in the last century. Sooner or later I feel sure we will forge stronger links between the Mainland Asiatics and the "Javanicums" through hybridisation, and any efforts in this direction should meet with great reward, especially in flower colour and, to a lesser extent, foliage quality.

As a postscript I should like to add that as I read the proof of these notes in September, *R. gracilentum* is in full bloom—almost every branchlet tipped by a delicate pink bell. One of the most seductive of all dwarf rhododendrons.

A NEW RHODODENDRON *R. VISCIDIFOLIUM*

By H. H. DAVIDIAN, B.Sc.

R. viscidifolium was discovered by Ludlow, Sherriff and Taylor at Lo La, Pachakshiri, south-east Tibet, in May 1938. It grows beside streams, usually on cliff faces near waterfalls at elevations of 9,000–11,000 feet.

In general appearance, *R. viscidifolium* shows a resemblance to the species of the Thomsonii Subseries, from all of which it is readily distinguished by the copper-red flowers. It agrees with *R. thomsonii* var. *pallidum* in some respects, but differs markedly in the colour of the flowers, in the small calyx, and in the densely tomentose or glandular ovary.

In cultivation, the plant was raised by Messrs. Gibson at Glenarn, from Ludlow, Sherriff, and Taylor seed, but it has been incorrectly named *R. thomsonii* var. *pallidum*. The plant was probably raised from No. 6567, although the number quoted is 3750. The glandular undersurfaces of the leaves are sticky to the touch, this being a distinctive feature. It may be remarked that most of the old leaves turn scarlet-crimson, bright red or bright yellow later in the season. The plant is hardy in a sheltered position.

Rhododendron viscidifolium Davidian, sp. nov.

Species *R. thomsonii* Hook. f. var. *pallido* Cowan affinis sed corolla cuprea postice kermesina maculata, calyce parvo, ovario dense tomentoso vel glanduloso differt.

Frutex 60 cm.–2·40 m. altus; ramuli glabri, glandulosi vel eglandulosi, sub inflorescentia 2–4 mm. diametro. Folia sempervirentia; lamina ovala vel rotundata, 4–9·7 cm. longa, 2·8–6·6 cm. lata, apice rotundata et mucronata, basi rotundata vel truncata vel subcordata; supra glabra, costa media sulcata, venis primariis 10–12 impressis, infra dense papillosa et parcius glandulosa, costa media elevata; petiolus 1–2·5 cm. longus, glaber, glandulosus vel eglandulosus. Inflorescentia terminalis, umbellata, 1–2-flora; rhachis 1–3 mm. longa, tomentosa; pedicelli 0·8–1 cm. longi, rubicundi, glabri, moderate vel sparsim glandulosi vel eglandulosi. Calyx cupulatus, 5-lobatus, ad medium divisus, 4–9 mm. longus, viridi vel cupreus, lobis rotundatis, extra glabris, margine floccosis. Corolla tubuloso-campanulata, carnosa, 3·6–4·6 cm. longa, cuprea postice kermesina maculata, basi saccis 5 parvis kermesinis praedita; lobi 5, 1–1·6 cm. longi, 1·5–2·3 cm. lati,

rotundati, emarginati. Stamina 10, inaequalia, 2·3–3·5 cm. longa; filamenta kermesina, glabra vel basi puberula. Gynoecium 3·5–4·2 cm. longum; ovarium conoideum, 7–8 mm. longum, 6-loculare, dense tomentosum vel dense vel moderate pilis glandulosis brevistipitatis praeditum vel eglandulosis; stylus kermesinus, glaber. Capsula oblonga, 2 cm. longa, 9 mm. lata, floccosa, sparsim glandulosa, calyce persistente.

S.E. TIBET. Lo La, Pachakshiri. Shrub 2–5 feet. Corolla fleshy, dark salmon, spotted darker on adaxial side and with five very dark nectar pouches, the inside often markedly yellower. Filaments crimson, hairy at base, anthers black. Style crimson, glabrous. Ovary grey green, densely hairy. Calyx fleshy with scales green to salmon, lobes with a few hairs on margins. Pedicels glabrous, salmon. Leaves leathery, dull matt green above, midrib pale yellow green; lower surface almost grey. Petioles very pale green. Common in this valley, always close to streams, usually on cliff faces near waterfalls. Altitude 9,000–11,000 feet. 13.5.1938. F. Ludlow, G. Sherriff & G. Taylor, No. 3750 (Holotype in Herb. Brit. Mus.).

S.E. TIBET. Lo La, Pachakshiri. Equals, No. 3750. Flowers over. Seed collected. Altitude 9,000–11,000 feet. 8.10.1938. F. Ludlow, G. Sherriff & Taylor, No. 6567.

A shrub, 60 cm.–2·40 m. high; branchlets glabrous, glandular or eglandular, those below the inflorescences 2–4 mm. in diameter. Leaves evergreen, lamina oval or rounded, 4–9·7 cm. long, 2·8–6·6 cm. broad, apex rounded, mucronate, base rounded or truncate or cordulate; upper surface glabrous, midrib grooves, primary veins 10–12 on each side impressed; under surface not hairy, densely papillate, glandular, midrib raised; petiole 1–2·5 cm. long, glabrous, glandular or eglandular. Inflorescence terminal, umbellate, 1–2-flowered; rachis 1–3 mm. long, hairy; pedicels 0·8–1 cm. long, reddish, glabrous, moderately or sparsely glandular or eglandular. Calyx cup-shaped, 5-lobed, divided to about the middle, 4–9 mm. long, green or copper-red, lobes rounded, outside glabrous, margin hairy. Corolla tubular-campanulate, fleshy, 3·6–4·6 cm. long, copper-red, spotted crimson on the posterior side, with 5 crimson pouches at the base; lobes 5, 1–1·6 cm. long, 1·5–2·3 cm. broad, rounded, emarginate. Stamens 10, unequal, 2·3–3.5 cm. long; filaments crimson, glabrous or puberulous at the base. Gynoecium 3·5–4.2 cm. long; ovary conoid, 7–8 mm. long, 6-celled, densely tomentose or densely or moderately glandular with short-stalked glands; style crimson, glabrous. Capsule oblong, 2 cm. long, 9 mm. broad, hairy, sparsely glandular, calyx persistent.

FIG. 34.—
Rhododendron cerasinum, the cherry edged form, shown from Nymans

FIG. 35.—
R. sargentianum 'Whitebait'. A.M. May 3, 1966, when shown by Messrs. E. H. M. and P. A. Cox, Glendoick (see pp. 107 and 165)

Photos: J. E. Downward

THE RHODODENDRON SHOW
MAY 3 and 4, 1966

By ALAN HARDY and PATRICK M. SYNGE

AS usual the New Hall presented a brilliant spectacle for the Rhododendron Show. Rarely have we seen finer exhibits in the Hybrid classes, while the nurserymen's groups excelled both in colour and in interesting plants. It had been an early season and we missed many of the species we usually see, particularly the larger-leaved ones. There had also been late frosts and snow in the West of Scotland, as well as in other places, which cut down the number of entries. As usual, however, there were some outstanding plants. Particularly lovely was the spray from Nymans of the cherry-edged *cerasinum* collected by Kingdon-Ward, a delicate bell of creamy-white with the deep cerise edge to the flowers, a form which is rarely seen in a species which varies from this to self-coloured crimson flowers.

It was an outstanding year also for the Campanulatums, particularly that lovely plant *wallichii*, whose flowers are usually bluer than in the type species, but whose only other difference lies in the form of the hairs of the indumentum. Among the hybrids the enormous pale pink trusses of 'The Master', shown by Messrs. Slocock, who raised it, attracted much attention, as did also the fine examples of 'Crest', the best of all the Hawks in flower. A specimen of the white form of *R. sargentianum* shown on the dais by Messrs. E. H. M. and P. A. Cox was also lovely, a perfect plant for the small garden and densely covered with flower. It was awarded an A.M. and has been named 'Whitebait'.

Three Gold Medals were awarded for Trade Groups to Messrs. W. C. Slocock, The Knap Hill Nursery and Messrs. Waterers. Messrs. Slocock's exhibit also won the Rothschild Challenge Cup. They had a great mass of rhododendrons below the clock. In the centre was a very large and full-flowered 'Goldsworth Pink', and others we particularly noted were 'The Master', 'Break of Day', a *dichroanthum* hybrid, raised at Exbury many years ago, with yellow flowers, edged with orange-pink, 'Letty Edwards' and 'Golden Horn', another Exbury-raised *dichroanthum* hybrid with orange-red flowers. Their seedling No. 296 was also promising.

The Knap Hill Nursery showed a mixed group of rhododendrons and azaleas and was dominated by a very fine plant of the old 'Mrs. A. T. de la Mare', with white flowers, each with a green basal spot. Among the azaleas we noted 'Whitethroat', 'Altaclarense', 'Wryneck', a nice deep yellow, 'Corneille', a Ghent with a pink tube and white lobes, and 'James Gable', an American raised evergreen azalea. There were also several nice doubles among the deciduous azaleas, of which we particularly liked 'Double Damask' with white flowers. John Waterer's exhibit had some large and very well-flowered specimens and was banked around large plants of 'Mrs. G. W. Leak' and the 'Earl of Athlone'. For sheer effect these old hardy hybrids are still unrivalled. A large plant of 'Elizabeth' gave one of the strongest patches of colour in the show and contrasted nicely with the paler creamy 'Chaste', the blush 'Dawn' and 'St. George', pink fading to white. There was also a tall and well-flowered plant of *oreotrephes*.

Three Silver Floral Medals were awarded to Messrs. Hillier and Sons, to Messrs. G. Reuthe and to the Hydon Nurseries. Hilliers showed interesting staging with sections of logs placed through the exhibit as stepping stones. They included a number of pretty combinations of species and hybrids such as *tosaense* with 'Bow Bells'. *R. quinquefolium* seemed to be flowering unusually well this year and this group had a very nice specimen, also one of *exquisetum*, more rarely seen but hardly justifiably named. A good pale yellow hybrid, which could have a future, was 'Chaste' × *litiense*.

Messrs. G. Reuthe's stand showed up well from a distance in the hall and was a nice combination of the old and the new; the old white 'Beauty of Littleworth' and 'Loder's White' are magnificent plants by any standard, while the 'Earl of Donoughmore', one of the earlier *griersonianum* hybrids and the Exbury form of 'Matador' in the centre made brilliant splashes of colour. As a contrast there were some rather choice though small-flowered species such as *melinanthum*, with yellow flowers. Our Handbook claims this as "the finest species in the *Trichocladum* series".

The Hydon Nurseries had a very pleasant group in which the American *carolinianum album* and *minus* were outstanding, the latter hardly justifying its name. 'Bow Bells' and 'Letty Edwards' were two other first-class plants. Here were also several of the interesting Tower Court crosses, such as 'Conyan' (*concatenans* × *pseudoyanthinum*).

COMPETITIVE CLASSES: SPECIES

Class I for eight species, which carries with it the Lionel de Rothschild Challenge Cup, was won by Mr. E. de Rothschild with Exbury plants. He showed *rex*, *falconeri*, *orbiculare*, *niveum*, *metternichii*, *bureavii*, *concatenans* and *laxiflorum*. The *niveum* was a nice, well-coloured form, the *falconeri* was rather pale but a good full truss, while the *rex* was also a good truss, a pale lilac in colour with a heavy blotch. Mr. S. F. Christie of Blackhills in Moray, Scotland, was second and, as usual, had *lacteum* and *phaeochrysum*, but good also was his *roxieanum* var. *oreonastes*. Third was Bodnant with a good group. Other flowers we particularly noticed among the six entries for the class were a good *vernicosum* from Sir Ralph Clarke of Borde Hill and a nice white form of *peregrinum* from Major Magor of Lamellen.

Wing-Cdr. F. L. Ingall of Corsock House, Castle Douglas, Scotland, won Class 2 for three species, again out of six entries. He showed *phaeochrysum*, *adenophorum* and *thomsonii*, all good examples of their species. Two of these were included in his

FIG. 36.—*R. bureavioides*, shown by Messrs. Reuthe in Class 3.

Photo: J. E. Downward

prizewinning group last year. The second prize went to Mr. E. de Rothschild, who showed *fictolacteum*, *vernicosum* and *crinigerum*. Mr. Kleinwort was third and also included *vernicosum*. Class 3, also for three species but restricted to those not winning a prize in the last five years in the two previous classes, was won by Mrs. G. M. Gosney of Kingswood, Surrey, and she also won the second prize. Her winning group contained *reticulatum*, *campylocarpum* and *davidsonianum*, two of which at least are rarely seen in this class which calls for a truss rather than a spray. Messrs. Reuthe were third and included an interesting *bureavioides* with a whitish flower with a pink centre ridge to the lobes and some speckling inside, but no blotch, while the leaves had less rusty indumentum than one finds in *bureavii*. Otherwise the two are very close (Fig. 36).

The McLaren Challenge Cup for one species in Class 4 again went to Wing-Cdr. Ingall of Corsock House for his lovely *phaeochrysum* for which he won it also in the two previous years. Second were the Hydon Nurseries with a good blue *wallichii* and Sir Ralph Clarke was third with a nice creamy yellow *sidereum* with a large dark blotch. Fourth was Mr. S. F. Christie with the rare *nakotiltum*, which should perhaps now be reinstated in the list of rhododendrons in cultivation in the Handbook. Class 5 for a spray was won by the Countess of Rosse and the National Trust, Nymans with the very lovely cherry-edged *cerasinum* already mentioned. This is a garden with good reservoirs of the species grown under the original collector's numbers and they won a number of prizes this year. The second prize went to Mr. F. Nicholls of Forde Manor, Lingfield, for a nice spray of *wardii* (shown as *croceum*), and the third again to Nymans for an unusual deep pink *sidereum*. Also noticeable in this class was a pale cerise *diphrocalyx* with a dark blotch and some flecking.

The next few classes for flowers from particular Series were not so well filled as usual, probably owing to the season, and so we will only mention a few which we noted as unusual or particularly good forms. The *arboreum* forma *roseum* which won first prize for Nymans in Class 6 was a lovely truss, while in Class 7 Sir Ralph Clarke showed a good *argyrophyllum* for first prize, the second going to Lord Stair for a compact *niveum*. In Class 8 for the Barbatum Series the Nymans *crinigerum* was first and Lord Stair's *rude* second. This belongs to the Glischrum sub-series and was a pleasant deep terra-cotta pink. The fourth prize also went to Nymans for an interesting and lovely form of

morii with compact truss of pale white flowers without any red blotch. Another form of this species, but with a red blotch, was shown by Mr. E. H. M. Cox, but was unplaced. In Class 10 for the Campanulatum series the first three prizes were given for specimens of *wallichii* from Messrs. Slocock, the Hydon Nurseries, and Mr. L. Riggall of Titness Park, Sunninghill, respectively. The first prize form had practically no indumentum on the under side of the leaf. It is not often that we see so many good examples of this species. Class 11 for the Cinnabarinum Series was well filled also and was an interesting class with wide variation. *R. xanthocodon* won both first and third prizes for Borde Hill and Bodnant, respectively. The Borde Hill entry was a rather pale-coloured flower of good form and size. Bodnant was also second with a very good specimen of *cinnabarinum* var. *roylei*, while we also noted a nice form of *concatenans* from Crarae.

For those with less favoured gardens it was interesting to see a good truss of *galactinum* from Mr. L. Riggall in second place in Class 14, since this is probably the hardiest member of the Falconeri Series. It was obviously a good year also for *orbiculare* and the Hydon Nurseries had a very nice pink form which won first prize in Class 16 for any species of the Fortunei Series other than *griffithianum*. All through this class the pink colour was clear and well defined. An interesting plant also was the "Fortunei red form" McLaren S.146 from Major-General Harrison. In Class 18 for the Grande Series the outstanding *sidereum* from Brodick was first. This showed the stamina of the flowers of this species since, owing to a delay, it had stood 48 hours travelling. The other two prizes were also awarded for this species to Sir Ralph Clarke and the Countess of Rosse and the National Trust, Nymans respectively.

Class 19 for the Irroratum Series was predominantly white and the first prize appropriately went to Lord Aberconway and the National Trust, Bodnant for their *aberconwayi*. But there were two bright reds among the whites and Sir Ralph Clarke won the second prize for his scarlet *venator*. The third prize was awarded to Mr. E. de Rothschild for the Exbury *laxiflorum* with white unspotted flowers. Class 20 had an interesting selection from the Lacteum Series but no *lacteum* itself was among the prize winners. Wing-Cdr. Ingall's *traillianum* with white flushed pink flowers was first, Bodnant's *wightii* second and third a form of *dictyotum* from Exbury named 'Kathmandu'. It is, of course, quite legitimate to show in these classes forms of species

with a clonal name. This is described by our Handbook as "a rather rare plant in cultivation".

There were only three entries for Class 21 for the Megacalyx subseries but Sir George Campbell's *lindleyi* with 8 bells to the truss was very fine. This was entirely a class from Scotland, the second prize going to Mr. E. H. M. Cox for another *lindleyi* again with 8 bells and the third to the National Trust for Scotland, Brodick for *taggianum*. It was not specified whether all these were grown outside or not.

For species of other subseries of the Maddenii series the *carneum* from Brodick was a real gem, a beautiful pale blush pink and fragrant. The truss of *johnstoneanum* from Brodick which won second prize was also a beauty.

R. haematodes itself won all three prizes in the next class for members of this series and the winning example from Lord Stair was a very fine one indeed, large-flowered, dark red and waxy. What a fine species this is both as a garden plant and as a parent.

The members of the Neriiflorum Series were mostly rather disappointing, largely because of the season. Lord Stair's little *haemaleum*, first prizewinner, was an unusually fine one. It was interesting to see *yakusimanum* now appearing in the class for the Ponticum Series. Most growers have treasured this too much to cut it. However, it did not win the first prize, this going to *metternichii* from Exbury. In garden as opposed to show value, however, probably the choice would be reversed. As a contrast the Taliense class was well filled with 17 entries and Wing-Cdr. Ingall's lovely *sphaeroblastum* was a worthy winner. There were several rare species in this class, including *balfourianum* var. *aganniphoides* also from Wing-Cdr. Ingall and *wiltonii* from Major A. Hardy of Sandling Park, Kent. The *campylocarpums* were, as usual, one of the prettiest groups in the Competition, all very free-flowering. The spray from Nymans was first and second was the one from Borde Hill. Among the Selense Series in Class 30 was a very nice specimen of *dasycladum* from Bodnant. There were only two entries for sprays of *schlippenbachii* in Class 34. Both were good forms from Leonardslee and Bodnant, respectively. In most gardens this species was already over. The *reticulatum* from Bodnant, the winner in Class 35, was a very well coloured form, and in spite of the season there were seven entries. In the next class for three sprays *quinquefolium* was unusually good and we particularly liked the one from Leonardslee although it was only in the trio placed third. This is a valuable

plant for any garden since it also has brilliant autumn colour.

The small members of the Anthopogon Series are probably not sufficiently appreciated as plants for the larger rock garden or the front of a woodland walk and they will stand more sun than many larger-leaved species. In Class 37 the first prize was shared between Exbury, who showed *trichostomum* var. *ledoides*, and Mr. E. H. M. Cox, who showed the white form of *sargentianum*. Both were lovely exhibits.

The class for the Edgeworthii Series again suffered from the early season and there were only two entries, the first prize going to a beautiful form of *edgeworthii* from Nymans. The season, however, had suited the Heliolepis Series and there were ten entries, the first prize going to a very fine *desquamatum* from the Earl of Stair. It was also nice to see the rare, although not very striking, *genestierianum* here, although it only won a fourth prize. Sir Ralph Clarke's *russatum* in the Lapponicum class was of very good quality and in conspicuously better condition than the rest of its class. In the Trichocladum Series it was nice to see the rare *cowanianum* from Mr. E. H. M. Cox of Glendoick, but it was not sufficiently conspicuous to win over the *trichocladums* from Borde Hill and Bodnant. The Triflorum series were all good and there was really an outstanding very deep mauve form of *augustinii*, which won first prize for that species for Sir Ralph Clarke. There were also good forms from Exbury and Nymans. The *oreotrephes* attracted a well-filled class of 11 entries and the exhibits showed wide variation. *Yunnanense* again was excellent and of very good quality, particularly the first prizewinner from Exbury. For other members of the subseries Mr. de Rothschild's *rigidum* made a very good vase for first place, while the second prize went to Mr. E. H. M. Cox for a lovely pink form of *davidsonianum*. Exbury's *hormophorum* was third. The rare *leptothrium* from Major Magor of Lamellen was an unusual exhibit in Class 53 and won second prize, the first going to Messrs. Waterer's *carolinianum*. Mr. Judson won both prizes in Class 54 for a truss or spray of any species shown by an exhibitor who has not won a prize for the previous five years at the Rhododendron Show and his *cinnabarinium* var. *roylei* and *oreotrephes* were the only two exhibits.

