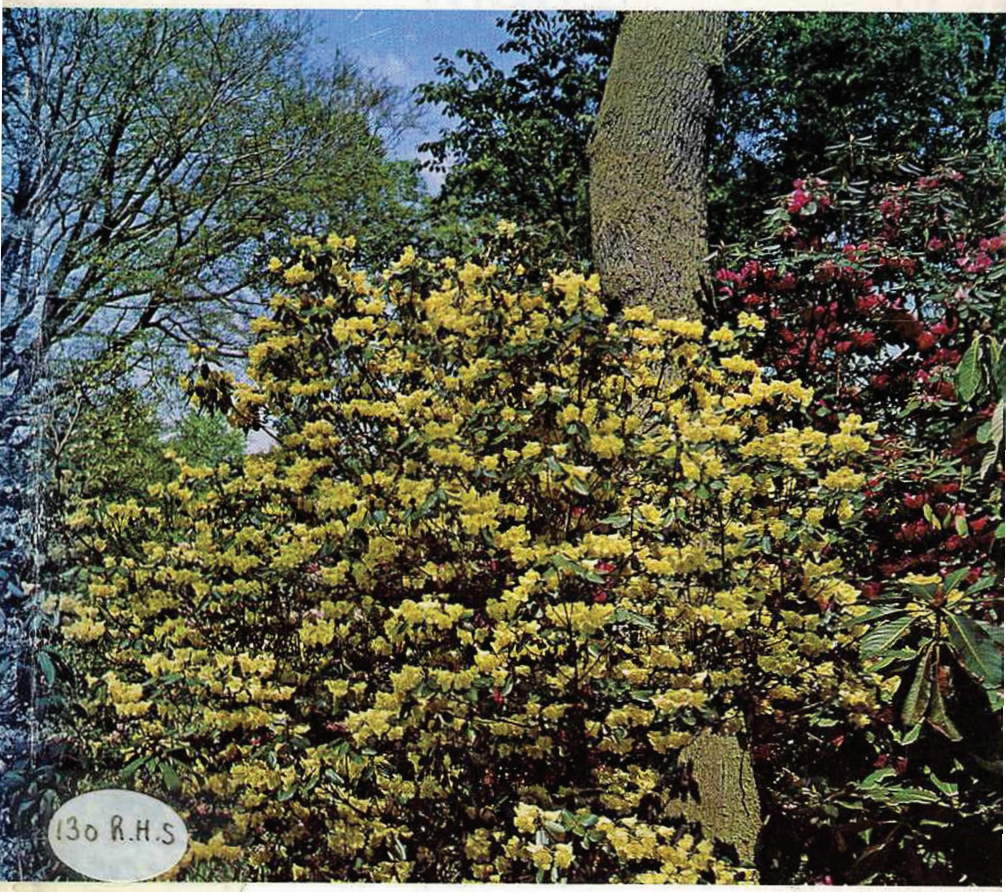
Rhododendrons 1972



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RHODODENDRON, CAMELLIA
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A ROYAL HORTICULTURAL SOCIETY GROUP

2017

RHODODENDRONS 1972

WITH MAGNOLIAS AND CAMELLIAS

The Royal Horticultural Society
LONDON

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FOREWORD

It is a great pleasure to welcome the publication of the 1972 rhododendron, camellia and magnolia year book. The previous series had to be discontinued due to financial reasons, and it is to be hoped that this modified edition can be a viable proposition and will be continued in future years.

The year book serves two useful purposes; to give a report on awards, registration of plants, and shows, which keep readers up to date with recent introductions. The other is the publication of various articles on how rhododendrons and camellias thrive, both at home and abroad. Here we must thank our assistant editor—Mr. Alan Hardy—for obtaining and compiling such a varied collection of contributions. Emphasis on *Rhododendron* species, both new and otherwise occupy a major section of the book, showing the universal interest they create.

Finally I would like to bring to the readers' attention several items. New articles, or even short notes, will be gratefully received for future year books. Secondly the Rhododendron and Camellia Competitions in the R.H.S. Halls are held in the spring of every year and more entrants would be welcomed (there are novice classes for those who have not won prizes before). Last of all there is the Rhododendron and Camellia group for all interested in these genera. Details of all the above can be obtained from the Secretary of the R.H.S., Vincent Square, London, SW1P 2PE.