HYBRIDS

These classes attained a very high standard. It was interesting to pick out also just a few which appear year by year in the

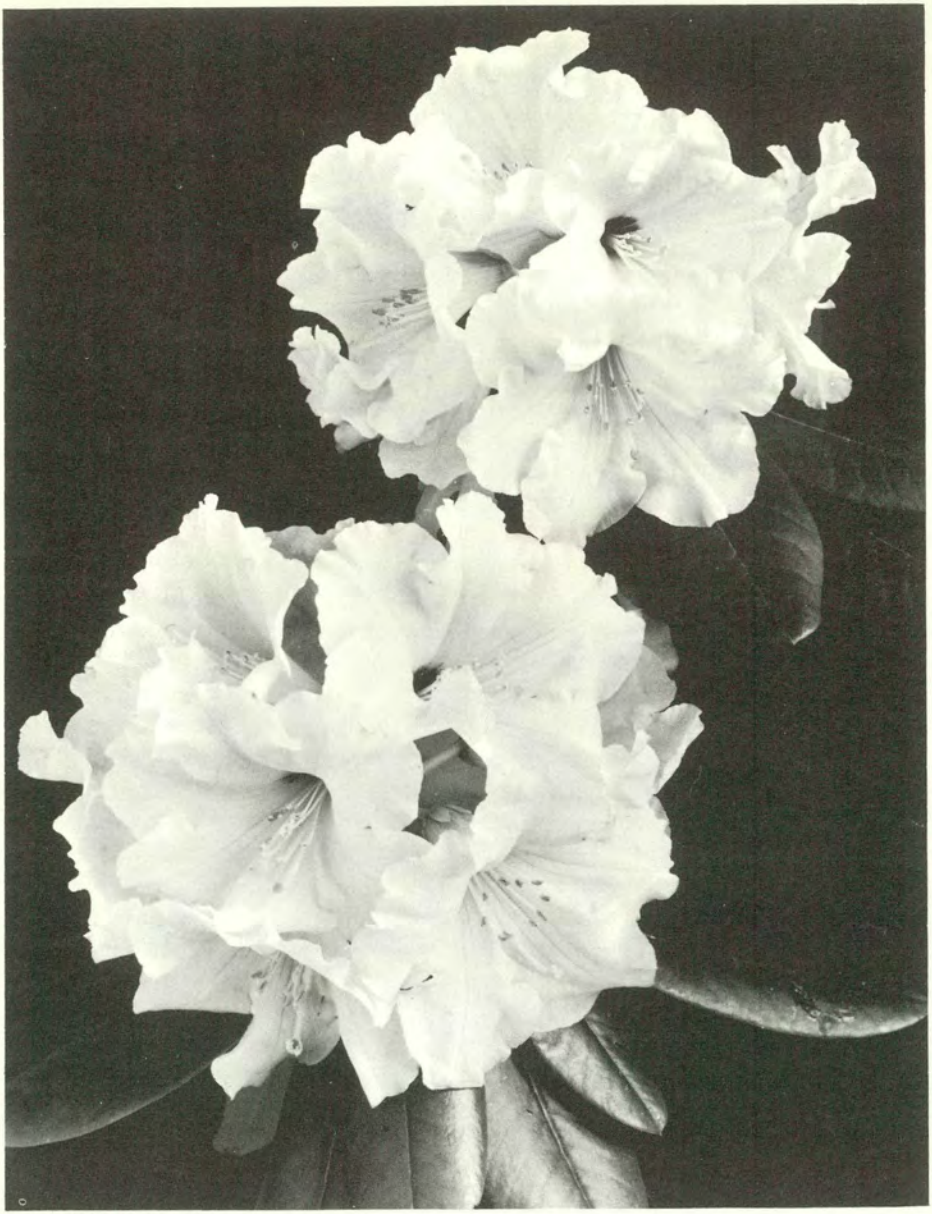


Photo: J. E. Downward

FIG. 37.—Rhododendron 'Cara Mia' (R. 'Aurora' × R. 'Crest'). A.M. May 3, 1966. Raised and exhibited by Edmund de Rothschild, Esq., Exbury (see p. 163)

prize-winning groups. Among the yellows 'Crest' is, of course, outstanding and among the dark reds 'Kharkov', 'Gretia' and 'Queen of Hearts' are nearly always good. Among the pinks 'The Master' has already been noted, while 'Coronation Day' has very large loose trusses and nearly always looks good on the first day but tends to flag quickly. Among the old hardy hybrids 'Susan' with its full heads of delicate mauve and 'King George' with its bright red trusses nearly always appear in the first or second group of these classes.

In Class 61 for eight hybrids Exbury was successful and showed 'Rosemary', 'Janet', 'Naomi Glow', 'Kharkov', 'Crest', 'Aurora' × 'Idealist', 'Cornish Cross' and 'Matador'. The specimen of 'Crest' was magnificent. Mr. Kleinwort was second and his 'Coronation Day' was particularly noticeable. Messrs. Reuthe were third and included a number of the older hardy hybrids, such as 'Susan', 'Earl of Athlone' and 'Beauty of Littleworth', all still brilliant plants for the garden. In the next class for three hybrids Exbury won first prize again with 'Lionel's Triumph', 'Susan' and 'Aurora' × 'Crest'. We particularly liked the last. The Hydon Nurseries were second with 'Goldsworth Pink', 'Letty Edwards' and 'Susan', while Mr. Julian Williams from Caerhays was third with three interesting but unnamed crosses. His *burmanicum* × *dalhousiae* was a lovely truss of waxy ice-white flowers with a creamy yellow base and followed the *dalhousiae* parent. Another truss of this plant was third also in Class 65 for the Loder Challenge Cup in which there were twenty-seven entries. Messrs. Slocock's won, showing a huge truss of 'The Master', a delicate pastel pink in colour, and second were Windsor Great Park with 'Idealist' × 'Crest', another very promising cross. Class 66 for the Crosfield Challenge Cup, awarded for six hybrids raised by or in the garden of the exhibitor, always produces some interesting entries. Mr. de Rothschild of Exbury was first here and again in Class 62 for three hybrids raised in his garden. This was undoubtedly an Exbury year in the hybrid classes. For the Crosfield Cup they showed 'Eurydice', 'Tzigane', 'Exbury Naomi', 'Aurora' × 'Idealist', 'Crest' and 'Tasco'. Second were Windsor, and it must have been very difficult to judge between these two entries. In both the flowers were of beautiful colour and all in good condition. The Windsor cross of *aberconwayi* × *souliei* was a very pleasing and promising new hybrid. Bodnant was third, and we particularly liked in their entry the 'Ruddigore' and the 'Rosa Bonheur', a very choice

pink seedling from 'Cornish Cross' × *loderi*. In Class 67 the Exbury 'Crest' was superb. They accompanied this with 'Naomi' and 'Electra'. For second place, Bodnant showed 'Coreta', 'Conroy' and 'Luscombei' × 'Loderi King George'. The 'Conroy' was lovely, a good colour and a graceful flower truss, while the 'Luscombei' × 'Loderi King George' was a nice clear pink and seemed to have missed the "blousiness" which some associate with the former parent and the "oversize" of the latter. An interesting cross from Bodnant was a white *arboreum* × *griffithianum* and the foliage showed characteristics of both. Again in Class 68 for six hardy hybrids 'The Master' dominated all the others, a formidable boss by any standards! Messrs. Slocock's 'Letty Edwards' was also well worth its place in the group.

For hybrids of the Arboreum Series Lord Aberconway's 'Eurydice' (*arboreum album* × Loderi) was first out of eleven entries, and a lovely flower it was also. His 'Cardinal' (*arboreum* × Barclayi) was second, a truss of much stronger colour. For Loderis the first prize went to Major A. Hardy of Sandling Park for a very fine truss of 'Loderi King George', while second was Mr. L. Riggall with the cream 'Loderi Julie', raised by Lord Swaythling. It was interesting also that the second generation Loderi seedling, 'Loderi Princess Marina' from Leonardslee, only won third place against one of the original seedlings of the cross. In Class 72 for *griffithianum* crosses with a hybrid the 'Yvonne' from Mr. Kleinwort was first in a class full of flowers of very good quality. Major General Harrison's 'Bombardier' was second and would be likely to make a very bright spot in the garden. Mr. Riggall's 'China', the winner in Class 74, out of sixteen entries, was a magnificent truss. 'Crest' again won a first prize for Exbury in Class 75, but Major Hardy's 'Idealist' was a good second. In Class 76 for *neriiflorum* hybrids there were also several very good specimens of 'David' in this class and it won the first two places. 'Red Glow' ('Halopeanum' × *thomsonii*) from Leonardslee gave a very nice erect truss and won Class 72 out of sixteen entries. Sir Giles Loder's 'Cinnkeys' was a very nice exhibit as winner of Class 81 for Cinnabarinum series hybrids. Sir Ralph Clarke's 'Oreocinn' was second and Bodnant's *cinnabarinum* × *concatenans* third, a very well-flowered spray. Sir Giles's 'Fragrantissimum', the winner of Class 82 for Maddenii and Edgeworthii hybrids, was a very fine big spray. This is one of the classes where flowers may be cut from a greenhouse and always produces some very beautiful specimens to tempt others

in the Home Counties to try this form of rhododendron cultivation.

There was quite a good entry for Class 85 of *forrestii* (*repens*) hybrids. As might have been expected, 'Elizabeth' from Bodnant was first, but it was interesting to see one of Herr Dietrich Hobbie's very hardy crosses, 'Elizabeth Hobbie', coming in second place when shown from Glendoick, Scotland by Messrs. E. H. M. and P. A. Cox; 'Moerheim Jubilee' from Mr. M. Cripps was third. The Cox's 'Pink Drift' (*calostrotum* × *scintillans*) was the only entry in Class 86 for Lepidote hybrids. Sir George Campbell's 'Mariloo', the winner in Class 88, was a very nice truss, but the foliage was poor, a tendency of this otherwise good hybrid which is filling one of the gaps among the early pale yellows. In this class Bodnant showed a very good coloured *augustinii* hybrid, the other parent being 'Bluebird'. A fine truss of that old favourite 'Mrs. G. W. Leak' from Mr. M. Cripps won Class 89, where there were 14 entries, and in Class 90 for any hybrid spray or branch up to 30 in. tall, Sir Giles Loder's 'Red Glow' was again very effective and must make a fine splash of colour in the garden. For smaller sprays in Class 91, Mrs. G. M. Gosney of Kingswood, Surrey

FIG. 38.—*Rhododendron sherriffii*. A.M. March 8, 1966. Exhibited by Crown Estate Commissioners, Windsor (see p. 166)

Photo: J. E. Downward

was first with a fine spray of 'Carita Charm' and second with 'Rose Perfection'.

There were, as usual, some abundantly-flowered specimens of colourful evergreen azaleas among which the white 'Kure-ne-Yuki' presented a welcome contrast. Messrs. Reuthe's crimson-purple (generally miscalled pink) form of *calostrotum* won the first prize for a dwarf rhododendron for the Rock Garden and they also won the next class for a specimen rhododendron plant in bloom not exceeding 4 ft. with a fine plant of 'Mrs. Betty Robertson', while Messrs. Slocock's 'The Don', a very pretty pink-flowered plant, was second.

In the final Class 107 for any species or hybrid grown under glass there were four interesting entries. Sir Giles Loder's *edgeworthii* (shown as *bullatum*) was first, Lord Stair's 'White Wings' second and Major Hardy's *dalhousiae* hybrid third.

THE RHODODENDRON COMPETITION MARCH 22 and 23, 1966

by JAMES PLATT

IT was a pity after many weeks of mild and even sunny weather, when rhododendrons almost rushed into flower, that there was frost for several nights just before March 22 and 23 when the Rhododendron Competition was held. This affected several trade exhibits and may have been the reason why some of the usual competitors were absent. Nevertheless, the New Hall was filled with bright and attractive exhibits.

We are becoming used to the exhibit which Mr. J. S. Basford stages with large-leafed and tender rhododendrons from the National Trust for Scotland's garden at Brodick Castle at this time of the year. However, the more we see of Mr. Basford's exhibits the more we appreciate them and hope that he may long continue to show. This year it was the large-leafed rhododendrons which were well represented. There were trusses of the lovely rose-pink *R. mollyanum*, cut from the plants from which this species was described; there were others of Brodick's *R. magnificum*, which received the F.C.C. at the previous Show. There was their particularly good pink *R. arizelum* and fine purple *R. giganteum*. *R. macabeanum* was present in several colour forms and there were good trusses of a waxen-white *R. praestans* and *R. basilicum*. Brodick's own hybrid R. 'Glenshant' with large creamy waxen bells, a cross between *R. grande* and *R. macabeanum*, was in a place of honour in the centre of the exhibit. A rhododendron species of interest in the exhibit was *R. fletcherianum*, with small saucer-shaped flowers of good form and of a soft shade of cream tinged green. It seemed a very pleasant species to be named in honour of Dr. H. R. Fletcher, Regius Keeper of the Royal Botanic Garden, Edinburgh. We believe that this was its first appearance at Vincent Square.

Messrs. Slocock had a large exhibit under the Clock. Their R. 'Avalanche' seemed as perfect a white as one could wish for, given space and shelter. The individual flowers of R. 'Dr. Stocker' which was raised in 1900, still compare favourably with other more recently raised whites, which on this occasion was 'Ava-

lanche'. They had an excellent early red in R. 'Ibex', a hybrid of *R. pocophorum* and *R. griersonianum*, whereas a well-budded R. 'Ilam Violet', though not fully open, showed an intense shade of blue. The rusty indumentum on the underleaf of a pink-flowered *R. fulvum* added interest to the exhibit, as did the inclusion of plants of *R. makinoi* and *R. yakusimanum*, flowerless and used for their effective foliage. The Knap Hill Nursery had a pleasant exhibit so staged by Mr. Donald Waterer that one could see the form and shape of each plant as well as its flowers. The emphasis was on deciduous azaleas, most of them Knap Hill, such as yellow 'Lapwing', 'Goldcrest' and 'Cockatoo', orange 'Brazil', pink 'Homebush' and white 'Albacore', with here and there a bush of a hardy rhododendron hybrid. Messrs. Hillier had arranged their exhibit effectively, with some of the larger growing plants such as the brilliant red R. 'Queen Wilhelmina' graded down to R. 'Remo', an excellent yellow of intermediate size, which in turn gave way to the white of *R. flavidum album*, the violet-blue of *R. lysolepis*, the pink of R. 'Racil' and finally to *R. pemakoense*, arranged as this suckering dwarf species should grow, as a carpet.

Rhododendron glaucophyllum var. *luteiflorum* from Brodick received a F.C.C., an award with which few people will disagree. It is a valuable shrub of compact habit, hardy, early-flowering and, as in this case, with flowers of a good yellow. R. 'John Marchand', which was shown by Capt. Collingwood Ingram and raised by Mr. John Marchand, received the A.M. This cross between *R. sperabile* and *R. moupinense*, another instance of a hybrid between a lepidote and an elepidote species, forms a compact mound and is extremely free-flowering. Its flowers are bell-shaped and of an attractive shade of cherry-pink.

There were 193 entries in the Competition from 17 competitors. Major E. W. M. Magor of Lamellen, Cornwall, was first in Class 1 for a truss each of four species, with a well-balanced truss of *R. macabeanum*, *R. calophytum*, *R. mollyanum* and *R. arizelum* of an attractive shade of old rose, altogether a fine entry. Major-General and Mrs. E. G. W. W. Harrison of Tremeer, Cornwall, were second with a somewhat similar quartet. Their *R. macabeanum* was less rich in colour and had longer bells, wide in the mouth and with very wavy margins. Their truss of *R. sinogrande* was one of few of this species in the Competition and they also included a truss of their attractive parma-violet *R. niveum*. In Mr. E. de Rothschild's quartet from Exbury the

heavily spotted *R. irroratum* 'Polka Dot' and a neat truss of *R. barbatum* contrasted well with the larger and heavier trusses of his *R. macabeanum* and *R. calophytum*. Mr. Basford had a nice truss of the tender *R. hookeri* in his entry from Brodick.

In Class 2 for a spray or branch of one species, a fine one of Brodick's *R. magnificum* with its five trusses rather overshone the other entries. A spray of *R. irroratum* with attractive cream, pink-flushed bells was second. It came from Inverewe in Wester Ross and we had to thank the National Trust for Scotland for sending down entries from their famous but far-distant garden. Sir Giles Loder won the third prize with a spray of the bright red *R. neriiflorum*. Class 3 is for one truss of any species. Major Magor's *R. macabeanum* took the first prize with Exbury's *R. irroratum* 'Polka Dot' second and Brodick's *R. magnificum* third. Class 4 is for one truss of three cultivars of *R. arboreum*, and Class 5 is for one truss of any species of the Arboreum Series other than *R. arboreum* itself. The winning entries were good without being exceptional and few in number. In Class 6 for any species of the Barbatum Series a good truss from Inverewe of *R. barbatum* took the first prize. The Countess of Rosse and the National Trust, Nymans were second with a mauve-pink *R. glischroides*. In Class 8 for any species of the Falconeri Series, a truss of *R. basilicum* with its waxy-white, substantial bells, each with a dark blotch, was just superior to Major Magor's old-rose *R. arizelum* and the laxer truss of this species from Nymans. There are generally more entries in the Class for the Fortunei Series than there were this year. *R. calophytum* from both Exbury and Lamellen took the first and second prizes without being particularly distinguished. Of the nine entries in Class 10 for the Grande Series, *R. macabeanum* from Tremeer had a well-formed truss and was a good yellow. It deserved the first prize, though the form from Sir George Jessel of Goudhurst, Kent, was very creditable, coming as it did from a county with which we do not generally associate rhododendrons of this Series, Of the 9 entries in this Class seven were *R. macabeanum*. Lady Rosse's *R. neriiflorum* with a distinct red calyx was first in Class 11 for any species of the Series of that name. The dusky red of *R. chaetomallum* in a rather flat truss from Brodick was second and *R. chaetomallum* with a neat round truss from Major Magor was third. Lady Rosse had a really fine red in her *R. meddianum* var. *atrokermesinum* in the class for a species of the *Thomsonii* Series. Yet another of her plants from Nymans was second. It

was *R. eclecteum* with a neat truss of light purple. Brodick's *R. glaucophyllum* var. *luteiflorum* was quite properly first in Class 13, which is for any species of the Boothii, Campylogynum, Glaucophyllum, Lapponicum, Moupinense, Saluenense, Triflorum or Virgatum Series. The Hydon Nurseries of Godalming entered a good pink *R. racemosum* which appeared as if it might be Forrest's 19404. Seedlings of this number are generally less leggy in growth and of a pleasant pink. Class 14 provides for any species not mentioned in any of the foregoing classes. Sir Giles Loder's pink *R. ciliatum* was unusually deep in colour and certainly deserved the first prize. *R. pemakoense* from Nymans was second and a pink striped *R. fulvum* from Exbury was third. Other interesting species in this Class were Sir Giles Loder's *R. albrechtii*, exceedingly rich in colour but not sufficiently open, Mr. G. Gorer's mauve-pink *R. fulvum* under Forrest's number 24110 and *R. heptamerum*, a sub-species of *R. eritimum* with deep crimson flowers from Nymans.

The hybrids started with Class 15 and Mr. Edmund de Rothschild's winning quartet included R. 'Jocelyne' and R. 'Our Kate', both of them Exbury raised and hybrids of *R. calophytum*, with beautifully formed waxen white bells. R. Nimrod 'Waddon Chase', another hybrid of *R. calophytum*, was also in the quartet. Its large mauve bells showed through their profuse spotting, the influence of their other parent *R. irroratum* 'Polka Dot'. Sir Giles Loder was second. His entry included 'Pink Glory', a delicate pink hybrid of *R. irroratum*, the rosy-red 'Faltho' and 'Seagull', which is one of the finest white hybrids. All three were raised at Leonardslee. Major Magor, who took the third prize, entered four hybrids raised by his father at Lamellen. They were 'Lacs', (*R. lacteum* × *R. sinogrande*,) 'Hermione', a fine red-flowered *R. arboreum* hybrid, 'Daphne', a very attractive red, no doubt showing its *R. neriiflorum* blood through its red calyx, and the lightly-spotted lemon yellow 'Merope'. There were two other attractive hybrids in the Class, Mr. Geoffrey Gorer's 'Sir George Sansom', a hybrid of *R. lacteum* raised by Mr. Gorer, with yellow flowers edged and striped with pink, and Major-General and Mrs. Harrison's *R. ririei* × *niveum* which had exceptionally neat trusses of violet-purple. In Class 17 for one hybrid Major-General and Mrs. Harrison's truss of 'Fortune' took the first prize. The winners in Classes 18 and 19 were rather repetitions of entries in previous Classes except for Mr. Gorer's 'Avalanche' in Class 18 and Major-General and Mrs. Harrison's 'Campirr',

a pale yellow with a faint pink edge, in Class 19. In Class 20 Mr. Gorer won the first prize with his pure white 'Janet', a lovely hybrid raised at Exbury by crossing R. 'Avalanche' with R. 'Dr. Stocker'. Sir Giles Loder's 'Seta' was first in Class 21. By now this delightful little hybrid has established itself in our regards as both hardy and frost resistant.

Classes 22 and 23 are for tender species or hybrids grown under glass, and frequently produce some beautiful entries. In Class 22 Mr. Gorer was both first and second with a very rich yellow *R. burmanicum* × *R. cubittii* in which, as it was only just opening, the deep rose of some of the buds contrasted with the white of those flowers which had opened. Dr. W. C. Carpenter of Warlingham, Surrey, was third with a truss of 'Sir George Holford', one of the once numerous *javanicum* hybrids which was making a rare appearance in the Hall, with coral-orange flowers. Class 23 was all yellow and all Sir Giles Loder's. His *R. chrysodoron* was intense in its colour. Its offspring, R. 'Goldfinger', a clone of R. 'Parisienne', was also very attractive. *R. valentinianum*, the other parent of R. 'Goldfinger', was the third prize winner.

RHODODENDRON GROUP TOUR, 1966

By ELSPETH NAPIER and DAVID PYCRAFT

IN 1966 the group went to Scotland and visited a few of the gardens on the Argyllshire coast, on Arran, and also the Royal Botanic Garden, Edinburgh. A party of about 30 gathered and we spent four interesting days (25–28 April) looking at rhododendrons. On our way over to Arran for our first visit—to Brodick Castle Gardens—we heard that there had been severe frosts in March. Few gardens had escaped damage, and as a result the Scottish Rhododendron Show in early April had to be cancelled. This was rather a depressing outlook for our tour, but in fact the picture was not so black as one had imagined and there was plenty of interest to see in all of the gardens we visited.

There is no doubt that it is the vigour, almost lushness, of growth of the rhododendrons on the west coast that impresses the visitor from the east, and this is true in particular of the plants at Brodick. The big-leaved species are the most immediately striking. The groups of *R. magnificum* and *R. giganteum* are well-known, of course—their flowers were over by the time we arrived—but the large leaves and decorative new growth, the bright red buds pointing skywards like candles, made a handsome sight. Large plants of *R. sinogrande*, *R. grande* and *R. macabeanum* were in full flower, and they too made impressive groups. Another species that relishes the conditions at Brodick is *R. johnstoneanum*, which has been planted most effectively; it was well into flowering when we were there, but there were plenty of the fat greenish yellow buds still to open to the lovely, pale creamy yellow, bell-shaped flowers. Flowers of a deeper yellow were to be seen of *R. glaucophyllum* var. *luteiflorum* (a F.C.C. plant of 1966); these were pendant in contrast to the more erect bearing of *R. johnstoneanum*. Other noteworthy plants include *R. mollyanum* and several species of the Maddenii Series growing in well-sheltered positions.

During our walk round the garden we had an unusual view, from a high path above, down on to the rhododendrons below; it was fascinating to see the patterns and shapes of leaf and growth without the distraction of flower colour. From here, too, we could see how near the rhododendrons at Brodick are to the

sea, the lower planting coming down to within 30 feet of the shore.

There were other plants besides rhododendrons that it was interesting to see growing outside. We were all impressed by the thicket of *Crinodendron hookerianum*; *Acacia melanoxylon* was flowering, although some of the buds had been frosted. Another plant in flower, but very tender, was *Correa alba*, which is, however, not an effective garden plant. There is hope for the future in the *Magnolia campbellii's* that have recently been planted.

The next day was wet. We visited the Younger Botanic Garden at Benmore near Dunoon in the morning, and we received some of the 90 inches of rain that is the average annual amount there—conditions of humidity much appreciated by the rhododendrons. The March frosts seemed to have had more effect here than at Brodick. All the flowers on plants of *R. eximium* and *R. basilicum*, for example, were sadly browned. Among some of the plants that were in flower were *R. adenophorum*, a large planting of Hooker's yellow *R. campylocarpum*, *R. niveum*, *R. meddianum* and *R. johnstoneanum* (rather behind those at Brodick), and we also saw a very deep purple form of *R. concinnum*. The tree form of *R. campanulatum* was covered in flower, all 30 feet of it, making a splendid sight. At its feet and, in fact, throughout the garden, the self-sown seedlings were a temptation to some members of the party. This is one of the striking sights of Benmore—the numbers of seedlings. The high humidity and the mossy ground covering provide conditions in which the percentage germination of the seeds must be very high, and in which the seedlings thrive. One remarkable patch was pointed out to us, where the parent plants *R. basilicum* and *R. arizelum* had been grubbed, but the ground was thick with their seedlings.

There were many interesting species to be seen in the flatter area near the Golden Gate. Alas, the original plant of the F.C.C. clone of *R. mollyanum* 'Benmore' has gone because of attack by honey fungus, although naturally it has been propagated. Curiously another plant of *R. mollyanum*, planted quite close and in the same conditions, has not yet flowered. Along the drive to the Golden Gate, an admirable plant was *R. morii*, 10 feet high, with bell-shaped white flowers.

Our afternoon visit was to the much smaller garden of Mrs. Kenneth of Ardrishaig. It was a small garden in comparison with the others we visited, although covering about 7 acres, and planted almost entirely with rhododendrons. The area around the

Photo: G. R. Speed

FIG. 39.—*Rhododendron lindleyi* at Brodick Castle

house was closely planted with many interesting plants. There was *R. beanianum* and its variety *compactum*, which, as Mr. Kenneth pointed out, shows some wide differences from the type and is oddly considered as a variety. The dwarf form of *R. roxieanum* var. *oreonastes* was also there, and the tender *R. zeylanicum* was flourishing. A purple form of *R. augustinii* was also in flower. At the loch-side of the house, Mrs. Kenneth had a good *R. niveum*; it was a form with a larger flower truss than usual. Plants of *R. bureauvii*, with its very fine foliage, a white *R. irroratum*, a large *R. auritum*, and *R. wightii* were to be seen, but the truss of the latter does not please the exhibitor in Mrs. Kenneth.

Above, in the higher part of the garden, most of the plants were younger and there was more space for them to fill. There were many interesting plants here, too, including several large plants of *R. decorum*, but our attention was attracted to two plants, one of 'Sir Charles Lemon' and another, a very good form of *R. campbelliae*. Both plants were in flower and the white and pink flowers (respectively) contrasted most attractively with the very rusty brown indumentum that we could see on the underside of the leaf when a gust of wind blew.

The next day started with a visit to Sir George Campbell's lovely garden at Crarae. The weather was perhaps even worse,

with a strong wind blowing in addition to the showers of rain. Such conditions are not the best for gardens, but at least we had a practical demonstration of the need for and the effectiveness of the shelter at Crarae. In the glen it was only occasionally that one felt any effect of the wind, and even then its effect was a fraction of the strength of gale down on the shore of the loch. We did feel the wind in the higher parts of the garden, the so-called Outer Circles. Mr. Ilay Campbell showed us some young plants of *R. sinogrande*, planted in a position that one would have thought was rather exposed for them, especially on a day when the eucalyptus above them were bending in the wind. The plants were, however, looking healthy and vigorous and seemed to be flourishing. Those in the open were looking as well as another group of young *R. sinogrande* planted nearby but with more protection, in clearings of a conifer plantation. It will be interesting to watch the development of these plants in such a situation. The rhododendrons in the garden had suffered considerably from the frosty nights in March, but there was still quite a show of flower. We saw a very fine plant of *R. delavayi*, at about the peak of its flowering, bearing splendid trusses of blood red flowers. Among other rhododendrons worthy of notice were *R. fulvum*, *R. falconeri* and *R. thomsonii*. Near the margin of the stream, there was a fine specimen of *R. detonsum*, uncommon in general cultivation. A remarkable feature was the large planting of *R. cinnabarinum* var. *roylei magnificum* raised from a packet of seed received from Exbury. *R. arboreum*, which we saw in all the gardens we visited, and *R. wallichii*, were both in full flower and most photogenic.

Sir George himself has said that he is not a victim of Rhododendronitis, and there were other plants to admire in the garden—the magnificent *Camellia reticulata* against the house wall, flowering profusely, *Cornus nuttalli*, the fine plant of *Clethra delavayi*, and, of course, the Eucalyptus, from the two fine specimen trees of *E. urnigera* before the house, to the various species grown in the higher parts of the garden.

In the afternoon we went on to Mr. Michael Noble's estate at Cairndow. The rain continued for most of the time that we were there, but Mrs. Noble made us very welcome and sent us round the garden with some inner refreshment against the weather. Mr. Noble is specially interested in raising hybrids, and in the fine Arboretum across the road can plant his rhododendrons beneath the trees, some of them rare conifer species, such as

Fitzroya. Many rhododendron species are also planted, and we saw a fine tree of *R. falconeri*. There was a good plant of *R. concatenans* that had formed a low bush, with waxy orange flowers tinged with pink, and, we were told, one of the original introduction. *R. basilicum* was in flower, having escaped the frost here. The natural situation of the arboretum is very favourable, steep banks on either side of the River Kinglas. Before leaving we returned to the house and admired again the fine collection of dwarf rhododendrons.

By the next day the weather had improved, and the sun shone for our visit to the Gibson family at Glenarn, Rhu. Here again we heard sad tales of damage by frost, particularly to the magnolias, but in addition *R. neriiflorum* had turned out to be less hardy in bud than had been thought. Snow had also caused some damage, and branches were broken from two large plants of R. 'Loderi'.

In the drive leading to the house there was *R. vernicosum*, its deep carmine buds just breaking, a deep yellow form of *R. campylocarpum*, and a vigorous specimen of *Magnolia mollicomata*, about 30 feet tall with fully open flowers. Near the house there were several old plants, 100 or more years old, of which the pride was the *R. falconeri* tree. This well-known tree of about 120 years old was at its best, looking very handsome in the sunshine and tempting most of the party into photographing it (Fig. 40). There were numerous plants of *R. lindleyi* bearing many flower buds, but we were just a day or two too early for their flowering. However, *R. bullatum* was just in flower for us and the flowers were delightfully scented; the plants at Glenarn are a good form and, their owner says, "fairly tough". There was also the K. W. collecting of *R. triflorum* from Tibet, var. *mahogani*, carrying its beautiful dark, mahogany-coloured flowers. The *concatenans* hybrid 'Peace' was flowering freely in a sunny situation, and nearby we were amused to see *R. johnstoneanum* happily growing high up in the trunk of a beech tree. Other interesting rhododendrons growing in the garden were *R. haematodes*, *R. griffithianum* and *R. eximium*. Down below in the "glen" *R. rude* was just bursting into flower; the large fat trusses of pink flowers were sitting like globes on the ends of the branches.

In the Rock Garden there was a fine display of *Primula chionantha* which was in flower, and of *Meconopsis quintuplinervia*, whose flower buds were just showing. We were interested in the *R. williamsianum* hybrid called 'Pook' (Fig. 41), of which there were several fine specimens in the Rock Garden and elsewhere in the

Photo: G. R. Speed

FIG. 40.—*Rhododendron falconeri* at Glenarn

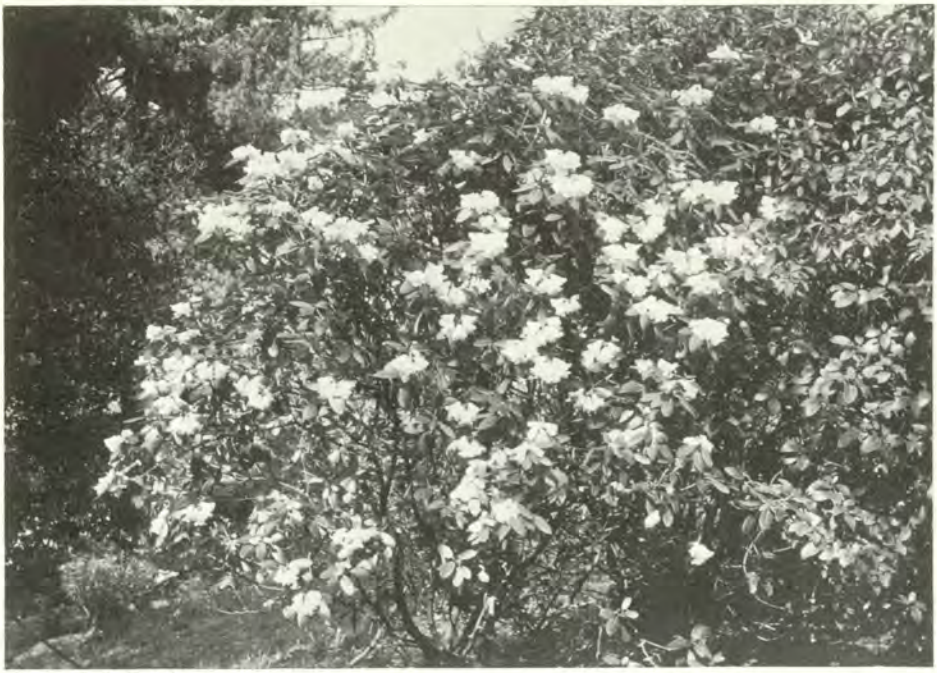


Photo: G. R. Speed

FIG. 41.—*Rhododendron* 'Pook', a hybrid of *R. williamsianum* at Glenarn

garden. There are both pink and white forms of this cross. An attractive feature was the large number of dwarf rhododendrons in the rockery.

There were many hybrids raised from large-leaved species such as *sino-grande*, *falconeri*, *hodgsoni* and *grande*, including a sturdy specimen of 'Ronald' (*R. sino-grande* × *R. hodgsoni*), but its trusses of flowers had been frosted. There was also an unusual yellow form of *R. zaleucum*, which has so far proved impossible to propagate since the mature shoots are very elongated. A large plant of *Philesia magellanica*, 12 feet or more across, was growing on a bank with the roots deep under the coolness of a rock. *Rhododendron valentinianum* was another low-growing plant, about 2 feet high, and well established in a stump shared by ferns.

The journey across to Edinburgh in the coach was rather hot, and the cup of tea provided at the Botanic Garden on our arrival was most welcome. The garden had also suffered from recent frosts, but there was, nevertheless, a good show of flower. In the rock garden there was a group of *R. russatum* plants raised from Rock's seed, giving a fine show of bluish-purple flowers. Shades of purple seemed predominant in the rock garden, and

we also saw *R. racemosum* and 'Blue Tit' in full flower. Among the many small rhododendrons which attracted attention were *R. chamae-thomsonii*, *R. lepidostylum* and *R. tsariense*. In the Peat Garden we saw another dwarf rhododendron, *R. microleucum*, still showing a mass of white flowers, although some of the petals had been scorched by the frosts. Here, too, there was *R. stictophyllum*, a Chinese species, that was covered in clusters of rose-purple flowers. *R. roxieanum* var. *oreonastes* was another of the low growing species that was in flower, and *R. vernicosum* was an attractive sight, its pink bell-shaped flowers borne on branches almost to ground level beneath the pine trees. Among the interesting species that were not in flower in that part of the garden was *R. succothii*, newly named and described.

On the hill at Inverleith House there were many species in flower, *R. fictolacteum* and *R. niveum*, which we had seen many times on the west coast, also a vigorous plant of *R. habrotrichum*, with large trusses of pink-tinged buds and white flowers. *R. prattii* was another white-flowered species, but the flowers had a large scarlet blotch at the base of the corolla. There was a fine display of *R. argyrophyllum* var. *leiandrum* and we also saw a deep yellow-flowered form of *R. macabeanum*, although some of the flowers had caught the frost.

Our time in the Garden was unfortunately rather short and we would have liked to have stayed longer. But it was the last visit of the trip and arrangements had been made for getting home.

The success of the tour can be largely attributed to Mr. Davidian, whose patience in providing rhododendron information was endless. We all learnt a great deal from him. The only signs of dismay that he showed were when he realized that "the bumble bee" had been too active amongst his species.

We thank the owners for letting us come and see their plants, and for treating us so hospitably. And we are most grateful to the owners and others for guiding us at one time or another during the tour, and for discussing rhododendrons with us. It was a memorable tour.

RHODODENDRON NOTES

Rhododendron mucronulatum IN AMERICA

Rhododendron mucronulatum is an important spring blooming shrub along the Eastern seaboard. In South-eastern Pennsylvania it blooms about the 1st April. In some very exposed situations it may be caught by frost in an occasional year, but in my own experience near Philadelphia, this has happened very few times in the last twenty years.

Commercially available plants of this species are mostly magenta purples—colour which many people do not like. For this reason various growers have tried to select paler, or pinker forms. Joseph B. Gable of Stewartstown, Pennsylvania, introduced one of the first of these under the name *Rhododendron mucronulatum roseum*. It has been used for further breeding and selection but is not itself, in my opinion, otherwise important.

In 1931, Henry T. Skinner, a Wisley graduate, present Director of the U.S. National Arboretum, was working at Cornell University. He purchased seed of *Rhododendron mucronulatum* from the Yokohama Nursery Company and raised over a thousand plants. Among them were variations in colour and the pinkest and best was selected to propagate by cuttings. Years later, in 1952, when Mr. Skinner was curator of the Morris Arboretum near Philadelphia this was named 'Cornell Pink' and distributed to nurserymen to introduce. It takes a long time to build up a stock but 'Cornell Pink' is now beginning to appear in nursery lists.

'Cornell Pink' was shown at the RHS last spring and received an Award of Merit. At the time that it was exhibited and when it was published in the Journal its origin was not stated. This note has been prepared so that proper credit can be given to the originator.

Guy G. Nearing, Paul Vossberg, Warren Baldsiefen and Donald Hardgrove, all of them in the New York region, have used 'Cornell Pink' in their breeding. There are various pink strains now available in limited quantities, but they are being distributed as strains and not as clones. They differ slightly from each other and from 'Cornell Pink'. I believe they are going to be useful in the future.

The most carefully planned breeding programme to improve the colours of *Rhododendron mucronulatum* has been undertaken by Joseph Casadevall in Whippany, New Jersey. He has sent the following report of his work:

"Three forms of *Rhododendron mucronulatum* were involved in the breeding programme. Many species and hybrids were used as either seed or pollen parents. Plants and pollen were from several English and West Coast gardens. Emphasis was on the best forms. The forms of *mucronulatum* were:

R. mucronulatum 'Roseum'.
R. mucronulatum, a pale pink form.
R. mucronulatum 'Cornell Pink'.
R. 'Conemaugh' (*R. racemosum* × *R. mucronulatum*).

"Although many crosses were made and plants from nearly twenty-five flowered, final selections have been made from crosses between the above plants and the following:

R. moupinense—white and near white flowers.
R. 'Bric-à-Brac' (*leucaspis* × *moupinense*)—pale lavender flowers.
R. racemosum Forrest 19404—bright pink flowers.
R. carolinianum, a pink form—pink and purple pink flowered plants.
R. carolinianum album—nearly white and pale pink and light lavender flowers.
R. keiskei, a dwarf form—a number of evergreen plants with white, cream, pale pink and bright pink flowers.
R. 'Conemaugh' (*racemosum* × *mucronulatum*) — heavy flowering plants—mauve lavender to light purple and purple pink.

"The effect in the April garden at Whippany is that of flowering plants in white, cream, all shades of pink, purple pink, and some purple coloured. The final selections will lead to a group of plants which flower with *R. mucronulatum* and up to the Kurume Azaleas. All selections are hardy in the H^2 classification of the American Rhododendron Society".

None have yet been named, propagated in any quantity or distributed.

JOHN C. WISTER

Swarthmore College,
Pennsylvania

A Note on Dead-wooding

"How healthy and happy your rhododendrons look" is not an uncommon comment, nor is it an unwelcome compliment. The gardener can feel his ego swelling within till (and this is inevitable) the remark is followed up by "Obviously your soil and climate are absolutely right". This deflating explanation may or may not be true. Most rhododendron growers would like to think that their own efforts are of some consequence. Why else would they while away so much time dead-heading or mulching, at least the best of their plants?

Dead-heading has been standard for generations, but the equally important practice of dead-wooding has often not been followed as energetically as it must be if the bushes are to give the impression of health and happiness. Dead or dying branches not only look unsightly and give an impression of ill-health and neglect, they also affect the well-being of the plant itself. They inhibit the passage of light and air essential for growth and also encourage moss and lichen, which are undesirable.

The difference in appearance of a rhododendron which has been conscientiously dead-wooded and one which has not has to be seen to be believed. According to size, a bushman saw or a pair of secateurs are the necessary tools. It is best to approach the subject from the back, as the branches to be cut out are more obvious from an unaccustomed angle, and work through systematically to the front. A shake of the main stem quickly shows up a branch or shoot without leaves. It should be cut off as near to the living wood as possible. Snags look ugly and encourage growth of moss which is often a contributory cause in bark splitting and subsequent death. It is important that all dead-wood, branches and twigs, be removed. In tall growing species, such as *R. campylocarpum* or *R. fargesii*, a long walking stick may be most effectively used, for the dead wood is brittle and snaps off easily. Living branches, on the other hand, will bend and resist all attempts to remove them.

This work can be undertaken any time after flowering has finished and growth started. It provides a remarkably congenial occupation throughout the winter and a good opportunity to see what is to come in the spring. Some species require more attention than others. In the Triflorum Series, for example, whole sprays may die off after flowering and members of the Fortunei Series and their hybrids are particularly liable to die-back. In

the normal course of events a rhododendron growth bud will produce multiple shoots, some of which will survive longer than others according to food supplies or adverse conditions encountered, such as intense shadow. Generally speaking, the lower shoots succumb first. With experience it becomes possible to recognise failing growths and these should be removed at the same time as the dead wood. The leaves will be discoloured and droop and an apparently healthy bud will, in the end, not survive.

This treatment will not only make the plants look healthier, they will, in fact, be healthier and the following season will supply visible proof that this is the case. In an unexpectedly short time the bush will appear more shapely, gaps will fill in and the smaller species will regain that desirable well-furnished look. In many cases new growth will appear from the base, and in others from older wood elsewhere. Herein lies the foundation of renewal pruning which may, with caution and advantage, be undertaken at the same time as dead-wooding. There is a tendency for old rhododendrons, other than the tree type, to lack vigour, become thin at the top and straggly. This results in flowers which are often too high to be appreciated and a succession of bare stems at eye-level which is undoubtedly dull. These faults can be overcome by judicious pruning over two or three seasons.

No hard and fast rules have yet been formulated for this type of pruning and some patient trial and error may be called for. Broadly speaking, the old hybrids with ponticum blood can be cut back to the desired height and shape without anxiety and will soon reproduce a shapely bush. This is particularly useful in the case of 'Pink Pearl' which consistently grows too high. A half or a third of it should be cut down at one time and the flowering will not be interrupted. Hybrids of *arboreum* also sprout freely, though the treatment here should be rather more controlled. Nobleanum is a case in point. *Campylocarpum* hybrids respond well, as does the species itself and some others in the same series. Not so, however, *thomsonii* or, indeed, others of the smooth-barked, larger species. Such species as *barbatum*, *fictolacteum* or *falconeri*, for example, will not break from the old wood. Of those with rough bark *macabeanum* will sprout on occasions and *decorum* invariably obliges. The smaller species vary: *griersonianum*, *glaucophyllum*, *triflorum*, *cinnabarinum*, *heliolepis* and *lapponicum* are some that respond well. That they benefit can be seen by the strong new growth on which the leaves may be twice the size of those which have been cut off. A year or

so after this new growth is established the old stems should be trimmed back to the desired break and then all trace of the operation will be concealed.

This procedure is of some importance, as without it there comes a time in every rhododendron garden when too many plants have assumed the straggly, thin appearance of being past their best and the visitor may cease to say "How healthy and happy your rhododendrons look".

S. F. CHRISTIE

Blackhills, Elgin, Morayshire

Rhododenron LODERI AND *Camellia* 'DONATION'

I cannot resist writing a few lines upon these two wonderful plants. For many years I have watched them and marvelled at their superiority. Both are persistent flowerers, strong and healthy. These points I can certainly prove. R. Loderi, bred by the late Sir Edmund Loder, I had in its various clones at Tower Court, Ascot, Berkshire, where the soil is sandy and the atmosphere could be dry and extremely hot. These plants never suffered, only the flowers would feel the extreme heat during the afternoon and would flop, but by 6 p.m. would again sit up and take notice. I brought two of my own layers from R. Loderi 'Fairyland' and R. Loderi 'Sir Joseph Hooker' to my present abode in Cornwall, where the climate is diametrically opposite to that in Berkshire. Both layers are flourishing and are now some 6 feet high by 6 feet wide. Only very strong winds and gales have distorted some of their foliage, but their flowers have been as good as ever and have tolerated stiff winds.

Considering the breeding of Loderi—*fortunei* × *griffithianum*, both species in the same series, *R. griffithianum* is not every one's cup of tea, for it will grow only in certain counties possessing the right climate. *R. fortunei* is not faddy and will grow in the usual rhododendron country. So by possessing Loderi one gains by having half *griffithianum* with all its superb qualities.

Now for Camellia 'Donation'. This hybrid, bred by the late Col. Stephenson Clarke of Borde Hill, Sussex, has proved its quality and worth for many years, a remarkably free flowerer. It is so well known I hardly need describe its perfections.

The flowering period in our garden lasts 3–4 months. With a mild winter it begins to flower in January—never later than around the 15th February—and continues cropping well into May. The

flowers stand up to tremendous beatings from heavy gales and hardly ever bruise or show brown, which with the majority of camellias is a common complaint.

Nearly all camellias show well indoors—very useful in floral decoration—but give me 'Donation' every time.

ROZA M. HARRISON

Tremeer, Cornwall

WIND AND WEATHER GIGHA 1966

Everything went wrong with the first four months of 1966 from a wind and weather point of view. Not a single month followed the usual pattern, and it was not until May that it was suddenly realised that one had entered into full spring direct from weather normally associated with late winter.

On our return to Gigha in early February we found plants to be 3–4 weeks earlier on than usual and this continued to the beginning of April. By the 1st of May they were, if anything, a little later than usual.