Giles Loder

RHODODENDRONS AT WAKEHURST PLACE
THE STORY SO FAR

A. D. SCHILLING

For many years Wakehurst Place has been well known as a garden possessing a wealth of plant material built up largely by Gerald W. E. Loder, later Lord Wakehurst, between 1903–36 and added to later by Sir Henry Price who subsequently bought the Estate.

The accent had in the main been on species rather than hybrids and Wakehurst had in consequence earned a reputation of being a plantsman's garden with a particularly fine representation of the hardier Australasian and South American plants. However in addition to these exotic Southern Hemisphere attractions there had also been a large amount of Asian and American plant material introduced over the years and Wakehurst had amongst other things a considerable reputation as a rhododendron garden.

In 1965, following the death of Sir Henry Price, the gardens were bequeathed to the nation and the administration came under the control of the Royal Botanic Gardens, Kew. An assessment of the plant collections revealed that rich though the rhododendron collection was there were many gaps. By 1968 after three years of preliminary relandscaping and the planning of future reclamation programmes it was decided by the Consultative Panel, which meets twice yearly to advise upon the technical administration and management of the gardens, that a Rhododendron Series Collection should be established in Westwood Valley.

This beautiful almost ravine-like valley running east-west comprises 50 acres of very undulating rock-outcropped terrain with a wide range of aspect, soil type and even altitude (approximately 375 ft. a.s.l. down to 150 ft. a.s.l.). Here then was the beginning of what has already in the short space of four years proved to be a most exciting programme.

The first decisions related to the planning out of the various zones for the Series and Sub-series, a headscratching but fascinating business, because to assess the best use of the 50 acre site turned out to be a fairly complex operation. We began by breaking down the Series into their different natural 'cultural groups'. The Cinnabarinum Series for instance demanded a relatively sunny aspect, but at the same time with adequate moisture in the soil. On the other hand the Falconeri, Grande and Lacteum Series required a well sheltered site and were relatively more tolerant of some degree of shade. The sandiest and sunniest site was given to the Triflorum Series and the shadiest site to the Ponticum Series, although here as elsewhere one had to aim for some variety within the area as, although *R. ponticum* and many of its near relatives are very shade tolerant, *R. yakusimanum* insists on full sun to give of its best.

In addition to these problems one also had to consider the numerical size of each Series and Sub-series and the area it was likely to take up. The variation within a single species and the number of sub-species involved was also a serious consideration and one quickly began to realise how rapidly the,

at first seemingly vast, 50 acre site was being used up. Very soon it was decided that the dwarf species in such Series as Lapponicum, Boothii, Saluenense, Lepidotum and Anthopogon, would be better accommodated in the Heath Garden and the large Azalea Series used as a 'link planting' leading across to the edge of the main valley plantings in Westwood Valley. After much musing, thinking and re-thinking throughout the summer of 1968 the Curatorial staff involved was finally certain of what was to be, and a detailed plan was ultimately drawn up and approved by the Consultative Panel.

Whilst the planning stage was going on the gardens staff had been involved in thinning, clearing and 'culling' operations throughout the gardens and many interesting plants neglected during recent years had in consequence come to light. During the general routine work many old buried or fallen labels were retrieved and caused much excitment as the dirt was rubbed off and the names of scarce species were read off and collectors numbers deciphered. Often one could only read part of a label and much time and research was sometimes needed to work out, by a process of elimination, the illegible part. At the time I remember referring to this stage of developments as being 'rather like plant hunting in the wild but better', as one had all the excitement of discovery but little of the actual discomfort which one so often experiences in the field.

Many of the more unusual fine specimens were identified by the Herbarium staff at Kew and gradually a picture of the strengths and weaknesses of the collections began to appear. Even now at the time of writing we still do not know the full story as the annotation of a collection of this size takes more than just a few years to complete. In order to help things along many plants have been transplanted from the Kew collections to fill certain gaps and some of these have been of considerable stature as well as interest. One particularly large specimen of *R. argipeplum* weighed ¾-ton and was actually planted after dark late one January afternoon by the lights of a Massey-Ferguson 135 tractor and a Land Rover!