January, a month normally of Atlantic gales and rain, behaved like a lamb, with its 22 fine days, mostly with light variable breezes and just over two inches of rain. It did not even produce one day of high wind, let alone a gale, but it did have 18 nights of frost up to 11° on the ground and 9° in the air, 15 of them on end.

February, another great month for gales, although rather wet, as is usual, with 3½ inches of rain and two falls of snow about one inch on the 18–19th, also failed to produce a single gale, although it had several days of strong winds. There were 14 frosty nights up to 9½° on the ground and these coincided with 14 days of very cold, fresh easterly winds. Luckily the only casualty was *Rhododendron* 'Bric-à-Brac' and a few trusses in a big bed of *R. moupinense*.

March was an abominable month, and although this is not unusual, it put up an extra special display of beastliness, being the wettest for 20 years with its 4½ inches of rain. It also produced four gales or near gales, and the garden being well under half a mile from the full Atlantic, the westerlies have to be seen and heard to be believed, and there were quite a few nights of light frost, 9 nights altogether during a spell of N.W. winds. Little damage was done, however.

Then came April with 13 nights of frost up to 9° on the ground during the first 20 days, accompanied by fresh to strong bitterly cold easterly winds and very little rain, only 0·95 of an inch in these 20 days and 0·71 of that in 24 hours on the 8–9th. The whole month indeed produced only 2½ inches in spite of the westerlies which took over for the last 10 days of the month.

The result of this disastrous month was that, although no growth-damage was done, a large variety of April-flowering rhododendrons had not an undamaged truss left. Every year, of course, one has one or two frosted plants, but this is the first time in all my 21 years at Gigha that the damage has been really extensive. I suppose I cannot complain, as with such weather in April one could not expect anything else, and actually I was agreeably surprised at how many plants escaped, but what I did not expect was the almost complete immunity of the April to mid-May flowering members of the *Maddenii* Series and its hybrids. There were a few frosted buds on one or two of the *burmanicums* and *dalhousiaes*, otherwise they flowered better than I ever remember, especially the three main criminals who hardly ever give me a decent show, as the main bulk of their flower-buds are invariably frosted—'Chrysomanicum', 'Countess of Haddington' and Parisienne—literally one just could not see the leaves for bloom and Parisienne was actually in process of coming into bloom during the worst of the frosts. I used to look at it with amazement every morning. Then in the first half of May 'Fragrantissimum' and *johnstoneanum* × *bullatum* flowered considerably better than usual with very few frosted buds, and considering that some of the latter live in the coldest and windiest part of my garden close to a pond, I consider it a remarkable achievement. The longer one gardens, the deeper the mysteries of growth, and the more there is to learn.

SIR JAMES HORLICK, BT.

Gigha

Ponticum HYBRIDS

I have often heard it said that too many hybrids are being produced, named and registered, and perhaps there is some truth in this. On the other hand there are still many exciting crosses to be made. Well-tried parents such as *griersonianum*, etc. have perhaps been used enough, but what about fully testing the species *ponticum*? I feel its use in the past has been mainly to

obtain hardiness, and I am now wondering whether *ponticum* has the capability of producing top-quality flowers of Award standard using some of the 1920–39 species introductions. After all, 'Purple Splendour', which is a known *ponticum* hybrid, and 'Purple Emperor', which may be one, have held their place among the hardy hybrids for the whole of this century.

Last year the Rhododendron Committee gave an Award of Merit to a *ponticum* hybrid I named 'Nicholas' after my elder son. I wish I could claim that this was a carefully thought out hybridization, but I am afraid its parentage had to be shown as (*ponticum* × ?), the plant being a chance seedling of which one parent was obviously *ponticum*. It is truly a most distinctive hybrid. The plant itself has a good compact habit—presently about twelve feet high with an equal spread, with dark green pointed and shining leaves. The flowers are a deep purple, distinctively marked in the throat and upper lobes with white. The truss carries nineteen tightly packed flowers, and it is in full bloom in late May and early June.

During this year I registered another *ponticum* hybrid, again with the other parent unknown. This I called 'Bud Flanagan', since I felt that its flamboyance warranted a name associated with the pleasure that Bud Flanagan and his Crazy Gang had given to so many people. In a completely different way this, too, is very distinctive. As a young plant now only 4½–5 feet high, it is growing vigorously at Exbury. The conical trusses are made up of eighteen flowers of a true mauve with a brown marking, which also appear in May–June and can only be described as enormous.

We at Exbury have always thought very highly of another *ponticum* hybrid—*Rhododendron* 'A. Bedford'. This was raised by the late Tom Lowinsky at Tittenhurst, Sunninghill, and he gave the parentage as *ponticum* × mauve seedling. I strongly suspect that this is another chance *ponticum* hybrid discovered by Lowinsky in the same way that I have discovered 'Nicholas' and 'Bud Flanagan'.

E. DE ROTHSCHILD

Exbury

AN INTERESTING RHODODENDRON HYBRID

Several years ago we were given, unexpectedly, pollen of R. 'Jalisco Eclipse'. There had been severe spring frost at Knap Hill and very few rhododendrons were in flower. Well aware of the

horror which such a cross might inspire in certain quarters, we chose R. 'Album Elegans' as a female parent for two reasons. It was a vigorous grower and very hardy.

Eight seedlings flowered and all of them took after the male parent. There were no outward and visible characteristics which might have been ascribed to the female parent. Two seedlings were attractive in flower but they were not strong growers and they were no improvement on 'Jalisco'. We used the pollen of one of them and chose R. 'Madeleine' as female parent. This hybrid was raised at Exbury and we had always admired the huge sweetly-scented white flowers. It had one serious failing which made it useless from the commercial point of view; it was very shy-flowering. We thought that the hidden influence of 'Album Elegans' might correct this.

Several seedlings from this cross have now flowered, mainly whites, creams and pale sulphur yellows. The flowers are large and all are strongly scented. Among the seedlings marked for further observation are an exceptionally fine pure white and a pale sulphur yellow, both of which have well-built trusses of large flowers. The influence of *R. discolor*, inherited both from 'Jalisco' and from 'Madeleine', is apparent both in foliage and growth. The plants are growing in an open drift in a cold situation and have not yet been damaged by frost.

G. DONALD WATERER

Knap Hill

RHODODENDRON J. C. WILLIAMS'S IMPEDITUM HYBRID

One of the most admired plants at Knap Hill is a dense cushion of small foliage smothered in late April and early May with small magenta-pink flowers. The plant is thirty years old, three feet high and four feet wide. People are not content merely to look at it. They usually stroke it and croon over it.

We do not know if it has been christened, and as far as we know we are the only nurserymen who list it. We presume that it came from Caerhays and that we are indebted to that famous garden for a plant of great character and charm.

G. DONALD WATERER

Knap Hill

Some Late Flowering rhododendrons at Crarae

At one time it was fashionable to be able to pick a vase of rhododendrons every month of the year, and to make this easier hybridists, with considerable success, concentrated on producing late flowering crosses in as wide a range of colours as possible.

It does, however, occasionally strike me that rhododendrons out of season look out of place. An illogical thought, I know, as several species flower, naturally, late in the season, but in July and August, when the grass is long, weeds are rampant and the broadleaved trees are in full leaf, the varied young growth on the rhododendrons seems more appropriate than flower. At Crarae we have several late flowerers, and while we have little desire to add greatly to their numbers, we do appreciate their particular individual qualities.

Our compact, slow growing plant of *R. sanguineum* subsp. *didymum* holds its deep crimson flowers for a fortnight or more in early July and can add an unusual ingredient to a mixed vase of summer flowers. Its hybrid with *R. griersonianum* R. 'Arthur Osborn' is even later and definitely more showy if slightly less deep in tone. Less successful is R. 'Impi' (*didymum* × 'Moser's Maroon'), the trusses being too small and sparse for the size of the plant. Perhaps the best of the family is R. 'Red Cap', *R. eriogynum* being the other parent. We have the original Tower Court cross which inherits the compact habit and deep colouring of *R. didymum* while having much larger flowers.

Very effective, flowering as they do, at a time of year when their somewhat strident pinks cannot clash with neighbours, are two large and very similar plants, R. 'May Day' × 'Polar Bear' and R. 'Auriel' (*griersonianum* × 'Polar Bear'). The latter has perhaps the more satisfactory colouring, being a little less "sugary", but the former is freer flowering and has inherited the lovely scent of R. 'Polar Bear'.

Our plant of R. 'Polar Bear', itself a gift from the late Lord Strathcona, does not yet flower very prolifically. It has concentrated on growing, which it does at a remarkable rate, putting on up to two feet in growth per annum. *R. auriculatum* has too much exposure at Crarae to suit its requirements and therefore always looks somewhat windswept, but it usually obliges with quite a few flowers in August and adds a touch of the "exotic" to the Glen.

Rhododendrons crassum and *maddenii* have never seemed par-

ticularly satisfactory at Crarae. Probably because of the "stop-go policy" favoured by our Argyll spring weather, half the flower buds usually fail to develop, and those that do seem so easily damaged by rain. This year, however, a twelve-year-old plant of *R. manipurense* was most effective with its huge creamy-white trumpets and delicious scent.

I have left until last our favourite R. 'Intrepid', an Exbury hybrid of exceptionally vigorous growth. It bears, in early July, immense waxy trusses of glowing, deep red flowers (surely not "rosy red" as described in the International Rhododendron Register?). These show up well against thick, dark green leaves. It is surprising that this lovely plant is not met with more frequently in gardens.

ILAY M. CAMPBELL

Crarae, Argyll

WEEDKILLERS FOR USE WITH RHODODENDRONS

Great advances have been made in weedkillers in recent years and rhododendrons have benefited amongst many other plants in the new found easiness of keeping them clean. Rhododendrons flourish much better with all grass and undergrowth removed from around them competing with their shallow root system.

The following notes contain my observations on the weed-killers I have used in connection with rhododendrons (including azaleas), starting with the older ones.

Sodium chlorate

Very dangerous near the root areas of any plants. Can turn leaves yellow, often resulting in death. Creeps through the soil after heavy rain. Still one of the best and cheapest for general clearing of nettles (*Urtica dioica*), etc.. well away from where it can cause damage. It is better not to replant the ground for one year afterwards.

MCPA, 2,4-D, 2,4,5-T, etc. (Sold under a huge list of trade names. The common so-called Hormone weedkillers).

The drift off the spray of these is always liable to cause twisting in young growth. If not severe, rhododendrons and azaleas will grow through this in time. Certain very volatile types even cause damage after an application followed by hot, muggy weather. The so called brushwood killers, which are usually 2, 4, 5-T with or without 2, 4-D added, are the only effective materials so far

introduced for woody weeds. Even with these, two or more applications are needed for *Rubus* sp. Only use well clear of desirable plants.

Dalapon and Amino-triazole (trade name Weedazol-T-L)

Not recommended.

Simazine (trade names Bladex, Gesatop, Shell Total Weedkiller).

Kills the majority of weed seedlings as they germinate, but has to be applied in very strong solution to be effective on top growth. Very persistent in the soil. May cause chlorosis and inhibit growth. Would not recommend it on root areas of rhododendrons from personal experience but further trials might prove that one to one and a half lb. per acre may be satisfactory. Can be used in combination with Paraquat (to burn off top growth). Sold as a wettable powder.

Paraquat and Diquat (trade names Paraquat; Weedol, Gramoxone W. Diquat; Preeglone).

Burns off all top growth of herbaceous weeds and is completely inactivated as soon as it touches the soil, so ground can be replanted as soon as weeds die off. Excellent under all rhododendrons and safe to use right up to the trunk or stems. Only soft shoots or leaves are liable to be damaged. Most perennial weeds come up again; some, such as ground elder (*Aegopodium podagraria*), being severely checked, and others, like nettles (*Urtica dioica*), growing away strongly almost at once. Very effective on all annuals and most grasses. (Cleavers, *Galium aparine*, slightly resistant). Best used in Spring and early Summer but is quite effective all the year round. Avoid drift, if possible, when applying amongst plants with shoots along the ground. In this case weeds should have been cut short first, and a hood over the nozzle of the sprayer or a watering can with a trickle bar should be used.

Excellent mixed with Simazine for killing and stopping germination of annual weeds and grasses on paths.

Dichlorothio benzamide (trade name, Prefix). Not available at time of writing in small retail packs.

Very new and not thoroughly tested yet but seems very promising. Still rather expensive even in the 55 lb. drums available.

Kills or severely checks all herbaceous plants and has little or no effect on woody material. Is applied dry in the form of very fine granules and can be put on by hand or by a special applicator. Is best put on in early Spring, i.e. early March when the soil is damp and before much top growth appears. It does not act through the foliage but effects the growing tissues of the roots. Apply as a spot treatment to patches of perennial weeds either just before or just after they come through the ground.

Trials on rhododendrons so far appear to show little or no damage, even put on over the root area. Is persistent in soil but how persistent is not known yet. It is recommended not to replant the area treated for at least six months, but rhododendrons, being woody, may be able to be planted sooner. Takes some time to take visible effect as weeds grow and then later collapse. Rosebay willowherb (*Chamaenerion* (*Epilobium*) *angustifolium*) is somewhat resistant but a heavier than normal dose will kill it. Very good on ground elder (*Aegopodium podagraria*), docks (*Rumex* sp.), nettles (*Urtica dioica*) and dandelions (*Taraxacum* sp.), plus many other troublesome weeds.

TO SUM UP

Under Rhododendrons. Annual, surface rooting weeds and grasses: Paraquat, Diquat. Perennial deep rooting weeds: Prefix (tentative).

Away from Rhododendron root areas. Annual and surface rooting weeds: Paraquat, Diquat, Simazine, Sodium chlorate, MCPA, 2, 4-D. Perennial deep rooting weeds: Prefix, Sodium chlorate, Brushwood killer. Woody weeds: Brushwood killer, Sodium chlorate put on young foliage of sprouting tree stumps.

Paths. Annuals and grass: Paraquat, Diquat with Simazine. Sodium chlorate (creeps). Perennial weeds: Prefix, Sodium chlorate.

All instructions *must* be very carefully read as to rates of application, timing, and safety precautions, before using any of the above mentioned chemicals. None in dilution are likely to be harmful to wildlife, especially over small areas.

PETER COX

Glendoick, Perth

A LETTER FROM FRANK KINGDON WARD

The following letter was written to Mrs. Thyne when she and her husband (who was at the time serving in the Burma Military

Police) were in Myitkyina, Upper Burma. It is reproduced with her permission. The letter gives a delightfully intimate picture of the plant hunter in camp, also some idea of the conditions in which the collectors worked.

Camp Adung Valley,
Burma Frontier,
via Fort Hertz.
19/2/31.

Dear Mrs. Tiny,

Here we are at our base camp—indeed we have been here a fortnight and have had time to look about us a bit, though the weather in February is atrocious, almost as bad as England. We have had one heavy snowfall in camp already, but mostly it rains steadily, day and night, and is wretchedly cold. However, we have had a fine big hut built, in which we keep two fires burning. The Tibetans bring us fresh milk every day, and sometimes eggs; and the Darus—the local tribe—cut our firewood. The altitude of our camp is just 6,000 feet, and the visible peaks, which shut out any further view, are about 12,000 feet, so that we are completely surrounded by snow. When the sun *does* come out, the view up the valley is dazzling and fairly makes us blink. Already the forest is lit up by tree rhododendrons in full bloom, crimson, purple and scarlet, and in another month or two the whole place will be festive with them. Cranbrook is well pleased with the birds and mammals, and has just shot a snipe and missed a duck. So on the whole we are well pleased with our location, though naturally we look forward to going higher up the valley when the snow melts in the spring. We are still some distance from the source of the Adung river, which, even here at low water season, is too big to wade across, besides being icy cold. We are just 19 marches from Fort Hertz, though I hope our mail runner will do it in 12 days. We expect him out here about the end of the month, and after that probably not till the first week in April.

I wonder if you would be so awfully kind as to get me some Chinese cakes in the bazaar, and send up by post in a couple of biscuit tins. I think they can be bought in some of the Chinese shops, but if not, Fan Li San would be able to get them. The Chinese name is *dienshen*, and there are several kinds, a sort of sponge cake, and a round, hardish cake made of lard and flour (I believe) filled with brown sugar being the best. They are frightfully good, and Cranbrook wants to try them—so do I.

We don't get much in the way of sweets, and Barnett's tinned cakes, although quite good, are very different.

Boo tells me you are going to stay with them in London. I'm sure you will have a good time—you must be looking forward to going home. How is Anne? *She* must be frightfully excited at the prospect.

We are looking forward to spring, as it is so wintry here now. There is a little cultivation carried on to about 6,500 feet, chiefly barley and peas, but whole slabs of the valley side are devoted to permanent pasture, where the yak (or rather semi-yak), cows, sheep and goats graze. Great rejoicing in camp tonight; the Tibetans have brought us a barking deer they shot with crossbow and poisoned arrows! However, they say we can eat it, and we certainly shall!

Our love to you both and all the best on the trip home.

Yours aye,

F. KINGDON WARD.

I enclose cheque for R.10 for cakes and postage—haven't the faintest idea what they cost, though.

[Contributed by LIONEL HARFORD]

Hawk's Lea,
Milford-on-Sea,
Lymington, Hants.

RANDOM NOTES FROM GLENARN, RHU, DUNBARTONSHIRE

We, in our West of Scotland climate, with about 70 inches of rain and want of sun, cannot attempt to make camellias to flower, except for the × *williamsii* tribe. Those ones do favour us with many flowers. The "Japonica" type of camellia is not worth a place unless it is planted against a wall facing south. So much for camellias.

Rhododendrons. We have had an unusual season here. Almost all the big-leafed tribe have had a year of No Flower. To qualify that statement I should mention that the old plant of *R. falconeri*, reputed to be neé 1848 ex Hooker seed and two of its progeny grafted (so we are told) on stocks of *R. ponticum* have, during April/May/June, surpassed themselves. The old parent plant must have had thousands of flower heads, and the two younger grafted plants, many hundreds. One of those grafted

plants is now about the 40 ft. high mark. Apart from those practically none of the big-leafed rhododendrons flowered this year. *Sinograndes*, for example, had none, though one of the crosses, *sinogrande* × *hodgsoni*, 'Ronald' in the stud book, put up a fair show before the early April frost put an end to it. The big old plants (Red *arboreum* × *catawbiense*) flowered as always. What a pity that Hooker's friend, who lived here during the Collecting period of that time, had not been sent, the true red *R. arboreum*, which we now know will thrive and prosper and flower and grow here. But that is a forty-year programme from the date of planting.

Small Rhododendrons. We write with a due sense of proportion. We have on many occasions been given a pinch of collector's seed under a number with the idea "Suitable for a small Rock Garden". By experience we have found, among a good many so described, that some, such as the *Glaucophyllum* tribe, *baileyi* and others, are quite capable of growing to 6–10 feet. We have frequently diverted paths in order to allow them to grow, without any undue branch cutting. One plant of *R. williamsianum* is a problem this year. We have the alternatives of a fly-over path, or a helicopter, or some sort of well determined H.E. blasting of a big, solid rock face, none of which will solve the problem, if we are to keep a path open and avoid using secateurs on that particular plant. The circumference is roughly 29 feet and the height about 4½ feet. All of which leads us to the "Beginners" idea, "always keep even dwarf rhododendrons much further away from each other" than you read in the books, especially if you live in an area of very high rainfall.

R. pumilum. The tiny pink flowers are exquisite and adorn the foliage of the small plant by flowering just on top of last year's growth. But watch it like a hawk. Once the flowers are finished, the pedicel (if I have the right botanical word) grows, within a matter of only a few weeks, to an affair half an inch long, and the seed pods on the top of that pedicel will be ready for collection and sowing shortly after. The same would go for all forms of *R. campylogynum*, but the seed pods ripen more slowly. How different to the seed ripening habits of the bigger brethren! Usually, with the bigger affairs, we keep a watch during January/February of the following year before trying to collect seed.

Winter bud hardiness. We continue to speculate upon the relative de-merits of the winters of 1963 and 1966. In the former we had at least two nights of 16° of frost. In the latter, although the winter started at the end of October 1965 it did not finish with us until early April 1966, and we had nothing worse than 12° of frost, repeated several times. In 1963 we had no flowers at all on, for example, *R. maddenii* × *roylei*; copious potential buds killed-in-the-shell, so to speak. In 1966, the self same plants flowered a treat despite a much longer winter. The same might go for *chrysodoron*, *taggianum*, *dalhousiae*, *supranubium*, *griffithianum* (née *aucklandii*) and others. Is there some magic in the difference between a winter low at 12° frost (as in last winter, and repeated several times) and 16° as in 1963, when potential flower buds never even opened? We have noticed this year, as a result of a very prolonged winter, that all the rhododendrons which flowered were shorter in the pip (and, of course, fewer in the truss) than usual, and that their flowering life did not last for so long as usual. They were out in one week and finished a week later.

A. C. GIBSON

Glenarn

RHODODENDRONS AT MT. BUFFALO, AUSTRALIA

Mt. Buffalo, which is part of the Australian Alps, was first discovered by the explorers Hume and Hovell in 1824. The Mount Buffalo National Park is some seven miles long by four miles wide, the highest point being 5,645 feet. The foremost trees are eucalypts and, in all, over 360 species of trees and flora have been listed. There are also in the vicinity of 90 varieties of birds to be found on the plateau, of which 30 are permanent residents. The Chalet, which is situated on the northern edge of the plateau, near the Buffalo Gorge, is 4,500 feet above sea level and has always been noted for the very fine display of flowers in the surrounding gardens, which include some 25 rhododendrons.

A number of years ago, the gardener wanted to clear them all out, as they were flowering very poorly. However, expert advice was sought and one of our well-known nurserymen, Mr. Bert Chandler, of Como Nurseries, accompanied by his son, made the journey of some 250 miles to Mt. Buffalo to endeavour to find the cause of the trouble.

A week was spent cutting out, replanting and generally opening

up the "jungle" which had developed, and after they recovered from the cutting back and shifting these rhododendrons flowered remarkably well. They are some of the old hardy hybrids on their own roots—'Broughtonii', 'Album Triumphans', 'Lady Grenville', 'Cynthia', etc., some of which are now over twenty feet high. Conditions at Mt. Buffalo are quite favourable for growing rhododendrons; summers are relatively mild and temperatures rarely exceed 80° F., whilst in the winter minimum temperatures experienced are usually in the low twenties, the lowest temperature ever recorded being 18° F.

The snow usually melts in early spring, after which it is not long before the rhododendrons make a glorious show of colour. Occasionally a late frost will cut back the flowers of the earlier flowering varieties such as 'Broughtonii'. However, the later ones are rarely affected. The gardens have been built up on solid rock and the soil, which is black and peaty with a pH of slightly over 5, contains a liberal quantity of natural gravel; it was brought from the nearby shores of Lake Catani, and its suitability for growing rhododendrons is reflected in their vigorous growth.