Due to the sad lack of past records it has often proved impossible to locate collectors numbers or relate any form of scientific collecting data to many of the exciting plants. By carefully questioning older members of the staff much useful information has been gleaned but for every problem solved a dozen remain a mystery.

The Wakehurst Award plants of *R. simsii* (F.C.C. 1933) (surely too flamboyant a pink to be true), *R. argyrophyllum* (A.M. 1934) and *R. rubiginosum* 'Wakehurst' (A.M. 1960) were happily rediscovered, but who knows today which of our several fine plants of *R. fulgens* received the Award of Merit almost 40 years ago in 1933? It is tempting but dangerous to guess.

Perhaps the most interesting results of the assessment operations have been connected with the rarer or more tender species which have been identified as being present here at Wakehurst. Amongst the more tender may be included *R. delavayi, R. wilsonae* (10 ft. tall and partially exposed to the east winds!), *R. elliottii, R. eriogynum* (12 ft. tall and 15 ft. wide), *R. stamineum, R. zeylanicum, R. valentinianum,* as well as a variety of the only slightly less tender species such as *R. crassum* and *R. araiophyllum.*

The list of those which might aptly be described as scarce, difficult or rare in cultivation reads with interest also containing as it does such plants as *R. arizelum* (red form) F. 21861, *R. chrysanthum,* 1 ft. tall and 3 ft. wide, *R. exasperatum, R. argipeplum* (once known as *erosum*), *R. longesquamatum, R. mallotum* (both Forrest and Farrer collections), *R. succothii* (L.S.H. 21295), *R. lacteum, R. inopinum* (which suitably translates as 'unexpected'), *R. semnoides, R. semibarbatum, R. ririei* almost 20 ft. tall, a really fine deep pink form of *R. pseudochrysanthum* under the Wilson number of 10928 and various fine pale pink forms of *R. hypoglaucum.* To round off this list of scarcity is the doubtfully correct *R. sinofalconeri* a species of somewhat doubtful status, only discernible from *R. falconeri* by microscopic differences in the indumentum.

During the last two years the rationalisation of the planting density in Westwood Valley has been effected and quite drastic, but carefully calculated, thinning operations have taken place to make room for the future plantings. Many fine examples of rhododendron species, far too large or awkwardly positioned to consider transplanting, have been classed as out-of-Series amenity plantings and will stay where they are to finish their natural life. Other smaller plants which are out of context, especially those plants verified by the Herbarium and having collecting data, are being moved to their appropriate positions in other areas of the valley. Once this long and often physically demanding task of 'Arboreal Shuffling' has been completed we will at last be in a position to see clearly where the gaps in the collections are.

As stated earlier we are already aware of many gaps. Often it is relatively easy to lay hold of a given species, but to get hold of material with a collection number or some other proof of originality is often a far more difficult matter. The Heliolepis Series in particular seems to be one with a particular paucity of collection numbers. At the other end of the scale some species are 'two-a-penny' with collecting data. We have for instance *R. campanulatum* from Ludlow Sherriff and Hicks (Bhutan), Stainton Sykes and Williams (W. Nepal) and Spring-Smythe (E. Nepal) and *R. hodgsonii* from four different collectors ranging from Spring-Smythe's East Nepal collections through Ludlow Sherriff and Hicks and Bowes Lyon's plants from Bhutan down to Cox and Hutchison collection from North East Frontier Agency. Already it is proving difficult to find room for some wild collected plants as the different species blocks are planted up.

Rhododendron arboreum (and here I include, for the sake of convenience, *R. cinnamomeum*) is especially well represented at Wakehurst. Various mature plants exist in various colour forms ranging from the really dark red form through rose to pure white and many of these must date back to the early planting years of Gerald Loder. No records exist as to their origin but recently plantings have more than made up for this as during the last three years over 50 plants of Spring-Smythe's collections have been placed out along a broad steep north-facing wooded hillside.

It is interesting to note already the variation in leaf colour, especially indumentum, and in years to come a wide range of flower colour will no doubt become evident too. Of particular interest is the variation of hardiness

within this species, even between plants collected from the same altitude. For instance Spring-Smythe's *Rhododendron arboreum* No. 18 (7,000 ft. Chitre, E. Nepal) is far and away hardier than my own collection of the same species from 7,000 ft. in the Katmandu foothills (Schilling 1111). This at first may seem somewhat strange until one pauses to think that the Chitre plant comes from close in to the main Himalayan range where the climate is harsher.

One could ramble on at length touching upon many other fine points of interest relating to the many excellent rhododendrons at Wakehurst. Suffice to mention the three star marking that George Forrest placed in his field notes against our exquisite collection of *R. caloxanthum* F. 27123 with the additional remarks and notation '. . . the type I think and strikingly beautiful. One of the best of the class'. His field notes that accompany this entry are enough to make any plantsman worth his salt yearn to pack a rucksack and make off into the great unknown in search of similar treasures!

Soon after the rhododendron policy was agreed a list of all the A.M. and F.C.C. plants listed in the RHS Species Handbook was made out and the many growers who possessed these fine forms have been very generous in their response to our various requests for vegetative material. As this is intended to be a botanical collection it has also been decided to represent particularly poor forms of species in order to illustrate more obviously the very wide variation that does occur within some species.

Such are the near-ideal growing conditions in Westwood Valley that much natural regeneration occurs and the most interesting of these include *R. glischroides, R. hypoglaucum, R. falconeri, R. sinogrande, R. niveum, R. ciliatum, R. sutchuenense* and *R. fictolacteum.*

Here then is the story so far. There are many problems (cultural and otherwise) to be overcome and much patience and hard work necessary before the collection is anything like representative. We have already added a little fame to the collection when we obtained one more Award of Merit for a Wakehurst Rhododendron species with *R. araiophyllum* 'George Taylor' in 1971. The cultivar name was chosen to honour Sir George Taylor our past Director, who was largely responsible for negotiating the Ministry of Agriculture, Fisheries and Food's acquisition of Wakehurst Place by lease from the National Trust as a satellite garden to Kew for a period of 99 years. Within this generous span of time the Rhododendron Series Collection will undoubtedly have ample opportunity to flourish and grow to maturity amidst the arboreal beauty of Westwood Valley.

The magnificent and richly varied collections of trees and shrubs which have been built up at Wakehurst Place over the last seventy years, coupled with the unpolluted atmosphere, kinder climate, higher rainfall and better soil render the Gardens ideal for the purpose for which they have now been acquired. On the first class foundations already laid by previous owners it is hoped to accumulate further botanical collections that will enhance the long-held reputation of Kew and make Wakehurst Place, as Kew already is, a national possession in which Britain may take a justifiable pride.

YAKU . . . WHICH?

DAN E. MAYERS

The controversy which rages about *R. yakusimanum* begins with its name—which should, it appears, follow that of the island on which it is found, the island of Yakushima. However, as there are more important things to discuss, we may leave this example of reverse Japlish to be relished by the taxonomists.

The history of the plant is well known and brief; before the last war Mr. K. Wada, with the effortless ease of a magician producing a pair of rabbits, shipped two remarkable plants to Lionel de Rothschild for his garden at Exbury. The best plant was kept at Exbury, and the other—almost as good—was given to Wisley, and it was awarded an F.C.C. For reasons not at all clear to me, the Exbury plant has not received this award, though there seems no reason that an F.C.C. can not be awarded to two clones of a single species.

From a strictly taxonomic standpoint (surely God must have loved the Taxonomists—one is tripping over them everywhere) it is probable that the species *R. yakusimanum* does not exist, but is merely, along with *R. makinoi, R. metternichii,* and *R. metternianum,* a varietal form of a single species (which?). However, as each of these varietal forms seems quite distinct and breeds true the matter is academic—pardon me, taxonomic.

Let us consider, for a moment, the qualities which endear *R. yakusimanum* to the rhododendron fraternity.