A number of years later Mr. Chandler endeavoured to introduce some newer varieties and species, but unfortunately they did not get started, he thinks probably through neglect of watering in their early stages.

Whilst the average annual rainfall is 76 inches and the summers are mild, nevertheless quite considerable periods can go by without rain.

It is a pity that the winter climate is too cold to enable *R. lochae*, the only rhododendron indigenous to Australia, to be grown in the Mt. Buffalo National Park.

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CAMELLIA NOTES

"Purpling" in Camellias

Reading over back numbers of the Year Books, and in particular Camellia Notes by Miss Godman in the 1957 issue, has prompted me to comment on the subject of "Purpling". Our 'Great Eastern' has now been flowering for about six weeks and a number of early flowers showed very marked purpling despite the fact that at this time (mid-April) we had no appreciably cold weather, the lowest temperatures being just under 40° F. Often early flowers on this plant have quite deep purple tonings which disappear as the winter progresses and much colder weather prevails. However, our winter temperatures are relatively mild and only very rarely do temperatures fall below 30°.

'Mathotiana' is another variety prone to purpling, but again our plant, which is in a fairly sheltered position, shows only very slight purpling after heavy frosts, whilst 'The Czar' often shows this colouring on late flowers well into the spring when the coldest weather has passed. I think with some varieties it is just the nature of the beast, with extremely cold conditions accentuating the colouring. It is claimed by one of our leading camellia nurserymen that soil conditions also have an influence. Certainly camellias growing in the heavy acid soil of the Dandenongs seem more prone to purpling, but, of course, their winters are considerably colder than in Melbourne—quite an intriguing subject for further observation and research!

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Camellias in a Chalk Area

In Winchester the depth of soil over chalk varies between 9 inches and almost 3 feet, depending upon whether one's garden is situated on the hill or in the valley, but throughout the district camellias within two or three years become chlorotic and die a lingering death.

In such locations it is possible to grow camellias in tubs with a very considerable measure of success. I recall my grandfather

in his conservatory grew about two dozen very fine specimens, where they looked really happy for 30 or more years until the time of his death. As I remember them the plants were 8/9 feet high and 4/6 feet wide and stood in large tubs in the slightly heated conservatory throughout the winter and were placed outside in the garden in half shade from May to October. Amongst the varieties grown by my grandfather, the following come back to my mind: *C. japonica* 'Donckelarii', *C.* 'Imbricata Rubra', *C.* 'Lady Clare', *C.* 'Lady Hume's Blush' and *C.* 'Nobilissima'.

He used a good lime-free loam imported from Surrey, sand, leaf-mould and old, well-decayed cow manure. The rain water supply collected from the roof of the house frequently became exhausted and the tank was filled with hard water in which was placed a sack of old cow manure and soot. Feeding at intervals was given of Clay's fertilizer and bone meal.

Since the camellia dies so quickly when given about 2 feet of soil over chalk, it is always a source of surprise to me that my grandfather's camellias were so tolerant of our hard water, and in those days we did have lovely sparkling water from the chalk without chlorination.

Under similar conditions and treatment he grew with equal success *Rhododendron* 'Fragrantissimum' and 'Lady Alice Fitzwilliam.' It is my belief that the ordinary hardy hybrids would not have tolerated similar treatment, and certainly would not have done so well. The camellias and the rhododendrons were loaded with flowers throughout the late winter and early spring.

H. G. HILLIER

BOOK NOTE

"An Account of Rhododendrons in Malesia"

By H. SLEUMER

202 pp. Illus. (P. Noordhoff Ltd., P.O. Box 39, Groningen, The Netherlands). Fl. 31.

In this book, some 288 Rhododendron species have been recorded from Malesia. The vast majority are small or medium-sized shrubs varying from a few inches up to about 12 feet high; some are small trees up to 40 feet. Flower size and colour are very variable as in the species from the Sino-Himalaya.

The first few pages contain useful information on the ecology, dispersal, pollination, hybridization, and cultivation of the Malesian rhododendrons. The rest of the book is devoted to the classification and description of the species with keys and general remarks on the distribution and native habitats of these plants.

The book is well illustrated with 53 excellent diagrams, photographs and maps of distribution. Figures 2 and 3, which show the main types of scales on the under surfaces of the leaves, will be very useful to those who are interested in trichomes. Most of the plants are lepidote, with only five elepidote species that are natives of Malesia.

About forty species have been introduced into cultivation, although these are suitable only for subtropical and tropical countries. Some of these flowered in glasshouses in Britain but proved too tender for cultivation out of doors. It is possible that further introductions from high elevations may succeed in well-sheltered gardens along the west coast.

This book will be helpful to all those who are interested in Malesian rhododendrons.

H. H. DAVIDIAN

THE EARLY CAMELLIA COMPETITION MARCH 22 and 23, 1966

By JAMES PLATT

THE Early Competition for Camellias grown either under glass or in the open was held for the second year running, on March 22 and 23. There were 266 entries from 13 competitors, considerably more than in 1965. Sir Giles and Lady Loder were by far the most successful competitors with 16 first prizes, 15 second prizes, and 9 third prizes. With their entries and those of Messrs. Waterer Sons and Crisp we were able to get a good idea of the advantages of growing under glass the many fine American cultivars which have reached this country. In fact most of them seem suited to such cultivation only in our climate. Every flower from Leonardslee, where such camellias are grown under glass, was a near perfect as one could wish. Camellias in the exhibits of Messrs. Hillier, L. R. Russell, and Waterers not only added to the attractions of this Show, but were also a convenience, for would-be growers of camellias had only to choose cultivars in the Competition and place an order for their fancies straight away. Let us hope they took advantage of these facilities.

Class 1 for a single white *Camellia japonica* was rather demure with some neat flowers, but they did appear rather undernourished if one approached them after leaving, say *C. japonica* 'Drama Girl' some 6 inches across. Messrs. Waterer's C. 'Rogetsu' which was placed first, can be very lovely when a big bush of it is in full flower. Classes 2, 3 and 4 for any single flowered self-coloured *C. japonica* other than white, any single-flowered variegated cultivar and any three single-flowered cultivars were all won by the Duke of Devonshire with, among them, a fine 'Jupiter' and a 'Sieboldii' which was almost all white with a little red marking. In Class 4 Messrs. Waterer had a lovely flower of the soft rose 'Hatsuzakura' and in Class 2 Major-General and Mrs. Harrison's crimson 'Sylva' was pleasing. General Harrison finds this last cultivar very satisfactory in their garden at Tremeer, which, although in Cornwall, is a cold one. Class 5 to 8 are for semi-double cultivars, and they fell one after the other to Sir Giles and Lady Loder. In Class 5 it was a perfect flower of the

lovely white 'Angel'. In Class 6 it was 'Mrs. D. W. Davis' and in Class 7 a well striped 'Saudade de Martins Branco'. In Class 8 for three cultivars they had a huge 'Drama Girl' and an impressive 'Gauntlettii' along with another flower of 'Mrs. D. W. Davies'. They also took the second prize, their large 'Reg Ragland' no doubt weighing the scales in their favour. But all the entries in these Classes were excellent. In Class 6 Miss Godman's 'Adolphe Audusson' had real panache, while in Class 7 for variegations Messrs. Waterer had a beautifully striped form of it, and the Hydon Nurseries of Godalming showed 'Donckelarii' at its best. Miss Godman's 'Mme. Victor de Bisschop' in Class 8 was immaculate. Classes 9 to 12 are for anemone—or paeony—formed cultivars. Mr. Ayling of Stanmore took the first prize in Class 9 with 'Pride of Descanso', a large pure white with a yellowish tinge at the centre. The Duke of Devonshire's 'Canon Boscawen' which was second, had, on the other hand, a pinkish tinge. Class 10 was full of good flowers. Sir Giles Loder had an exceptionally fine 'Princess Lear' and a 'Tomorrow' which was almost as good. 'Princess Lear' is of a shade of pink which one might call flamingo, and very enticing too. Messrs. Waterer took the third prize with the rich pink, paeony-like 'Mary Anne Houser'. Miss C. A. Marsh of Dulwich Wood Avenue, S.E. 19 took the fourth prize with a deep pink sport of 'Bella Romana' which in its usual form of lighter and darker pinks won her the first prize in Class 11. Sir Giles took the second and third prizes in this Class with 'Richard Nixon', which was a neatly striped red on white, and 'Extravaganza', a cultivar which is well named because of its size and many vivid light red stripes on a white ground. Sir Giles was first and second in Class 12 for three cultivars with many sumptuous flowers. Notable among them were 'Mattie O'Reilly', 'R. L. Wheeler', 'Dainty Maiden', 'Miriam Stevenson' and 'Pink Clouds', all of which are of some shade of pink.

With Classes 13 to 16 we came to the formal double flowers. Of them the various forms of 'Mathotiana' are most rewarding when grown under glass, producing beautifully proportioned flowers. Mr. H. G. Ayling's 'Mathotiana Alba' in Class 13, Miss Godman's 'Mathotiana' in Class 14 and the 'Mathotiana Rosea' of Mrs. M. E. Bainbridge of Sale, Cheshire, were quite perfect. 'Augusto L. Gouveia Pinto', which is considered by some people to be a sport of 'Mathotiana', is another useful double in these Classes. The very neat white margin to each petal accentuates its regularity of form. The colour of the petals is unusual and has

been described as coral-pink flushed lavender. Both Miss Godman and Sir Giles Loder had beautiful large prize-winning flowers of it. Other attractive entries were Messrs. Waterer's 'Coquetti' in Class 14 and Sir Giles' 'Betty Sheffield Supreme', which has pale pink petals deepening towards the edges and of the texture of Crepe de Chine, in Class 15. Mr. Ayling was first in Class 16 and Miss Godman second, using much of the material entered in the previous classes. Sir Giles was third, giving us the opportunity to see the fiery red 'Vulcan' and to appreciate the delicate variegation of 'Carter's Sunburst' with its palest pink ground striped and flecked red. Sir Giles, relying on some really big guns, took first and second prizes in Class 17. His 'Drama Girl' was quite 6½ inches across, but 'Purple Emperor' in his second entry ran it close. Miss Godman, who was third, had some lovely flowers, including the attractive 'Flamingo'. Sir Giles and Lady Loder, bringing a triumphant ending to the classes open to cultivars of *C. japonica*, were again first and second in Class 18. They had a really lovely full and rounded 'Tomorrow', 'R. L. Wheeler' 5½ inches across and a perfect 'Gauntlettii'. Messrs. Waterer, who took the third prize, had an excellent 'Leviathan' and the cherry-red 'Monjisu' with its white marbling.

In the next three Classes for *C. reticulata* and its forms a *C. reticulata* 'Mary Williams' from Leonardslee was first in Class 19 for a wild single form, while Major-General and Mrs. Harrison were second with a flower which no doubt was cut in the open. In the next Class for *C. reticulata* 'Captain Rawes', the Duke of Devonshire, was first, as he has so often been before, with a lovely flower 5½ inches across. Up to the present, it is doubtful if any individual flower of a "Kunming reticulata" surpasses a flower such as that which came from Chatsworth, but, of course, we will have to wait many years before we see a plant of a Kunming comparable in size to those plants at, say Kew, Edinburgh and Chatsworth. In Class 21 Sir Giles, once again first, second and third, had two Kunmings, the red 'Lion Head' and pink 'Confucius', along with the old 'Robert Fortune', all three some 5½ inches across, and very fine they were. The next three Classes for *C. saluenensis* or any other species other than *C. reticulata* and *C. saluenensis* had a limited number of entries. Mrs. E. M. L. Paton of Virginia Water was first in Class 22 with a good pink *C. saluenensis*. In those Classes for hybrids Sir Giles took the three prizes in Class 25 with *C. williamsii* 'Cherub', a very pretty light pink, the more vivid *C. williamsii* 'St. Ewe', and 'Golden

Spangles', which is much like *C. williamsii* 'J. C. Williams' with a golden variegation to the leaf. In Class 26 for *williamsii* cultivars other than those with single flowers there were good flowers of *C. williamsii* 'Donation' from Chatsworth and Tremeer, although the flower of 'Donation' always seems more attractive on a plant in the open. There was also a flower of the paler pink *C. williamsii* 'Mildred Veitch' and *C. williamsii* 'E. G. Waterhouse' with candy-pink and white flowers from Waterers. In the Class for a single-flowered hybrid with one parent *C. reticulata* there was a nice 'Inamorata' from Leonardslee and a 'Barbara Hillier' with satiny pink flowers, which is sometimes associated with *C. heterophylla.* Sir Giles was also successful in the Class for double-flowered hybrids with 'Leonard Messel' with which Waterers were second. Sir Giles showed the soft-pink 'Felice Harris' in this Class, while in Class 29 he had a spray of 'Bonnie Marie', a hybrid with orchid pink flowers which it appears has *C. cuspidata* in a rather mixed parentage and which is only just being seen in this country. He also had a spray of the engaging 'Cornish Snow' which was just coming into flower. In Class 30 for any three hybrids the Duke of Devonshire had three good × *williamsiis*, 'Donation', 'Mary Christian' and 'Hiraethlyn', the latter rather a delicate pink. In the Classes for plants in bloom, Waterer had a good plant of *C. japonica* 'Faith', an American cultivar with semi-double rose-pink anemone-formed flowers.

TRURO SHOW, APRIL 6 and 7, 1966

By ANN MAGOR

IT was satisfactory to see that some gardens had not suffered badly from the frost and gales that immediately preceded the Cornwall Garden Society's spring show this year. They did cause a number of cancellations, however, and as a result there were some conspicuous absentees, notably Trengwainton and Tremeer.

There were two outstanding trade stands. Treseder's Nurseries of Truro put up a fine exhibit, which included Rhododendrons 'Saffron Queen' and 'Countess of Haddington'. Veitch & Son Ltd. of Exeter had an exhibit in which Magnolias predominated, among which *M. veitchii*, M. 'Alba Superba' and *M. denudata*, purple-eyed variety were conspicuous. Colour was added to this exhibit by Prunus 'Tai-Haku' and P. 'Shirotae' and some Exbury hybrid azaleas.

The centre of the hall was occupied by a large stand from Caerhays Castle, which was the main feature of the show and reflected great credit on Mr. F. Julian Williams and his staff. Crowning the top of the stand were big branches of *Michelia doltsopa* covered with its large magnolia-type flowers. This species seems to do well at Caerhays. Several different forms of *Rhododendron sinogrande* were represented, of which the pink and yellow forms were of outstanding interest. *Euonymus fimbriatus* at first glance resembled *Pieris forrestii* with its bright red young growth. A *Symplocos* with yellow flowers and purple young foliage has puzzled the botanists. *Pieris* 'Charles Michael', which received an A.M. a few years ago, looked really lovely with its creamy bells against the dark green foliage. A blaze of red, at one end of the stand, included *Rhododendrons thomsonii* and 'Elizabeth'. This exhibit was awarded a gold medal.

It was a great pleasure also to see a stand from Tresco Abbey, in the Scilly Isles, particularly when it was known that the weather had very nearly prevented any boats leaving the harbour. This exhibit was also awarded a gold medal, and it included a number of unusual plants, few of which do well anywhere else in Britain. *Sophora tetraptera* really caught one's eye, a mass of deep yellow flowers borne terminally. *Beschorneria* has dark red flower stalks

three feet in length, terminating in red bracts enclosing small green flowers. Among the Australian plants were *Acacia verticillata* and *Grevillea lanigera.*

CAMELLIA CLASSES

Class 1, for 3 varieties of *C. japonica*, one bloom of each, was won by Mrs. George Johnstone of Trewithen, who showed perfect specimens of 'Spencer's Pink', 'White Swan' and 'Akebono'. Lady Falmouth won Class 2 for one bloom of a single *C. japonica* with 'Sylva'. Mrs. Johnstone won Class 3 for three varieties of semi-doubles with 'Drama Girl', 'The Czar and a particularly good 'Gauntlettii'.

Class 4 for one bloom of a semi-double was won by Colonel Colville of Penheale with 'Mars'. Mrs. Copeland and the National Trust from Trelissick won Class 5 for 3 blooms of anemone or paeony forms with fine blooms of 'Altheaflora', 'Blackburniana' and 'Rosea Transparensis'. Class 6 for one bloom of the same type as the previous class was won by Mrs. Cuthbert Fox of Glendurgan with 'Marguerite Gouillon'.

Mrs. Johnstone deservedly won Class 7 for three blooms of rose and formal double varieties with lovely blooms of 'Herme', 'High Hat' and 'Eleanor Hagood'. Her 'High Hat' also won the next class for a single bloom of the same sort. She also won Class 9 for six varieties of *C. japonica* with 'The Czar', 'Mrs. D. W. Davis', 'Monte Carlo', 'Drama Girl', 'Gauntlettii' and 'Eleanor Hagood'. Colonel Petherick of Porthpean showed a notable dark coloured 'Kouron-Juro' in this class.

Class 10 for a bloom of a single *C. reticulata* was won by Mrs. Johnstone with a wonderful seedling which brought to mind the much admired 'Shot Silk'. The only entry in the next class, for 3 blooms of semi-double or double *C. reticulata*, also came from Mrs. Johnstone, who was awarded first prize for 'Trewithen Pink', 'Trewithen Salmon' and 'Elizabeth Johnstone'. Class 12 for one bloom of a semi-double or double *C. reticulata* was won by Mrs. Fox with a huge bloom.

Class 13 for 1 bloom each of 3 single varieties of *C. williamsii* was won by Mr. N. T. Holman of Chyverton. Class 14 for one bloom of a single *C. williamsii* was won by Colonel Colville with 'J. C. Williams', and he also won the next class for 1 bloom of 'Donation' in a class of seven. Commander Penrose and Mrs. P. M. Holman were the runners-up.

Class 16 for six different species or varieties was won by an

outstanding exhibit from Mr. N. T. Holman, consisting of *C. reticulata*, *C. reticulata* 'Captain Rawes', 'Adolphe Audusson', *williamsii* 'Mildred Veitch', 'Lady Clare and *heterophylla* 'Barbara Hillier'. This exhibit also won the Camellia Cup.

In Class 17 for a spray of *C. japonica*, Lord St. Levan won with a spray of 'Donckelarii'. Class 18 for a spray of species other than *C. japonica* or *C. reticulata* was won by Mrs. Johnstone with a spray of *C. saluenensis*.

RHODODENDRON CLASSES

Class 1 for 6 species was won by Mrs. Johnstone of Trewithen with *Rhododendrons macabeanum*, *sinogrande*, *eximium*, *arizelum*, *delavayi* and *niveum*, and this exhibit won the Mrs. Charles Williams Challenge Cup. Major E. W. M. Magor of Lamellen, who was second, had in his exhibit *R. calophytum*, *macabeanum*, a good pink *arizelum*, and an unusual deep pink *arboreum*.

Lady Falmouth won Class 2 for 3 species with a lovely blood-red *R. arboreum*, *thomsonii* and *calophytum*. Class 3 for a species of the Falconeri or Grande Series was won by Trewithen with a magnificent yellow *R. macabeanum*. Mrs. Copeland and the National Trust won Class 4 for any species of the Arboreum Series with a blood-red *arboreum* from Trelissick. Class 5 for any species other than the Falconeri and Grande Series was won by Major Magor with *R. calophytum*. Mr. Holman was second with a very good form of *R. johnstoneanum*. Class 6 for any species of the Thomsonii Series was won by Colonel Colville with a very good *R. thomsonii*. Mr. Holman won Class 7 for any species of the Edgeworthii or Maddenii Series with a lovely truss of *R. lindleyi*, tinged with pink, with Mrs. Johnstone's *johnstoneanum* second.

In the spray classes, Class 8 for a spray of any species in a Series other than Falconeri and Grande was won by Mrs. Johnstone with a really magnificent spray of *R. delavayi*. *R. desquamatum* from Lamellen was second, and Mr. Holman was third with *R. thomsonii*. Class 9 for a spray of any species in the Triflorum Series was won by Major Magor with a very good pink *R. davidsonianum*. Colonel Colville won Class 10 for a spray of a species in the Lapponicum Series with *R. scintillans*. There was only one entry in Class 11, which was won by Mr. Holman showing a deep purple *R. baileyi*.

In the Azalea classes, Class 12 for a spray of a deciduous azalea was won by Mr. Holman with a really beautiful *R. schlippen-*

bachii, which also won the Abbiss Memorial Trophy for the most outstanding plant in the show. Class 13 for three sprays of deciduous azalea species was won by Mrs. Johnstone with a paler form of *R. schlippenbachii*, a very good deep pink *R. albrechtii*, and *R. quinquefolium*, which looked very attractive with its new foliage. The class for one spray of an evergreen azalea was won by Lord St. Levan with R. 'Hinodegiri'. Mrs. Charles Williams of Trewidden won the class for three sprays of evergreen azaleas with R. 'Hinomayo', R. 'Hinodegiri' and R. 'Shin-Seikai'.

In the section for hybrid rhododendrons, Mrs. Copeland and the National Trust from Trelissick won the class for six trusses with a fine exhibit in which the most notable feature was a truss of R. 'Dot', which was quite outstanding in its height and uniformity. Lamellen was second with an exhibit which included a very fine pink R. 'Arbcalo'. Class 17 for three hybrids was won by Mrs. Cobbold-Sawle, whose R. 'Elsae' was particularly striking. Mr. Holman was second with an exhibit which included his very fine form of R. 'Letty Edwards'. This hybrid won the next class for one truss of any hybrid. It was a great pleasure to see R. 'Trewithen Orange' win the class for any hybrid raised in the garden of the exhibitor, against much larger trusses, as this is perhaps one of the best hybrids of its kind to be raised.

Class 20 for any hybrid of which one parent is a species of the Fortunei Series was won by Mrs. Copeland and the National Trust with R. 'Dot'; Lamellen was second with R. 'Arbcalo'. Class 21 for any hybrid of which one parent is a species of the Thomsonii Series was won by Trelissick with R. 'Shilsonii'. There was only one entry in Class 22 for three hybrid sprays, and this was won by Trelissick with a very fine exhibit of R. 'Dr. Stocker', R. 'Glory of Penjerrick' and R. 'Yvonne'. In Class 23 for one spray of a hybrid, Mrs. Cuthbert Fox's *R. griffithianum* seedling deservedly won, with seven large trusses of 7 or 8 bells each in a pretty shade of pale pink. Class 24 for a species or hybrid of the Edgeworthii or Maddenii Series was won by Mr. Holman with a spray of *R. ciliatum*.

There was only one entry this year in the class for an exhibit of Rhododendron leaves, and this was won again by Trewithen with a beautifully arranged exhibit of perfect specimens.