1. The foliage is *R. yakusimanum's* chief glory; the leaves are beautifully shaped, have a fine indumentum (no matter that you have to turn the leaf upside down to see it—it is one of those unimportant things to which the in-group attaches great spiritual significance) and cover the plant completely. There is none of the rugged grace of a spindly half-naked shrub begging to be turned into a large bonsai. A well grown *R. yakusimanum* is as symmetrical and firm as a barrel cactus—a very attractive characteristic indeed.

2. *R. yakusimanum* is slow growing and always looks, in any position, as though it is just the right size and shape for wherever it finds itself. It is a plant with *savoir faire.* Perhaps it may eventually grow too large—and it can always be pruned to keep it the proper size—but I doubt it.

3. The flowers are most attractive, and thoroughly in keeping with the overall spirit of refinement which the plant exhibits. Pink in the bud, opening to a flushed white, the trusses are compact, yet allow the beauty of the individual floret full scope.

4. *R. yakusimanum* is thoroughly hardy and relishes full sun.

In short, *R. yakusimanum* has all of the good characteristics that one looks for in a rhododendron and none of the drawbacks; as miraculous and rare as a pretty girl who has nothing but virtues.

Why, then, should anyone try to meddle with the plant? Why not simply propagate it by the million and get rich? Well, at this point some of the commercial facts of life enter the picture.

Obviously, the easiest thing to do is to self-pollinate the plant and raise the seeds. Although the plants are not enthusiastically self-fertile, it can be done. But the seedlings grow so slowly . . . it is 10 years before one has a plant of any landscape significance, and this is the real market—not the rhododendron enthusiast who will apostrophize a minute wee seedling. So, back to the drawing board . . .

Well, let's graft the plant or root cuttings. In either case, we have to have adequate scion material—and perhaps one of the main causes of the delightfully bun-shaped appearance of the comparatively few plants of the Exbury and F.C.C. forms that one sees in gardens is the shameless way that they are being constantly cut back to secure propagating material. However, grafted plants are, in principle, an abomination due to the problem of suckering, and as for rooting cuttings of this charming species . . . there are easier ways of making a living—running Lonrho, for example.

So, now we come to the subject of crossing *R. yakusimanum* with other rhododendrons—an infamous practice or one of the best things that has happened to rhododendron breeding, depending on one's viewpoint. People get excited about the matter. The curator of one of Britain's most important public gardens proposes one of the more ingenious Oriental practices for anyone tampering with the purity of the sacred plant's sex life. Others regard the plant with much the same eye as an artificial insemination centre regards its prize bull. As they are both right in their views let us try to make some sense of the matter.

If one regards *R. yakusimanum* as the epitome of elegance and beauty, then it is entirely true that any alteration in it, since it can not improve it, must produce a plant inferior to the *R. yakusimanum* parent. Accordingly, the lovers of the pure species form are perfectly justified in attacking the hybrids—the hybrids definitely are not the same as the species.

However, precisely because the hybrids so differ from the species, these differences can be judged on their own merits—not by comparing the hybrid to its species parent, but by examining the hybrid quite objectively and without preconceptions. On this basis, the hybrids have a great deal of merit—and not the least is that of variety in foliage, habit, blooming season and flower which, whatever may be its other manifold virtues, are certainly lacking in *R. yakusimanum.*

Let us, then, consider some of the characteristics of *R. yakusimanum* hybrids.

The first crosses made with *R. yakusimanum* were with the hardy hybrids—everyone seems to have crossed it with 'Doncaster', so let us consider this as a typical case. The result, briefly, is a series of nice, compact, small pink 'Doncasters'. Compared to its species parent, the cross has little to commend it—the foliage is coarse and typical of the hardy hybrids, the flower is undistinguished in size and faded in colour as compared to 'Doncaster'. As compared to its species parent, the hybrid is, objectively and without undue partiality to the species, a disaster. It is, however, an improvement in many ways on 'Doncaster'—it is much more compact and bushy and an ideal plant to set against the wall of a house as part of the under planting.

In comparing a hybrid with its parent *R. yakusimanum* one frequently loses sight of the fact that, while the hybrid may be inferior in every way to its species parent, it may be a great improvement, in some respects, on its other parent—and it takes two to play the hybridization game (later we will extend this to group marriage).

Once it became clear that no matter what one crossed with *R. yakusimanum,* the result was going to be a nice compact plant of variable foliage and flower, people began to be a bit more discriminating in their hybridization. If every damn fool could make nice saleable *R. yakusimanum* hybrids, then pretty soon only the best ones would be saleable. Ordinarily, when one crosses two plants, one keeps only a few—or perhaps only one—of the best seedlings and discards the remainder; the annual pre-war bonfires at Exbury were famous. With *R. yakusimanum* one doesn't have to discard anything—all the seedlings produce nice saleable bushy plants which, initially, could be sold like hot cakes. And the lovers of the species, observing the prostitution of their favourite, cried woe.

However, with increasing experience, discrimination, and market pressure, certain trends in the use of *R. yakusimanum* in breeding became apparent. These may be summarized as follows:

1. The search for a good red. *R. yakusimanum* is, basically, pinkish-white and the problem of producing a really bright red, without losing the typical *R. yakusimanum* foliage and habit, proved difficult. No matter what one tried, the result tended to be pink . . . or white . . . or slightly mauve. Nevertheless, by trial and error, the problem was solved and there are a number of good reds available for propagating, today, and doubtless some will reach the commercial market in the years to come. One of the best sources of red, interestingly enough, is through the use of 'Fabia'. By adding a first-class red to the *yakusimanum* x 'Fabia' hybrid—*R. eriogynum,* for example—one achieves a variable set of seedlings from which it is possible to select a plant which retains the *yakusimanum* habit and hardiness, with a vivid red colour. Another path is by crossing with 'Carmen' or *R. didymum* and so on. The use of only 25 per cent *yakusimanum* blood—as a grandparent rather than a parent—permits a very much greater variation in the seedlings and greater chance of finding one in the batch which is outstanding. This technique of using only 25 per cent *yakusimanum* blood will be a recurrent theme as other hybridization objectives are examined. In general, primary crosses of *R. yakusimanum* tend to be disappointing.

2. The search for a good yellow. This, as might be expected, proved more difficult than the task of achieving a good red. After all, when seeking red one can use such pronounced pigments as 'Fusilier', 'Matador', May Day', 'Tally Ho'. In searching for yellow the choice is enormously restricted, by comparison. The obvious cross of *yakusimanum* x 'Crest' and vice versa is an unmitigated disaster. However, by using 25 per cent *yakusimanum* blood in combination with various mixtures of 'Jalisco', *R. wardii,* and 'Fabia' (no matter what colour one is seeking, a little 'Fabia' helps) some first class yellows have been achieved, usually with a slightly red throat. One, at least,

is comparable in every way to 'Crest' in colour and size of flower, but with a vastly superior habit of growth.

3. The search for unusual colours. These may be regarded as more or less accidental off-shoots of the efforts to achieve a good red and a good yellow. A number of extremely attractive plants have resulted, with plain or ruffled flowers of yellow or light pink at the edges, darkening to attractive oranges and reds in the throat. Some of these will undoubtedly be named and propagated in due course. They add enormous colour interest to the general range of *yakusimanum* hybrids and are so unlike *R. yakusimanum*—only in their compact habit does one note the parentage—that even the confirmed lover of the species cannot help finding points of real merit in them.

4. Miscellaneous characteristics. In the course of seeking improved—or different flower colours, various secondary characteristics were also developed. Most of the hybrids are stronger growing than *R. yakusimanum*—if they grew as slowly as the species they would be a commercial disaster—but retain the nicely clothed habit of foliage and a generally compact, rather than spindly, appearance. A few crosses of *yakusimanum* x 'Carmen' and similar crosses with dwarf or prostrate species or hybrids—tend to be genuine dwarfs; *R. yakusimanum,* though a slow grower, is definitely not a dwarf. Other crosses have produced plants which grow to a height of about 18 to 24 inches and then spread horizontally, producing a flat table effect, in contrast to the domed habit of the parent species. The matter of indumentum, or lack of it I leave to the indumentum-fanciers. In short, *R. yakusimanum,* while keeping its offspring within tasteful bounds in shape and habit, has allowed great scope for their individual development—surely one of its most useful parental characteristics.