RHODODENDRONS AND CAMELLIAS WHICH HAVE RECEIVED AWARDS IN 1966

Rhododendron glaucophyllum var. luteiflorum 'Glen Cloy', F.C.C. March 22, 1966. A hardy flowering plant (votes 11 for, 3 against). A small shrub up to 4 feet. Collected in North Burma at 10–11,000 feet by Capt. F. Kingdon-Ward. Leaves 2½ inches long and 1¼ inches across, elliptic, narrowly ovate, white underneath, aromatic. Petioles ⅜ inch long, glabrous, flattened upper surface. Truss seven to eleven-flowered, ⅞ inch long and ⅞ inch across, flowers openly campanulate. Calyx five-lobed, joined at base ⅜ inch long, pale green, serrated, faintly powdery. Petiole ½ inch long. Stigma stout, held low. Flowers Dresden Yellow (H.C.C. 64/2). Exhibited by the National Trust for Scotland, Brodick Castle Gardens, Isle of Arran (Pl. 4).

Rhododendron magnificum 'Kildonan', F.C.C. February 22, 1966. A tender flowering plant of the Grande series. Collected by Captain F. Kingdon-Ward and introduced from Upper Burma in 1931 under number K.W. 9200. In its natural habitat a tree up to 45 ft. tall. Leaves up to 18 ins. long and 8 ins. across; oblong to oblong-obovate. Undersurface covered with a thin, pale, indumentum. Trusses compact, dome-shaped, up to 30-flowered. Flowers tubular campanulate, 2¾ ins. long by 2⅛ ins. across; Fuchsine Pink (H.C.C. 627/3) shading at lip to Fuchsine Pink (H.C.C. 627/1). Exhibited by The National Trust for Scotland, Brodick Castle Gardens, Isle of Arran (Pl. 5).

Rhododendron ('Portia × barbatum) 'Appleford', A.M. March 8, 1966. A hardy flowering plant (votes 8 for, 0 against). Leaves 6 inches long and 1⅞ inches broad, glabrous, narrowly oblong, slightly revolute. Petiole 1 inch long, upper surface flattened, long hairs mainly on upper surface. Truss twenty-flowered, compact, dome shaped. Corolla 1¾ inches long and 2 inches across, Cardinal Red (H.C.C. 822). Calyx five-lobed, two upper lobes joined 17 mm. long. Two central lobes 8 mm. long, lower lobe 4 mm. long, near Carmine (H.C.C. 21/1). Pedicel ¾ inch long, hairy at base. Flowers campanulate. Exhibited by Crown Estate Commissioners, Windsor Great Park, Berks. (Fig. 42).

Photo: J. E. Downward

FIG. 42.—Rhododendron 'Appleford' (R. 'Portia' × *R. barbatum*). A.M. March 8, 1966. Exhibited by Crown Estate Commissioners, Windsor (see p. 161)

Rhododendron brachyanthum 'Jaune', A.M. May 23, 1966. A hardy flowering plant (votes 14 for, 6 against) Leaves 1 3/10 inches long and 3/5 nches across, narrowly elliptic, scaly indumentum on both leaf surfaces but more densely on upper surface. Leaf aromatic when crushed. Truss 3 or 4-flowered. Flowers campanulate, Primrose Yellow (H.C.C. 601/2) on long 1 1/5 inch pedicels. Calyx 5-lobed, green, joined at base, slightly reflex. Pedicel and calyx covered lightly, scaly indumentum, Anthers brown. Collector unknown. Exhibited by Capt. Collingwood Ingram, F.L.S., V.M.H., The Grange, Benenden, Cranbrook, Kent.

Rhododendron (forrestii repens K.W. 6832 × barbatum) 'Brightwell', A.M. March 8, 1966. A hardy flowering plant (votes 7 for, 0 against). Leaves 2 1/2 inches long and 1 inch broad, narrowly elliptic, glabrous; petiole 1/2 inch long, flattened on surface, glabrous. Truss eight-flowered, loose. Corolla 1 5/8 inches long and 2 1/4 inches across, Currant Red (H.C.C. 821). Calyx five-lobed, joined, slightly reflex, 3 mm. long, slightly paler red; stamens small, withdrawn. Pedicel 3/4 inch long, slightly hairy. Flowers

widely-funnel campanulate. Exhibited by Crown Estate Commissioners.

Rhododendron (concatenans × cinnabarinum var. blandfordiaeflorum) 'Caerhays Philip', A.M. April 19, 1966. A hardy flowering plant (votes unanimous). Leaves 4½ inches long and 1¾ inches broad, narrowly elliptic to elliptic. Underside of leaves covered very small brown scaly indumentum, more noticeable on petiole and mid-rib. Petiole ⅝ inch long. Truss loose, seven-flowered, flowers 2½ inches long and 2½ inches broad, deeply lobed, funnel-shaped, Yellow Ochre (H.C.C. 07) shading to Chinese Yellow (H.C.C. 606/1) at lip. Stigma slightly protruding. Calyx five joined lobes, 2 mm. long. Pedicels up to 1 inch long. Pedicels and calyx lightly covered scaly yellow indumentum. Raised by the Rt. Hon. Charles Williams and Charles Michael. Exhibited by F. Julian Williams, Esq., Caerhays Castle, Gorran, St. Austell, Cornwall (Fig. 8).

Rhododendron ('Aurora' × 'Crest') 'Cara Mia', A.M. May 3, 1966. A hardy flowering plant (votes 16 for, 7 against). Leaves 5 inches long and 2⅘ inches across, narrowly ovate, sub-cordate, free from indumentum. Petiole 1 inch long, glabrous. Truss 9–10 flowered, flowers widely funnel campanulate, 2 inches long and 4¼ inches across, lip of corolla flushed Rose Pink (H.C.C. 427/3) shading to Mimosa Yellow (H.C.C. 602/2) in throat. Strong flush of Maroon (H.C.C. 1030/2) at base of throat. In bud stage close to Rhodamine Pink (H.C.C. 527/1). Calyx 6 lobed, joined at base, ragged, 5–10 mm. long. Pedicel ¾ inch long, glabrous. Raised and exhibited by Edmund de Rothschild, Esq., Inchmery House, Exbury, near Southampton (Fig. 37).

Rhododendron (aberconwayi × anwheiense) 'Enborne', A.M. May 3, 1966. A hardy flowering plant (votes 19 for, 4 against). Leaves 3 inches long and 1⅕ inches broad, oblanceolate to narrowly obovate, considerably reflexed, free from indumentum. Truss 12–14 flowered, compact. Flowers widely funnel campanulate 1⅕ inches long and 1⅜ inches across. White flushed Phlox Pink (H.C.C. 625/3), upper part of throat speckled Phlox Pink (H.C.C. 625) to Beetroot Purple (H.C.C. 830/1). Calyx rudimentary, 5 joined lobes 2 mm. in length. Pedicel 1½ inches long, lightly covered fine hairs. Raised and exhibited by Crown Estate Commissioners (Fig. 7).

Rhododendron (lacteum × 'Penjerrick') 'Jason', A.M. April 5, 1966. A hardy flowering plant (votes 9 for, 2 against). Leaves 7½ inches long and 3¼ inches broad, elliptic, free from indumentum.

Petiole 1½ inches long. Truss fifteen to seventeen-flowered. Flowers 3 inches long and 3¾ inches across, campanulate, between Chartreuse Green (H.C.C. 663/3) and Primrose Yellow (H.C.C. 601/3) at shaded base to Ivory White on fully exposed surfaces. Calyx five-lobed, joined at base 4 mm. long. Pedicels flushed and streaked red, up to 2 inches long. Bud scales partially persistent with inflorescence fully open. Raised by Lionel de Rothschild, Esq., and exhibited by Edmund de Rothschild, Esq.

Rhododendron (sperabile × moupinense) 'John Marchand', A.M. March 22, 1966. A hardy flowering plant (votes unanimous). Leaves 1½ inches long and 1 inch broad, broadly elliptic, free from indumentum. Petiole ½ inch long, glabrous. Truss three-flowered, loose. Corolla 1⅜ inches long and 2 inches across, openly campanulate, close to Neyron Rose (H.C.C. 623) shading at lip to 623/1. Calyx rudimentary, five-joined lobes, reflexed with circlet of stiff hairs around perimeter. Stigma protruding. Pedicel ½ inch long, slightly hairy. Raised by John Marchand, exhibited by Capt. Collingwood Ingram. (Pl. 1).

Rhododendron (Jalisco grex) 'Jubilant', A.M. May 23, 1966. A hardy flowering plant (votes 21 for, 2 against). Leaves 5 inches long and 2 inches broad, narrowly elliptic to elliptic, free from indumentum. Petiole 1¾ inches long. Truss 12–14 flowered, loosely held, flowers widely funnel-campanulate, 3 inches long and 3 inches across. Buttercup Yellow (H.C.C. 5/2) at lip deepening to Chrome Yellow (H.C.C. 605) in throat. Upper part of throat faintly marked/spotted green. Bud and newly opened flowers tinged with Poppy Red (H.C.C. 16/2). Calyx joined irregular Chrome Yellow (H.C.C. 605) up to 24 mm. long. Style hairy, anthers brown. Pedicel 1¾ inches long, slightly hairy. Raised by Lionel de Rothschild, Esq. Exhibited by Edmund de Rothschild, Esq. (Pl. 7).

Rhododendron 'Marie Antoinette' × ?) 'Jungfrau' A.M., May 23, 1966. A hardy flowering plant (votes 19 for, 6 against). Leaves 5½ inches long and 2½ inches across, elliptic, free from indumentum. Petiole 1 inch long. Truss conical 24–32 flowered, 8 inches across and 10 inches long. Flowers openly funnel-shaped 2 inches long and 3¾ inches across. Corolla creamy white in throat flushing to pale Tyrian Rose (H.C.C. 24/3) at lip. Outer corolla flushed as above. Lower joined petal green flush at base. Bud scales persistent after flowering. Style protruding, lightly covered minute glandular hairs. Anthers very light brown. Corolla green, 5 irregular lobes up to 5 mm. long edged glandular hairs.

Pedicel 2 inches long, glabrous. Raised and exhibited by Edmund de Rothschild, Esq. (Fig. 16).

Rhododendron (brachyanthum hybrid) 'Leonard Messel', A.M. May 23, 1966. A hardy flowering plant (votes 24 for, 0 against). Leaves 2 inches long and $\frac{9}{10}$ inch broad, elliptic, faintly fragrant, light covering of scaly indumentum on under surfaces of leaf and on petiole, particularly noticeable on young leaves. Petiole 5 mm. long. Flowers openly campanulate, 4 or 5 to a truss held loosely, $\frac{7}{10}$ inch long and $1\frac{1}{10}$ inch across. Primrose Yellow (H.C.C. 601/1), upper surface of throat lightly flecked greenish brown. Pedicel $\frac{3}{4}$ inch long. Calyx 5-lobed, regular, joined at base, 4 mm. long. Pedicel and calyx flushed red and covered scale indumentum. Few long hairs tipping each calyx segment. Style and stamens slightly protruding, anthers pale brown. Collected by Capt. F. Kingdon-Ward. Exhibited by the Countess of Rosse and the National Trust, Nymans, Handcross, Sussex. (Fig. 6).

Rhododendron (elliottii × 'Jacquetta') 'Romance', A.M. May 23, 1966. A hardy flowering plant (votes 26 for, 0 against). Leaves 9 inches long and 3 inches broad, narrowly elliptic, soft, very loose woolly light brown indumentum along midrib and underside of leaf. Petiole $1\frac{1}{2}$ inches long. Truss 12–14 flowered. Fairly tight. Flowers widely funnel-campanulate $2\frac{1}{2}$ inches long and 3 inches wide. Geranium Lake (H.C.C. 20/1), base of corolla Oxblood Red (H.C.C. 00823/3). Inner surface of corolla freely speckled with Cardinal Red (H.C.C. 822). Calyx rudimentary, 5 joined lobes thickly covered short white hairs. Pedicel 1 inch long, flushed red. Pedicel and outer base of corolla also hairy to variable degrees. Style red, hairy. Stamens black anthered. Raised by Lord Aberconway. Exhibited by Lord Aberconway and the National Trust, Bodnant, Tal-y-cafn, Denbighshire. (Fig. 15).

Rhododendron sargentianum (white form) 'Whitebait', A.M. May 3, 1966. A hardy flowering plant (votes 15 for, 1 against). A dwarf compact shrub up to 1 foot in height and a native of Szechwan. A form with pale yellow flowers received the Award of Merit in 1923. Leaves $\frac{7}{10}$ inch long and $\frac{2}{5}$ inch broad; broadly elliptic, reticulate, glossy above, thick brown scaly indumentum below. Petiole 3 mm. long, scaly. Truss 7 flowered. Flowers tubular, funnel-shaped, scaly outside, throat hairy, $\frac{1}{2}$ inch long and $\frac{2}{5}$ inch across. In bud near Primrose Yellow (H.C.C. 601/2) opening to a pale Primrose Yellow (H.C.C. 601/3). Calyx 4 mm. long, green, joined at base, covered yellow scales and with soft hairs on lips. Pedicel rudimentary. Bud scales persistent after

flower opens. Collector unknown. Exhibited by Messrs. E. H. M. and P. A. Cox, Glendoick, Perth (Fig, 35).

Rhododendron sherriffii (exhibited under L. & S. No. 2751), A.M. March 8, 1966. A hardy flowering plant (votes 8 for, 0 against). Leaves 2⅝ inches long and 1⅝ inches broad, broadly elliptic, covered below with thick soft dark brown indumentum. Petiole ⅝ inch long, rounded, glabrous. Truss three or four-flowered, loose; corolla 1¼ inches long and 2⅛ inches across in specimen exhibited Cardinal Red (H.C.C. 822) at lip, shading to H.C.C. 822/3 on inner surfaces of corolla. Flowers campanulate. Calyx 5-lobed, 3 mm. long, red. Nectaries black. Pedicel ⅝ inch long, flushed red on upper surface, glabrous, stamens irregular in length, stigma protruding, red. Exhibited by Crown Estate Commissioners (Fig. 38).

Rhododendron ('Penjerrick' × 'Hawk Crest') 'Theale', A.M. May 3, 1966. A hardy flowering plant (votes 16 for, 0 against). Leaves 4½ inches long and 2¼ inches broad, narrowly ovate, free from indumentum. Petiole 1 inch in length, glabrous. Truss 10-flowered, open but not loose. Flowers widely funnel-campanulate 2 inches long and 2¼ inches across. Primrose Yellow (H.C.C. 601/2), slight flush of Cardinal Red (H.C.C. 822/1) in throat at base of 3 upper corolla segments. Calyx 5 irregular lobes joined at base, upper 6 mm. in length, lower 3 mm. in length, greenish yellow. Petiole 1⅜ inches long. Raised and exhibited by Crown Estate Commissioners (Pl. 6).

Rhododendron campylogynum (salmon pink form) 'Thimble', A.M. May 23, 1966. A hardy flowering plant (votes 16 for, 3 against). Leaves 1 inch long and 2 inch broad, narrowly ovate, glaucous undersurface, lightly covered brown scaly indumentum. Petiole 1 inch long, sparsely covered scaly indumentum. Flowers 1 to 3 in cluster, campanulate. Pedicels very long, 1½ inches, calyx 5-lobed regular, joined at base, green. Calyx and pedicel lightly covered scaly indumentum. Style red, protruding. Anthers brown. Collector not known. Exhibited by Capt. Collingwood Ingram.

Rhododendron ('Barclayi' × 'Elizabeth') 'Zyxya', A.M. April 19, 1966. A hardy flowering plant (votes 6 for, 0 against). Leaves 4 inches long and 1¾ inches broad, narrowly ovate. Free from indumentum. Petiole ¾ inch long, short flattened hairs on petioles of newer leaves. Truss 5–7 flowered. Flowers 2 inches long and 3 inches across, widely funnel-campanulate, Blood Red (H.C.C. 820). Calyx 5-lobed joined, lower lobes more clearly defined,

sometimes reflex. 5 mm. long. Pedicel 1 inch long, covered short bristly hairs. Pedicel and calyx slightly darker red than corolla. Raised and exhibited by Major-General E. G. W. W. Harrison, C.B., C.B.E., M.C., Tremeer, St. Tudy, Bodmin, Cornwall (Fig. 19).

Rhododendron (litiense × Hawk 'Crest') 'Clewer', P.C. May 3, 1966. A hardy flowering plant (votes 18 for, 0 against), raised and exhibited by Crown Estate Commissioners.

Rhododendron phaeochrysum 'Corsock', P.C. May 3, 1966. A hardy flowering plant (votes 17 for, 1 against). Exhibited by F. L. Ingall, Esq., Corsock House, Castle Douglas, Kirkcudbrightshire.

Rhododendron yunnanense hybrid 'Diana Colville', P.C. May 3, 1966. A hardy flowering plant. Raised and exhibited by Col. N. R. Colville, M.C., Penheale Manor, Launceston, Cornwall.

Rhododendron (chaetomallum × 'Portia') 'Donnington', P.C. March 8, 1966. A hardy flowering plant. Exhibited by Crown Estate Commissioners.

Rhododendron (thomsonii × haemaleum) Thomaleum g. 'Oporto' P.C. April 19, 1966. A hardy flowering plant (votes unanimous). Raised and exhibited by Capt. Collingwood Ingram.

Rhododendron ('Dido' × 'Sarita Loder') 'Tilehurst' P.C. May 23, 1966. A hardy flowering plant. Raised and exhibited by Crown Estate Commissioners.

Camellia japonica 'Drama Girl', A.M. March 8, 1966. A flowering plant for the cool greenhouse (votes 6 for, 0 against). Leaves 4¾ inches long and 2½ inches across, tip elongated. Flowers very large, 6⅝ inches across, anemone form, petals sixteen to eighteen, colour Carmine Rose (H.C.C. 621). Centre whorl of intermingled stamens and petalodes, immediate centre predominantly stamens. Petalodes streaked paler shades Carmine Rose through to white. Exhibited by Sir Giles Loder, Bt., Leonardslee, Horsham, Sussex (Fig. 9).

Camellia reticulata 'Purple Gown' ('Tzepao'), A.M. March 22, 1966. A flowering plant for the cold greenhouse (votes 14 for, 1 against). Leaves 5 inches long and 2¾ inches broad, narrowly ovate, serrated, tip elongated. Flowers very large, 5½ inches across. Rose form double. Twenty-eight to thirty petals and irregular petals, colour near Cardinal Red (H.C.C. 822/3) but with purplish tinge shading to Neyron Rose (623) at edge of petals. Central irregular petals streaked paler shades to near white at tip. Raiser unknown. Exhibited by Sir Giles Loder, Bt. (Fig. 18).

AWARDS TO RHODODENDRONS AFTER TRIAL AT WISLEY

WISLEY TRIALS, 1966

Rhododendrons

On the recommendation of the Rhododendron and Camellia Committee, the Council has made the following awards to rhododendrons, after trial at Wisley.

The number in brackets after the description of the plant was that under which it was grown in the trial.

Hardy Hybrid Rhododendrons

Rhododendron (*yakusimanum* × 'Pauline') **'Telstar'.** (Raised at The Royal Horticultural Society's Garden, Wisley, Ripley, Woking, Surrey; not yet generally introduced). **A.M.** May 10, 1966. Described R.H.S. Proceedings, 88, pp. 51 to 52, and the Rhododendron and Camellia Year Book, 1966, No. 20, p. 175. Flowering from May 6, 1966 (H.C. 1962). (45).

Rhododendron ('China' × 'Letty Edwards') **'The Master.'** (Raised by Messrs. Walter C. Slocock Ltd., Goldsworth Nurseries, Woking, Surrey, in 1936; introduced 1952; and sent by Messrs. Walter C. Slocock Ltd. **A.M.** May 19, 1966. Described R.H.S. Proceedings, 90, p. 57. Flowering from May 10, 1966 (H.C. 1964). (182).

Evergreen Azaleas

Rhododendron (Vuykiana Hybrid) **'Vuyk's Scarlet'.** (Raised by Messrs. Vuyk van Nes, Zijde 17, Boskoop, Holland; introduced 1954; sent by Messrs. Walter C. Slocock Ltd.). **F.C.C.** May 10, 1966. Plant 1½ feet high, 3¼ feet spread, vigorous, spreading and compact habit, very free-flowering; leaves 1 $\frac{1}{10}$ inches long, $\frac{3}{8}$ inch wide, dark glossy green. Flower truss compact, one to two flowers per truss; corolla 2¼ inches diameter, 1¾ inches long, funnel-shaped, margins waved, Crimson (H.C.C. 22/1) tinged Crimson (H.C.C. 22), speckling on lower throat darker colour. Flowering from May 1, 1966 (A.M. 1959). (37).

Rhododendron ('Daimio' × *simsii*) **'Bengal Beauty'.** (Raised, introduced and sent by Mr. M. Haworth-Booth, Farall Nurseries, Roundhurst, near Haslemere, Surrey). **A.M.** June 3, 1966. Plant 2 feet high, 3¼ feet spread, vigorous, upright and compact habit,

very free-flowering; leaves 2½ inches long, 1 inch wide, light glossy green. Flower truss 3½ inches diameter, 2½ inches deep, compact, two to three flowers per truss; corolla 2 inches diameter, 1⅜ inches long, funnel-shaped, margins slightly waved, Phlox Pink (H.C.C. 625/1) veined and flushed Tyrian Rose (H.C.C. 24/1), light dotting on lower lobe brown. Flowering from May 28, 1966. (57).

Rhododendron ('Daimio' × *simsii*) **'Lilliput'.** (Raised and sent by Messrs. John Waterer, Sons & Crisp Ltd., The Nurseries, Bagshot, Surrey; not yet generally introduced). **H.C.** June 3, 1966. Plant 1 foot high, 3½ feet spread, vigorous, spreading habit, very free-flowering; leaves 3½ inches long, ½ inch wide, light glossy green, one or two flowers per truss; corolla 1¾ inches diameter, 1⅜ inches long, funnel-shaped, margins waved, a colour between Empire Rose (H.C.C. 0621) and Delft Rose (H.C.C. 020/1), light spotting on lower lobe reddish-brown. Flowering from May 27, 1966. (100).

Rhododendron (Azalea 'Pink Perfection' × Kurume Mauve Seedling) **'Velvet Gown'.** (Raised, introduced and sent by Messrs. John Waterer, Sons & Crisp Ltd.). **H.C.** May 10, 1966. Plant 1 foot high, 3¼ feet spread, vigorous, spreading habit, very free-flowering; leaves $\frac{9}{10}$ inch long, ½ inch wide, dark dull green. Flower truss 2¼ inches diameter, compact, one or two flowers per truss; corolla 1¾ inches diameter, 1¼ inches long, funnel-shaped, margins slightly waved, a colour between Cyclamen Purple (H.C.C. 30/1) and Orchid Purple (H.C.C. 31), speckling on lower throat Oxblood Red (H.C.C. 00823/3). Flowering from May 5, 1966. (9).