One lesson seems to be clear in the matter of selecting plants to cross with *R. yakusimanum.* The emphasis should be on plants with very strong colour rather than upon flower size. Crosses of *R. yakusimanum* with the Loderi's and other such plants noted chiefly for the size of flower tend to be less rewarding than crosses with plants having inherently smaller, but strongly pigmented flowers.

In Britain, the breeding of *R. yakusimanum* hybrids has been associated chiefly with Exbury Gardens and Waterer, Sons & Crisp. Exbury has made a vast number of primary crosses of *R. yakusimanum* with Exbury's best hybrids, and a number of the results will doubtless be named. Waterer, Sons & Crisp made fewer primary crosses, but their *yakusimanum* x 'Fabia' was a first class cross, and they used it systematically, in combination with various reds and yellows to produce a quite remarkable range of hybrids of every conceivable colour, flower shape, and habit. They are slowly naming and propagating the best of them.

Providing one adopts a rational view of the objective merits and defects of *R. yakusimanum* hybrids and profits from the hybridizing experience to date there is no reason why new and most attractive hybrids should not be produced in the future; the surface has not even been scratched. In effect,

one can, with enough patience and ingenuity, produce hybrids having most of the merits of *R. yakusimanum* in terms of habit and hardiness, yet blooming in a fashion seen hitherto only in the most refined woodland hybrids. Give the hybridizers another twenty years or so . . .

OUTLOOK ON CAMELLIAS FROM AUSTRALIA AND NEW ZEALAND

DAVID TREHANE

In the Year Book of 1963 Tom Durrant wrote vividly of old historical camellias in New Zealand, and two years later he dealt mainly with newer hybrids. Professor Waterhouse contributed notes on some Australian camellias to the Year Book for 1965, and A. W. Headlam followed in 1967 with an article on camellias in Melbourne, Australia.

Since then—silence, which I, on the wrong side of the water, have been invited to break!

The interesting feature, common to the three writers I have mentioned, is that they look back as well as forward, and I think that it is this inherent sense of continuity and historical values which enables the Australian and New Zealand raisers of new camellias to avoid the malformed horrors which get registered elsewhere and, so, to bring out camellias which are more suited to our taste and more likely to gain a lasting place in British gardens.

No one has done more to foster this sense of continuity and fitness than Professor E. G. Waterhouse, Foundation President of the International Camellia Society, prime mover in the formation of the Australian Camellia Research Society and much else, all of which earned him, on his 90th birthday last year the highest tribute for 'his devotion to discerning and honouring the good, the beautiful and the true'.

If it is fair to trace the first surge of development of new camellias in this century to the raising of the *williamsii* hybrids by J. C. Williams at Caerhays Castle in Cornwall, and of 'Donation' by Col. Stephenson Clarke at Borde Hill in Sussex, in the thirties, we must give credit for the second phase to Professor Waterhouse. His formal double, 'E. G. Waterhouse', demonstrated that the paeony flowers of 'George Blandford' and 'Caerhays' were not finality, but a beginning in the development of colour and form in *williamsii* camellias. 'E. G. Waterhouse' in 1954 and 'Shocking Pink' a year later widened the range into formal doubles.

'E. G. Waterhouse' is the camellia *par excellence* for small gardens, for it shapes up like a miniature Irish yew and carries its clear soft pink 4 inch flowers from top to bottom. The variegated form with blotched flowers was obtained by grafting on a virus-infected stock, an evil practice. 'Shocking Pink' is a deeper formal double, a darker pink which seems, somehow, to want to be a cabbage rose on a dense upright evergreen bush.

Most of the English *williamsii* hybrids are known to camelliophiles as 'blue' pinks. The blue tone is derived from the dark-flowered form of *C. saluenensis* Forrest 24090 and is not aggressive except in 'Caerhays' which, in cold weather, can look like 'Dona Herzilia' herself. We owe to Professor Waterhouse a choice of semi-doubles which are clear pink with no blue undertones, and which have been tested in this country since he wrote about them in 1965.