Deciduous Azaleas

Rhododendron (Azalea Seedling × Azalea 'Ginger') **'Daybreak'.** (Raised, introduced and sent by Messrs. John Waterer, Sons & Crisp Ltd.; catalogued since 1957). **A.M.** May 19, 1966. Plant 5¼ feet high, 6½ feet spread, vigorous, spreading habit, very free-flowering; leaves 2¾ inches long, 1¼ inches wide, medium glossy green heavily suffused dark red. Flower truss 4¼ inches diameter, 4 inches deep, globular-shaped, compact, nine flowers per truss; corolla 2½ inches diameter, 1¾ inches long, fully expanded funnel-shaped, margins slightly waved and crinkled, Orange Buff (H.C.C. 507) veined and flushed Poppy Red (H.C.C. 16/1), Brick Red (H.C.C. 016) and Mandarin Red (H.C.C. 17/1), upper lobe Tangerine Orange (H.C.C. 9) flushed Mandarin Red (H.C.C. 17/1). Flowering from May 15, 1966. (110).

Rhododendron (Parentage unknown) **'Orwell'.** (Raised at The Royal Horticultural Society's Garden; not yet generally introduced). **A.M.** May 19, 1966. Described R.H.S. PROCEEDINGS, 88, p. 53, when Highly Commended under the name Arun, but the name of the plant now registered is 'Orwell'. Flowering from May 14, 1966 (H.C. 1962). (68).

Rhododendron (Parentage unknown) **'Derwent.'** (Raised at The Royal Horticultural Society's Garden; not yet generally introduced). **H.C.** May 19, 1966. Plant 7½ feet high, 9 feet spread, vigorous, slightly spreading habit, very free-flowering; leaves 3½ to 4 inches long, 1½ inches wide, light glossy green very faintly tinged bronze. Flower truss 5¾ inches diameter, 4¾ inches deep, globular-shaped, compact, sixteen flowers per truss; corolla 2¾ inches diameter, 2½ inches long, fully expanded funnel-shaped, margins frilled and waved, ground white veined and flushed Rose Madder (H.C.C. varying from 23/1 to 23/3), blotch on upper lobe Orpiment Orange (H.C.C. 10/1) deepening to Orpiment Orange (H.C.C. 10) at throat. Flowering from May 15, 1966. (49).

Rhododendron (Knap Hill Hybrid) **'Persil.'** (Raised, introduced and sent by Messrs. Walter C. Slocock Ltd.). **H.C.** May 19, 1966. Plant 3¾ feet high, 2½ feet spread, vigorous, upright and compact habit, free-flowering; leaves 3 inches long, 1 $\frac{9}{10}$ inches wide, light glossy green. Flower truss 5¼ inches diameter, 4¾ inches deep, globular-shaped, compact, twenty flowers per truss; corolla 2¼ inches diameter, 2⅛ inches long, funnel-shaped, margins slightly waved, white, blotch on upper lobe Buttercup Yellow (H.C.C. 5). Flowering from May 13, 1966. (5).

Rhododendron (Mollis × *kosterianum*) **'Spek's Brilliant'.** (Raised by Messrs. Jan Spek, Boskoop, Holland, and sent by Messrs. Sunningdale Nurseries, Windlesham, Surrey). **H.C.** May 10, 1966. Plant 4 feet high, 4 feet spread, vigorous, upright and fairly compact habit, very free-flowering, leaves 2½ inches long, $\frac{9}{10}$ inch wide, light glossy green. Flower truss 4½ inches diameter, 3½ inches deep, globular-shaped, compact, nine flowers per truss; corolla 2 to 2¼ inches diameter, 2 inches long, funnel-shaped, margins smooth, Vermilion (H.C.C. 18/2) tinged Mandarin Red (H.C.C. 17/1) and Vermilion (H.C.C. 18/1), upper throat touched a colour near Saffron Yellow (H.C.C. 7/1). Flowering from May 2, 1966. (109).

Rhododendron (Seedling of Azalea (Mollis) 'Hugo Hardijzer') **'Willem Hardijzer.'** (Raised, introduced and sent by Messrs.

Willem Hardijzer & Co., The Nurseries, Reijerskoop, Boskoop, Holland). **H.C.** May 19, 1966. Plant 4½ feet high, 5 feet spread, vigorous, slightly spreading habit, very free-flowering; leaves 2¾ inches long, 1 inch wide, light glossy green. Flower truss 4¾ inches diameter, 4½ inches deep, globular-shaped, compact, fourteen flowers per truss; corolla 2½ inches diameter, 2⅛ inches long, fully expanded, funnel-shaped, margins slightly waved, Peach (H.C.C. 512) along mid-rib and throat, remainder Porcelain Rose (H.C.C. 620) flushed Scarlet (H.C.C. 19/1), blotch on upper lobe Orpiment Orange (H.C.C. 10). Flowering from May 12. (77).

ADDITIONS TO THE INTERNATIONAL RHODODENDRON REGISTER, 1965-66

(Names registered up to the end of July, 1966).

a Appalachia — cl. Parentage unknown; (Professor O. M. Neal, Horticulture Dept., West Virginia University, U.S.A.); plant deciduous, 3 to 4 ft. tall and broad in 10 years from seed; lvs. large, dull green with purple cast in spring and fair autumn colour, summer foliage good; fls. up to 20 per cluster, up to 3 in. wide, from brilliant yellow (Nickerson 5y 9/9) to vivid yellow (2·5y 8/12), outside of corolla sometimes red, fragrant.

Appleford — cl. 'Portia' × *barbatum*; (Crown Estate Commissioners, The Great Park, Windsor, Berks., England); lvs. 6 in. long, 1⅞ in. broad, glabrous, narrowly oblong, slightly revolute; truss 20-flowered, compact, dome-shaped; fls. campanulate, 1¾ in. long, 2 in. across, Cardinal Red (H.C.C. 822); calyx 5-lobed, 2 upper joined and 17 mm. long, 2 central 8 mm. long, lower lobe 4 mm. long, near Carmine (H.C.C. 21/1). A.M. (R.H.S.) 1966.

a April Showers — cl. New Race Hybrid Seedling; (John Waterer, Sons & Crisp, Ltd., The Nurseries, Jenkins Hill, Bagshot, Surrey, England); compact growing and early flowering; flowers pale yellow with golden centre, top petal slightly blotched.

Arthur Stevens — cl. 'Coronation Day' × *souliei* ♀; (Messrs. Hillier & Sons, Winchester, Hants., England); plant 5 ft. high of open rounded habit, with purple-brown second year wood; lvs. oblong to oblong-oblanceolate, base broadly obtuse, rounded to subcordate, 7 to 13 cm. long by 3·5 to 4·5 cm. broad, glabrous, young leaves with glaucous hue; fls. 7 to 8 in short lax raceme, open funnel-shaped, 4 cm. long, 8 to 9 cm. broad, firm texture, 5-lobed, white, at first tinged with rose on outside, base within with 5 fans of Magenta Rose (H.C.C. 027); calyx irregularly 5-lobed, upper 2 lobes often to 7 mm. by 3 mm., the rest 2 to 3 mm.

Blue Pool — cl. 'Sapphire' × *augustinii*; (Knap Hill Nursery, Ltd., Woking, Surrey, England); compact shrub of slow growth, 3 to 4 ft. in height and in breadth; fls. lavender-blue.

Blush Button — cl. 'C.O.D.' × 'Honeydew'; (Mrs. John Knippenberg, Laurelwood Gardens, Wayne, New Jersey, U.S.A.); plant 5 ft. high by 8 ft. across after 10 years; fls. 8 per flat truss, cream (H.C.C. 407/1) but shaded Coral Red, 6 to 8 lobed, button in the centre, no stamens; mid-season.

Bobbet — cl. *campylogynum* × *campylogynum* var. *cremastum*; (Mr. and Mrs. James Caperci, Rainier Mt. Alpine Gardens, Seattle, Washington, U.S.A.); upright spreading plant to 16 in. high by 7 in. wide in 7 years; lvs. obovate to 1 in. long by ½ in. wide, glabrous; fls. funnel-campanulate, yellow, to ⅜ in. long and wide; calyx prominent, dark green, pubescent; pedicel 1½ in. long.

Brightwell — cl. *forrestii* var. *repens* (K.W. 6832) × *barbatum*; (Crown Estate Commissioners, The Great Park, Windsor, Berks., England); procumbent shrub; lvs. 2½ in. long, 1 in. broad, narrowly elliptic, glabrous; truss loose, 8-flowered; fls. widely funnel-campanulate, 1⅜ in. long, 2¼ in. across, Currant Red (H.C.C. 821); calyx 5-lobed, joined, 3 mm. long, slightly reflexed and paler red. A.M. (R.H.S.) 1966.

Britannia's Bells — cl. 'Britannia' × *williamsianum*; (Ben Lancaster, Camas, Washington, U.S.A.); plant a sturdy bushy mound 12 in. tall by 18 in. wide at 8 years; lvs. ovate, cordate at base, to 2 in. long by 1½ in. broad; fls. in truss of 7 to 8, wide bell-shaped, 5 petals of good substance, to 3 in. wide by 1½ in. deep, Rose Red (H.C.C. 724/2); mid-April.

Bud Flanagan — cl. Unknown rhododendron × *ponticum*; (Mr. Edmund de Rothschild, Exbury, Hampshire, England); flower trusses enormous and conical of 18 to 20 closely-packed flowers, lively sparkling mauve emphasized by a large and spreading flash of deep chestnut.

Caerhays Philip — cl. *concatenans* × *cinnabarinum* var. *blandfordiaeflorum*; (raised by Rt. Hon. Charles Williams and Mr. Charles Michael, exhibited by Mr. F. Julian Williams, Caerhays Castle, Gorran, St. Austell, Cornwall, England); lvs. 4½ in. long, 1¾ in. broad, narrowly

elliptic to elliptic, scaly indumentum below; fls. 7 to loose truss, funnel-shaped, deeply lobed, 2½ in. long and broad, Yellow Ochre (H.C.C. 07) shading to Chinese Yellow (H.C.C. 606/1) at tip. A.M. (R.H.S.) 1966.

Candidissimum — cl. *catawbiense* hybrid (*possibly catawbiense* × *maximum*); (raiser and introducer unknown); flower truss 4 in. high, 6 in. wide, full, rounded, up to 12-flowered; fls. 2¾ in. diameter, bluish-white to Rose Madder (H.C.C. 23/3) with a few Citron Green (H.C.C. 763/3) markings inside corolla.

Cara Mia — cl. 'Aurora' × 'Crest'; (Mr. Edmund de Rothschild, Exbury, Hampshire, England); plant of tall upright compact habit; fls. 12–15 in compact truss, open funnel-campanulate, 5-lobed, 2 in. long, 4¼ in. across, Rose Pink (H.C.C. 427/3) in bud opening to cream with Mimosa Yellow throat (H.C.C. 602/2) and crimson stain at the base, retaining a pinkish flush on outer side of bloom. A.M. (R.H.S.) 1966.

Caroline Gem — cl. 'Elizabeth' × 'Caroline'; (Mrs. John Knippenberg, Laurelwood Gardens, Wayne, New Jersey, U.S.A.); plant 30 in. tall by 30 in. across in 10 years; fls. 10 to 12 in conical truss, bell-shaped, buds (H.C.C. 621), open flowers Carmine Rose (621/2), slight coral flush, to 4 in. across; mid-May.

Clarice of Langau — cl. *didymum* × *haematodes*; (raised by Mr. Lionel de Rothschild and named by Mr. Edmund de Rothschild, Exbury, Hampshire, England); fls. dark red in fairly loose truss.

Clatsop Belle — cl. 'Bow Bells' × 'Earl of Athlone'; (George L. Baker, Astoria, Oregon, U.S.A.); plant relatively low, compact, up to 4 ft. in 10 years; lvs. to 3 in. long, 1½ in. wide; truss loose, upright, up to 15-flowered; fls. soft rose to deep pink, slightly ruffled, campanulate, to 2 in. wide by 1½ in. long.

Clewer — cl. *litiense* × 'Hawk Crest'; (Crown Estate Commissioners, The Great Park, Windsor, Berks., England); lvs. 3 in. long, 1⅝ in. broad, narrowly obovate to obovate, glabrous; truss compact, 10-flowered; fls. 1½ in. long, 2¼ in. broad, Primrose Yellow (H.C.C. 601/1); calyx 6 to 7-lobed, joined at base, irregular, 9 mm. long. P.C. (R.H.S.) 1966.

Corsock — cl. Seedling of *R. phaeochrysum*, raised from seeds collected by Forrest probably 1930/31; (raised by the late Brig. General D. MacEwen, Corsock House, Castle Douglas, Kirkcudbrightshire, Scotland, exhibited by F. L. Ingall, Corsock); lvs. 6½ in. long and 2¾ in. broad, elliptic, brown indumentum (scaly) below; fls. 18 to 20 in tightly-packed truss, 5½ in. across, funnel-campanulate, white, throat lightly spotted, close to China Rose (H.C.C. 024), 2 in. long, 2½ in. across; calyx 5-lobed, rudimentary. P.C. (R.H.S.) 1966.

Crimson Bells — cl. 'F. C. Puddle' × *williamsianum*: (Ben Lancaster,

Camas, Washington, U.S.A.); plant 15 in. tall by 30 in. wide at 8 years; lvs. oval, truncate at base, to 3 in. long by 2 in. broad; fls. 7 to truss, bell-shaped, 5-petalled, to 3 in. wide and 2 in. deep, Crimson (H.C.C. 22/1); mid-April.

Currant Bells — cl. *thomsonii* (blood red form) × *williamsianum*; (Ben Lancaster, Camas, Washington, U.S.A.); plant 2 ft. tall by 3 ft. wide at 10 years; lvs. oval, cordate, 2 in. long by 1¾ in. wide; fls. 7 to 8 per truss, 5-petalled, bell-shaped, to 2½ in. across by 2 in. deep, Currant Red (H.C.C. 821/2); mid-April.

a Derwent — cl. Parentage unknown; (R.H.S. Gardens, Wisley, Ripley, Woking, Surrey, England); deciduous, plant 7½ ft. high, 9 ft. spread, vigorous, free flowering; lvs. 3½ to 4 in. long, 1½ in. wide, light glossy green faintly tinged brown; flower truss 5¾ in. diameter, 4¾ in. deep, globular, compact, 16-flowered; corolla 2¾ in. diameter, 2½ in. long, funnel-shaped, margins frilled and waved, white veined and flushed Rose Madder (H.C.C. 23/1 to 23/3), blotch on upper lobe Orpiment Orange (H.C.C. 10/1) deepening to Orpiment Orange (H.C.C. 10) at throat; flowering from May 17, 1966. H.C. (Wisley Trials) 1966.

Dollar Princess — cl. 'Sir Frederick Moore' × 'Tally Ho'; (raised by Mr. Lionel de Rothschild, Exbury, Hampshire, England, and named by Mr. Edmund de Rothschild); fls. in well-built truss, deep carmine pink with glistening texture.

Donnington — cl. *chaetomallum* × 'Portia'; (Crown Estate Commissioners, The Great Park, Windsor, Berks., England); lvs. 4⅜ in. long, 2 in. broad, narrowly ovate, loose light brown indumentum below; truss 9-flowered, loose; fls. 2 in. long, 2 in. across, widely funnel-campanulate, Cardinal Red (H.C.C. 822); calyx 5-lobed, variable, joined or detached, 5 to 15 mm. long, Cardinal Red (H.C.C. 822). P.C. (R.H.S.) 1966.

Dorothy Corston — cl. [Knap Hill]; 'Knap Hill Red' × unnamed seedling; (Knap Hill Nurseries Ltd., Woking, Surrey, England); a rather dense grower; lvs. bronze-tinted; fls. deep red.

Easter Bells — cl. *williamsianum* × 'China'; (Ben Lancaster, Camas, Washington, U.S.A.); plant 2 ft. tall by 3 ft. across at 10 years; lvs. oval, cordate, to 4 in. long by 2 in. broad; fls. 8 per truss, wide bell-shaped, to 3 in. across and 2 in. deep, opening cream, turning to white; early mid-season.

a Eiko-San — cl. Interspecies hybrid of Gumpo selection derived from *R. indicum*, *kaempferi* and *eriocarpum*; (introduced from Japan, without a name, by Mrs. Julian W. Hill and Mary Louisa B. Hill, 1106 Greenhill Avenue, Wilmington, Delaware 19805, U.S.A.); plant mounded and compact 12 in. high and 20 in. wide with reddish winter colour; fls. compounded of 6 layers of 5 lobes and petalodes, 30 segments in

all, 2 in. across, deep pink (Nickerson 2–5 R.6/11) with veins of strong red; late May and June blooming.

Enborne — cl. *aberconwayi* × *anwheiense*; (Crown Estate Commissioners, The Great Park, Windsor, Berks., England); plant dwarf; lvs. 3 in. long, 1⅛ in. broad, oblanceolate to narrowly obovate, reflexed, glabrous; truss compact 12 to 14 flowered; fls. widely funnel-campanulate, 1⅛ in. long, 1½ in. broad, white flushed Phlox Pink (H.C.C. 625/3), upper part of throat speckled Phlox Pink (H.C.C. 625) to Beetroot Purple (H.C.C. 830/1); calyx rudimentary, 5-lobed. A.M. (R.H.S.) 1966. Selected for Wisley Trials 1966.

Fox Hunter — cl. 'Gaul' × 'Matador' ♀; (Major General E. G. W. W. Harrison, Tremeer, St. Tudy, Cornwall, England); fls. 12 to truss, deep bright red, without spots, 2¾ in. wide, 2½ in. long; first flowered April 1966.

Golden Fleece — cl. 'Goldsworth Orange' × 'Yvonne'; (Walter C. Slocock Ltd., Goldsworth Nursery, Woking, Surrey, England); fls. large, frilled, golden yellow.

Grace Seabrook — cl. 'The Hon. Jean Marie de Montague' × *strigillosum*; (G. S. Seabrook, Tacoma, Washington, U.S.A.); lvs. large; fls. in tight truss, funnel-shaped, to 3 in. across and 2 in. deep, Currant Red (H.C.C. 821/1) at the margin, shading to Blood Red (H.C.C. 820) at the centre; season early.

Hardy Giant — cl. *fortunei* × *fictolacteum*; (Mrs. John Knippenberg, Laurelwood Gardens, Wayne, New Jersey, U.S.A.); plant 6 ft. by 6 ft. in 10 years; lvs. to 9 in. long by 3 in. wide; fls. 14 per conical truss, creamy white (H.C.C. 503/1) with raspberry blotch, up to 3½ in. across; mid-May.

a Hino Pink — cl. [Kurume]; ('Hino Crimson' × *poukhanense*) × (*kaempferi* seedling × 'Louise Gable'); (A.M. Shammarello, South Euclid, Ohio, U.S.A.); plant to 18 in. high by 3 ft. wide, spreading, compact; lvs. to 1½ in. long by ½ in. wide; fls. 3 to a cluster, Flesh Pink (Nickerson 7·5-RP 7/10), strong purplish pink, to 1¾ in. wide; flowering about May 10.

a Irresistible — cl. 'Hino Crimson' × 'Salmon Elf'; (Robert L. Pryer, Ornamentals Investigations, Crops Research Division, A.R.S., U.S.D.A., Beltsville, Maryland, U.S.A.); plant dwarf, compact, about 1½ times as wide as high; lvs. persistent, greyish-green with white margins; fls. numerous, 2 to 3 per cluster, hose-in-hose, Spinel Red (Ridgway XXVI 71 V. R.R.), 1½ in. by 1½ in., stamens 5 to 7, same colour as petals.

Ivory Bells — cl. *chlorops* × *williamsianum*; (Ben Lancaster, Camas, Washington, U.S.A.); plant sturdy, compact, semi-dwarf, to 30 in. tall in 15 years; lvs. oval, to 2½ in. long by 1½ in. wide, slightly waved; fls. 7 to 10 in graceful truss, Chinese Yellow (H.C.C. 606/1) opening Straw Yellow (H.C.C. 604/1), flattish, to 3 in. wide by ½ in. deep; early mid-season.

Jason — cl. *lacteum* × 'Penjerrick'; (raised by Mr. Lionel de Rothschild, exhibited by Mr. Edmund de Rothschild, Inchmery House, Exbury, Hampshire, England); lvs. 7½ in. long, 3¼ in. broad, elliptic; fls. 15 to 17 per truss, campanulate, 3 in. long, 3¾ in. across, between Chartreuse Green (H.C.C. 663/3) and Primrose Yellow (H.C.C. 601/3) shaded to Ivory White at base; calyx 5-lobed, 4 mm. long. A.M. (R.H.S.) 1966.

J. Edgar Hoover — cl. 'Ivery's Scarlet' × 'Francis Hanger'; (C.S. Seabrook, Tacoma, Washington, U.S.A.); plant of moderate size; lvs. large, light green; fls. upstanding in loose truss, campanulate, to 4½ in. across by 2 in. deep, white inside, edged pink, outside Turkey Red (H.C.C. 721/1) to Rose Madder (H.C.C. 23/1); late.

Jerez — cl. *fortunei* × R. × Jalisco seedling; (Mr. Edmund de Rothschild, Exbury, Hampshire, England); plant of tall, compact habit; fls. pale lemon-yellow.

Jerome Kern — cl. 'The Hon. Jean Marie de Montague' × *haemaleum*; (C. S. Seabrook, Tacoma, Washington, U.S.A.); fls. 10 to 15 per large tight truss, Rose Bengal (H.C.C. 25/1), funnel-shaped, to 3½ in. across by 2 in. deep; mid-season.

Joyful — cl. *fortunei* × R. × Jalisco seedling; (Mr. Edmund de Rothschild, Exbury, Hampshire, England); plant of tall, compact habit; fls. creamy yellow flushed carmine pink on outer lobes and a distinct red line running down the centre of each lobe on outer side showing pink on inside.

Jungfrau — cl. 'Marie Antoinette' × unknown seedling; (Mr. Edmund de Rothschild, Exbury, Hampshire, England); plant of tall, compact habit; fls. up to 32 in huge conical truss, 10 in. long and 8 in. across, open funnel-shaped, 2 in. long, 3¾ in. across, creamy white in throat flushing to pale Tyrian Rose (H.C.C. 24/3) at tip. A.M. (R.H.S.) 1966.

Lackamas Firebrand — cl. 'Essex Scarlet' × *griersonianum*; (Ben Lancaster, Camas, Washington, U.S.A.); plant upright, bushy, 4 ft. by 4 ft. at 15 years; lvs. elliptic, to 5½ in. long by 1¾ in. broad, with tan indumentum beneath; fls. 18 per globe-shaped truss, Currant Red (H.C.C. 821/2), bell-shaped, 2½ in. wide by 2 in. deep; late June.

Laurel Pink — cl. 'Boule de Neige' × *catawbiense* × 'F. C. Puddle'; (Mrs. John Knippenberg, Laurelwood Gardens, Wayne, New Jersey, U.S.A.); plant 24 in. high by 30 in. wide at 12 years; lvs. of *williamsianum* type, almost round, 1¾ in. long by 1¼ in. wide; fls. 10 to 12 in rounded truss, Neyron Rose in bud (H.C.C. 623), open 623/3, 6 or 7-lobed, to 2 in. diameter, frilled; late April.

Leonard Messel — cl. Probably a hybrid of *R. brachyanthum*; (raised by Mr. Leonard Messel, reputedly from seeds collected by Captain Kingdon Ward, exhibited by the Countess

of Rosse and the National Trust, Nymans, Handcross, Sussex, England); lvs. 2 in. long, about 1 in. broad, elliptic, slightly fragrant, covered below with light covering of scales; fls. 4 to 5 per loose truss, openly campanulate, $\frac{7}{16}$ in. long, about 1 in. broad, Primrose Yellow (H.C.C. 601/1), upper surface of throat lightly flecked greenish-brown; calyx flushed red, of 5 regular lobes 4 mm. long. A.M. (R.H.S.) 1966.

a Lilliput — cl. 'Daimio' × *simsii*; (Messrs. John Waterer, Sons & Crisp Ltd., The Nurseries, Bagshot, Surrey, England); evergreen plant 1 ft. high, 3½ ft. spread, free flowering, vigorous; lvs. 3½ in. long, ½ in. wide, light glossy green; truss 1 to 2 flowered, fls. 1¾ in. diameter, 1⅜ in. long, funnel-shaped, margins waved, between Empire Rose (H.C.C. 0621) and Delft Rose (H.C.C. 020/1), light spotting on lower lobe reddish-brown; flowering from May 27, 1966. H.C. (Wisley Trials) 1966.

Lori Eichelser — cl. *forrestii* var. *repens* (pink form) × 'Bow Bells'; (cross made by Lester Brandt, introduced by Mr. and Mrs. Kenneth Janeck, Tacoma, Washington, U.S.A.); plant compact, 1½ ft. high, 5½ ft. wide in 14 years; lvs. broadly elliptic, 2½ in. long by 1½ in. wide, impressed venation; fls. 3 to 4 per truss, Cherry (H.C.C. 722/1), campanulate, 2½ in. wide by 2 in. deep; late March to early April.

a Lotus Porter — cl. Parentage unknown; (raised by Otto Benesh, introduced by Beneschoen Gardens, Myrtle Creek, Oregon, U.S.A.); plant 21 in. tall by 36 in. across in 8 years; lvs. 1½ in. by ¾ in., ovate; fls. semi-double, Phlox Purple (H.C.C. 632/2), 1½ in. across; mid-season.

Lunar Queen — cl. *griffithianum* × 'Hawk' ; (Major General E. G. W. W. Harrison, Tremeer, St. Tudy, Cornwall, England); fls. 9 per truss, 5-lobed, cream, 4 in. across, 2½ in. long; flowers April-May.

Mandate — cl. *lacteum* × *thomsonii* ; (Major General E. G. W. W. Harrison, Tremeer, St. Tudy, Cornwall, England); April flowering; fls. clear pink, 3¼ in. across, 2¼ in. long, 10 per truss. First flowered 1964.

a Matsuyo — cl. Interspecies hybrid of Gumpo selection derived from *R. indicum*, *kaempferi* and *eriocarpum*; (introduced from Japan, without name, by Mrs. Julian W. Hill and Mary Louisa B. Hill, 1106 Greenhill Avenue, Wilmington, Delaware 19805, U.S.A.); vigorous shrub of medium low habit; fls. white with pink flecks and stripes (Nickerson 2·5R 6/11), 3¼ in. across, overall effect of a very pale, pleasant clear pink.

a Midori — cl. Interspecies hybrid of Gumpo selection derived from *R. indicum*, *kaempferi* and *eriocarpum*; (originated in Japan, introduced into the U.S.A. without a name by Mrs. Julian W. Hill and Mary Louisa B. Hill, 1106 Greenhill Avenue, Wilmington, Delaware 19805, U.S.A.); plant low and spreading, 16 in. high

by 21 in. wide; fls. large, white with chartreuse throat.

a Nanki-Poo — cl. 'Kirishima' ♀ × 'Malvatica'; (cross in 1938 by Stevenson, Tower, Court, Ascot, England; introduced 1966 by Hydon Nurseries, Hydon Heath, Godalming, Surrey, England); evergreen; fls. bright crimson and crimson stamens; free flowering and hardy.

Northern Star — cl. *discolor* × 'Lodauric Iceberg'; (Hydon Nurseries Ltd., Hydon Heath, Godalming, Surrey, England); large compact shrub; fls. 15 per truss; corolla 7-lobed, widely funnel-shaped, white, throat greenish, cinnamon coloured anthers. Selected for Wisley Trials 1966.

a Orange Truffles — cl. [Knap Hill]; (seedling raised by Messrs. Hillier & Sons, Winchester, Hants., England); truss a tight compact and rounded head 3 to 4 in. across; fls. double, 1½ to 2 in. across, frilled and crinkled along margin, Apricot (H.C.C. 609/1) illuminated Chrome Yellow (H.C.C. 605) on outside and flushed Nasturtium Red (H.C.C. 14/2) on tube and back of petals.

Pale Perfection — cl. A *catawbiense* hybrid—parentage unknown; (R. L. Tichner, Aurora, Oregon, U.S.A.); plant 2 ft. high and 4 ft. across at 9 years from a cutting; lvs. 4¼ in. long by 1¾ in. wide; fls. 13 per 4 in. to 5 in. high truss, funnel-shaped, 5-lobed, to 2½ in. across, light Purplish Pink (Nickerson 2·5 RP. 8/5), blotch dark greenish (Nickerson 10Y 6/7); mid-May in Oregon.

Paul Detlefsen — cl. 'May Day' × *haematodes*; (C. S. Seabrook, Tacoma, Washington, U.S.A.); plant compact, 24 in. high in 10 years; lvs. dark, glossy, with indumentum; fls. many in loose truss, funnel-shaped, 2½ in. across and almost as deep, Orient Red (H.C.C. 819); mid-season.

a Peep-Bo — cl. 'Kirishima' ♀ × 'Malvatica'; (cross in 1938 by Stevenson, Tower Court, Ascot, England; introduced 1966 by Hydon Nurseries, Ltd., Hydon Heath, Godalming, Surrey, England); evergreen; fls. silvery-pink with white stamens; free flowering and hardy.

Pink Petticoats — cl. A seedling of 'Jan Dekens' selfed; (John G. Lofthouse, Vancouver, British Columbia, Canada); plant of dense upright habit, to 5 ft. high and 6 ft. wide in 10 years; lvs. narrow, elliptical, to 8 in. long by 2¾ in. wide; fls. up to 32 in high, compact truss, 9 in. by 9 in.; corolla China Rose (H.C.C. 024/1) at margin, H.C.C. 024/3 to 024/2 at centre, openly funnel-shaped, frilled picotee, to 2½ in. wide by 1¼ in. long; mid-May.

a Pooh-Bah — cl. 'Kirishima' ♀ × 'Malvatica'; (Stevenson, Tower Court, Ascot, England, cross in 1938; introduced 1966 by Hydon Nurseries Ltd., Hydon Heath, Godalming, Surrey, England); evergreen; large flowers, bright magenta-purple with darker spotting and crimson stamens; very free flowering and hardy.

Prawn — cl. 'Lady Bessborough' × 'Tortoiseshell Wonder'; (Walter C. Slocock Ltd., Goldsworth Nursery, Woking, Surrey, England); fls. salmon-shrimp; June flowering.

Ripe Corn — cl. 'Goldsworth Orange' × 'Exbury Naomi'; (Walter C. Slocock Ltd., Goldsworth Nursery, Woking, Surrey, England); fls. corn coloured, slightly tinged with pink.

Saint Mabyn — cl. Seedling of R. × Souldis; (Major General E. G. W. W. Harrison, Tremeer, St. Tudy, Cornwall, England; cross in 1921, introduced 1927); fls. 10 per truss, white tinged with yellow inside and faintest pink outside, top petal heavily spotted with red, 7-lobed, saucer-shaped, 4 in. across, 2½ in. long; first flowered June, 1966.

Silver Bells — cl. *caucasicum* × *williamsianum*; (Ben Lancaster, Camas, Washington, U.S.A.); plant 18 in. tall by 30 in. wide at 8 years; lvs. oval to 2½ in. long by 1½ in. wide; fls. 6 to 7 per truss, bell-shaped, to 2½ in. across by 1½ in. deep, petals ruffled, silvery-white, top petal slightly spotted; mid-April.

Simita — cl. *fortunei* × R. × Jalisco seedling; (Mr. Edmund de Rothschild, Exbury, Hampshire, England); plant of tall, compact habit; fls. Maize Yellow with brown eye and slight brown spotting.

Sir Arthur Conan Doyle — cl. *scyphocalyx* × 'Jasper'; (C. S. Seabrook, Tacoma, Washington, U.S.A.); small but not dwarf plant; lvs. rounded, bluish-green; fls. 8 to 10 per flat truss, campanulate, to 2½ in. across to 1¾ in. deep, Spanish Orange (H.C.C. 010/1) with pink edges, not fading; late season.

a Sorrento — cl. *obtusum* ♀ × unknown pollen parent; (Mr. T. Lelliott, 15 Owen Street, Boronia, Victoria, Australia); fls. hose-in-hose, pink (H.C.C. 27/2–27/3) with a yellow flush in the throat; first flowered 1960.

Steven Foster — cl. 'May Day' × *haematodes*; (C. S. Seabrook, Tacoma, Washington, U.S.A.); plant roundish, 24 in. high at 10 years; lvs. with some indumentum, dark green, glossy; fls. in loose truss slightly more upstanding than in 'May Day', campanulate, to 2¾ in. across by 2 in. deep, Blood Red (H.C.C. 820); early.

Theale — cl. 'Penjerrick' × 'Hawk Crest'; (Crown Estate Commissioners, The Great Park, Windsor, Berks., England); lvs. 4½ in. long, 2¼ in. broad, narrowly ovate, without indumentum; truss open but not loose, 10-flowered; fls. widely funnel-campanulate, 2 in. long, 2½ in. across, Primrose Yellow (H.C.C. 601/2), slight flush of Cardinal Red (H.C.C. 822/1) in throat at base of 3 upper petals; calyx 5-lobed, irregular, upper 6 mm. long, lower 3 mm. long, greenish-yellow. A.M. (R.H.S.) 1966.

Thimble — cl. Salmon-pink flowered seedling of *R. campylogynum*; (raised by Captain Collingwood Ingram, The Grange,

Benenden, Cranbrook, Kent, England); lvs. 1 in. long by ½ in. broad, narrowly ovate, glaucous and brown, scaly below; fls. 1 to 3 per cluster, campanulate, salmon-pink; calyx green, of 5 regular lobes; pedicels 1½ in. long. A.M. (R.H.S.) 1966.

Tilehurst — cl. 'Dido' × 'Sarita Loder'; (Crown Estate Commissioners, The Great Park, Windsor, Berks., England); lvs. 5 in. long and 2¼ in. broad, narrowly ovate, glabrous; flower truss 10 to 12 flowered, compact but not tight; corolla 1¾ in. long, 2½ in. diameter, Porcelain Rose (H.C.C. 620) at base of corolla shading to Carmine Rose (H.C.C. 621/1) at tip, colouring flushed and irregular, paler within, with some spotting on three upper petals; calyx near Porcelain Rose (H.C.C. 620) joined and irregular, up to 12 mm. long. P.C. (R.H.S.) 1966; selected for Wisley Trials.

a Tit-Willow — cl. 'Kirishima' ♀ × 'Malvatica'; (cross in 1938 by Stevenson, Tower Court, Ascot, England; introduced 1966 by Hydon Nurseries, Hydon Heath, Godalming, Surrey, England); evergreen; fls. pale silvery-mauve with long white stamens; free flowering, hardy.

Trianon — cl. *fortunei* × R. × Jalisco seedling; (Mr. Edmund de Rothschild, Exbury, Hampshire, England); plant of tall, compact habit; fls. rose pink with golden yellow throat.

a Velvet Gown — cl. 'Pink Perfection' × Kurume mauve seedling; (Messrs. John Waterer, Sons & Crisp Ltd., The Nurseries, Bagshot, Surrey, England); evergreen plant 1 ft. high, 3¼ ft. spread, vigorous, free flowering; lvs. 1 in. long, ½ in. wide, dark dull green; flower truss 2¼ in. diameter, compact, 1 to 2 flowered; fls. funnel-shaped, 1¾ in. diameter, 1¼ in. long, margins slightly waved, between Cyclamen Purple (H.C.C. 30/1) and Orchid Purple (H.C.C. 31), speckling on lower throat Oxblood Red (H.C.C. 00823/3); flowering from May 5, 1966. H.C. (Wisley Trials) 1966.

Vesper Bells — cl. *williamsianum* × *albertsenianum*; (Ben Lancaster, Camas, Washington, U.S.A.); plant 12 in. tall by 20 in. across in 8 years; lvs. oval, cordate at base, to 2½ in. long by 1½ in. broad; fls. 6 to 8 per truss, bell-shaped, 6 to 7 petals, to 3 in. across by 1¾ in. deep, Rose Bengal (H.C.C. 25/2) in bud, opening to H.C.C. 25/3; mid-April.

Vulcan's Bells — cl. 'Vulcan's Flame' × *williamsianum*; (Ben Lancaster, Camas, Washington, U.S.A.); plant sturdy, 24 in. tall, 30 in. wide at 10 years; lvs. 2½ in. long by 1½ in. wide, oval, slightly cordate at base; fls. 6 to 8 per truss, clear Rose Red (H.C.C. 724), open bell-shaped, 2½ in. wide, 2 in. deep; early mid-season.

War Lord — cl. ('Tally Ho' × 'Britannia') × 'Britannia'; (Knap Hill Nurseries Ltd., Woking, Surrey, England); fls. deep and brilliant red in well-formed trusses; mid-May.

Wayne Pink — cl. A Dexter seedling of unknown parentage; (John Knippenberg, Laurelwood Gardens, Wayne, New Jersey, U.S.A.); plant 6 ft. high by 6 ft. wide in 12 years; lvs. to 7 in. long by 2½ in. wide; fls. 19 to 22 in 7 in. high dome-shaped truss, Spiraea Red (H.C.C. 160/3) up to 3½ in. across; late May.

Winifred Merson — cl. *formosum* ♀ × *burmanicum*; (Mr. T. Lelliott, 15 Owen Street, Boronia, Victoria, Australia); fls. Uranium Green in bud (H.C.C. 63/2), opening to white with Chrome Yellow flush (H.C.C. 605/1); first flowered 1962.

Yaku Sunrise — cl. 'Vulcan's Flame' × *yakusimanum* (F.C.C. form); (Ben Lancaster, Camas, Washington, U.S.A.); plant 12 in. tall by 18 in. across at 5 years; lvs. dark green, slightly recurved, to 3 in. long by 1½ in. broad; fls. 10 per compact truss, open bell-shaped, 5-petalled, to 2¾ in. across and 1½ in. deep, Rose Madder (H.C.C. 23/2), deeper at margins and on the back of the petals; early May.

a Yaye — cl. Interspecies hybrid of Gumpo selection; Gumpo azalea derived from *R. indicum*, *kaempferi* and *eriocarpum*; (introduced to U.S.A. from Japan, without name, by Mrs. Julian W. Hill and Mary Louisa B. Hill, 1106 Greenhill Avenue, Wilmington, Delaware 19805, U.S.A.); plant vigorous, spreading, medium low habit, 18 in. high and 36 in. across; lvs. bluish; fls. single, white, chartreuse in throat, with salmon stripes, heavy texture, ruffled, 3¾ in., sometimes with an all pink flower appearing and sometimes one with salmon pink border and white throat; top flower buds sometimes winter killed; late May and June flowering.

Yellow Bells — cl. 'Cunningham's Sulphur' × 'Moonstone'; (cross made by Don Newkirk, raised and introduced by Ben Lancaster, Camas, Washington, U.S.A.); plant 2 ft. tall and 2 ft. across in 10 years; lvs. glossy, wax-like, to 2½ in. long by 1½ in. wide; fls. 10 to 12 per truss, bell-shaped, to 1½ in. across and 1½ in. deep, Chrome Yellow (H.C.C. 605/1 to 605/3), ruffled; mid-April.

a Yuka — cl. Interspecies hybrid of Gumpo selection, derived from *R. indicum*, *kaempferi* and *eriocarpum*; (originated in Japan, introduced into U.S.A., without name, by Mrs. Julian W. Hill and Mary Louisa B. Hill, 1106 Greenhill Avenue, Wilmington, Delaware 19805, U.S.A.); vigorous medium-low, mounding and spreading shrub; lvs. medium green, evergreen; fls. 3 in. across, mostly pure white and unruffled, some with streaks of strong pink (Nickerson 10 R. P. 7/8); mid-June.

Zyxya — cl. 'Barclayi Robert Fox' ♀ × 'Elizabeth'; (Major-General E. G. W. W. Harrison, Tremeer, St. Tudy, Cornwall, England); fls. 6 per truss, Blood Red (H.C.C. 820) without spots, 4 in. across, 2½ in. long, April flowering; first flowered 1963. A.M. (R.H.S.) 1966.

Amplified Descriptions

a Bengal Beauty — cl. 'Diamio' × *simsii*; (Mr. M. Haworth-Booth, Farall Nurseries, Roundhurst, nr. Haslemere, Surrey, England); evergreen plant 2 ft. high, 3¼ ft. spread, vigorous, upright compact habit, free flowering; lvs. 2½ in. long, 1 in. wide, light glossy green; flower truss 3½ in. diameter, 2½ in. deep, compact, 2 to 3 flowered; fls. funnel-shaped, 2 in. diameter, 1⅜ in. long, margins slightly waved, Phlox Pink (H.C.C. 625/1), veined and flushed Tyrian Rose (H.C.C. 24/1), light dotting on lower lobe brown; flowering from May 28, 1966. A.M. (Wisley Trials) 1966.

John Marchand — cl. *moupinense* × *sperabile*; (raised by John Marchand, exhibited by Captain Collingwood Ingram, The Grange, Benenden, Cranbrook, Kent, England); lvs. 1½ in. long and 1 in. broad, broadly elliptic, free from indumentum; fls. 3 in loose truss; corolla open-campanulate, 1¾ in. long, 2 in. across, close to Neyron Rose (H.C.C. 623) shading at tip to 623/1; calyx rudimentary. A.M. (R.H.S.) 1966.

a Persil — cl. [Knap Hill Hybrid]; (Messrs. Walter C. Slocock Ltd, Goldsworth Nursery, Woking, Surrey, England); plant 3¾ ft. high, 2½ ft. spread, vigorous, compact, free flowering; lvs. 3 in. long, nearly 2 in. wide, deciduous; flower truss 5¼ in. diameter, 4¾ in. deep, globe-shaped, compact, up to 20-flowered; corolla 2½ in. diameter, 2⅛ in. long, funnel-shaped, margins slightly waved, white, blotch on upper lobe, Buttercup Yellow (H.C.C. 5); flowering from May 13, 1966. H.C. (Wisley Trials) 1966.

Romance — cl. *elliottii* ♀ × 'Jacquetta'; (Lord Aberconway, Bodnant, Tal-y-cafn, Denbighshire, N. Wales); lvs. 9 in. long and 3 in. broad, narrowly elliptic, soft, loose, woolly, light brown indumentum on lower surface; fls. 12 to 14 in fairly tight truss, widely funnel-campanulate, 2½ in. long and 3 in. wide, Geranium Lake (H.C.C. 20/1), base of corolla Oxblood Red (H.C.C. 00823/3), inner surface freely speckled with Cardinal Red (H.C.C. 822); calyx rudimentary. A.M. (R.H.S.) 1966.

a Spek's Brilliant — cl. [Mollis] × Kosterianum clone; (raised by Jan Spek; sent to Wisley Trials by Messrs. Sunningdale Nurseries, Windlesham, Surrey, England); plant 4 ft. high, 4 ft. spread, vigorous, fairly compact habit; lvs. 2½ in. long, 1 in. wide, deciduous; flower truss 4½ in. diameter, 3½ in. deep, globular, compact, 9-flowered; corolla 2 to 2¼ in. diameter, 2 in. long, funnel-shaped, margins smooth, Vermilion (H.C.C. 18/2) tinged Mandarin Red (H.C.C. 17/1) and Vermilion (H.C.C. 18/1), upper throat touched a colour near Saffron Yellow (H.C.C. 7/1); flowering from May 2, 1966. H.C. (Wisley Trials) 1966.

Telstar — cl. H.C. (Wisley Trials) 1962. A.M. (Wisley Trials) 1966.

The Master — cl. H.C. (Wisley Trials) 1964. A.M. (Wisley Trials) 1966.

a Vuyk's Scarlet — cl. F.C.C. (Wisley Trials) 1966.

a William Hardijzer — cl. [Mollis]; (Messrs. Willem Hardijzer & Co., The Nurseries, Reijerskoop, Boskoop, Holland); plant 4½ ft. high, 5 ft. spread, vigorous, slightly spreading habit, very free flowering; lvs. 2¾ in. long, 1 in. wide, deciduous; flower truss 4¾ in. diameter, 4½ in. deep, globular, compact, 14-flowered; corolla 2½ in. diameter, 2 in. long, funnel-shaped, margins slightly waved, Peach (H.C.C. 512) along mid-rib and throat, remainder Porcelain Rose (H.C.C. 620) flushed Scarlet (H.C.C. 19/1), blotch on upper lobe Orpiment Orange (H.C.C. 10); flowering from May 12, 1966. H.C. (Wisley Trials) 1966.

Correction

a Hino Red — Page 188 of 1966 Rhododendron and Camellia Year Book of the Royal Horticultural Society, London, should read 'Hino Scarlet'.

a Hino Scarlet — See description of 'Hino Red' on page 188 of 1966 Rhododendron and Camellia Year Book.

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Figures in Clarendon type refer to illustrations
(*) *denotes Award made after Trial*
(a) *denotes Azalea*

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