'Margaret Waterhouse', midseason, flowers abundantly; the semi-double flowers are not long lasting but they shatter when over and the bush is always clean. 'Crinkles', the same pale pink, is very late with petals packed like a shaving brush. 'Clarrie Fawcett' is quite charming, a rounded twiggy bush with simple, medium-sized clear pink cup-shaped flowers. 'Ellamine', by contrast, might be considered blowsy, a robust green pyramid loaded with massive, darker pink, wide bell-shaped flowers. They need a bird repellent spray when opening, for great-tits love to nip the top two petals. 'Farfalla' is quite different, a strong upright bush, expanding at the top, fairly late with 3 inch pearl pink trumpets, a quiet plant.

The finest of the clear pink semi-doubles are 'Sayonara', 'Bowen Bryant' and 'Lady's Maid', flowering in that order. I would recommend anyone tempted to plant 'Hana-fuki', known as 'Chalice', a *japonica* camellia, to look at these three before doing so, for they all have 3½ to 4 inch wide bowl-shaped flowers, made pendent by their weight, but not excessively so like 'Mrs. D. W. Davis'. They are nicely spaced out in succession on dense upright bushes and, what is more, they drop when over. If I had to choose one it would be 'Bowen Bryant'.

'Charles Colbert' is a similar but smaller semi-double. My own plant is fastigiate to 8 feet and still going up.

Of Professor Waterhouse's *williamsii* camellias of which I have experience there remains 'Lady Gowrie', with wide-opening flowers shaped, notched, and coloured like great 4½ inch dog-roses. They come late on a wide spreading bush and shatter when over.

Contemporary with these camellias from Australia is a group, somewhat similar, of darker pinks raised by Dr. Doak in New Zealand, and classified as *saluenensis* x *reticulata* hybrids. 'Phyl Doak' is the one acclaimed by both Professor Waterhouse and Tom Durrant and it has been described as strong, almost tree-like, covered with flowers, in New Zealand. In this country it is at first weak and spreading, later pushing up more erect branches, with many flowers close in colouring to 'Lady Gowrie' but much earlier, mid-season, and it does not manage to drop them when over. In this respect 'Phyl Doak' is surpassed by 'Brian' and 'Barbara Clark' the flowers of which are neater and brighter, their growth stiffer but still spreading.

I was asked the other day 'What is there special about *williamsii* camellias? Is it just prestige value?' The question was asked in Cornwall, where one might fairly acknowledge the prestige of Caerhays. The answer is important for it is the ability of the *williamsii* camellias to make more efficient use of light and heat in perfecting and opening more flower buds than any other camellias (except *cuspidata* hybrids!) which has extended both the season and the geographical limits, in our case into Scotland, within which camellias can be flowered outdoors. Most of them have the other great attribute, the ability to shed, either whole or by shattering, their spent flowers.

For the third surge of development we must move to New Zealand. There the greatest advance in extending the range of colour and form in *williamsii* hybrids has been made by Les Jury of New Plymouth (his grandfather emigrated from Plymouth, England) adhering to a deliberate breeding programme combined with a ruthless elimination of all but the best. He first selected from many forms the best breeding stock of *C. saluenensis* and then,

instead of using some modern dinner-plate camellia as the other parent, chose Shepherd's Australian of 1862, 'Leviathan', to get 'Anticipation', a great full paeony crimson, up to 6 inches across outdoors or under glass. This hybrid has just been granted the first award of the Dr. John Taylor Award in the USA for the best non-reticulata hybrid. From preliminary trials it looks like being a success in Scotland.

Next comes 'Grand Jury', a cross between *saluenensis* and 'Salutation', giving it a dash of reticulata blood. It has 5 inch loose paeony flowers. They open before Christmas under glass, pale pink with a warm flush, and they are not so delicate as they look outdoors but this hybrid has yet to make its mark in this country.

A cross between 'Chandler's Elegans' and *saluenensis,* appropriately named 'Elegant Beauty', follows. This is a spreading grower with strong arching stems, bronze young foliage, and large rose-red semidouble or paeony flowers, all of which make it a good choice for grouping with *Pieris formosa forrestii.*

Next, in 1964, comes 'Elsie Jury'; the most advanced *williamsii* hybrid in commerce today, raised from *saluenensis* x 'Pukekura White'. This has beautiful clear pink anemone or paeony flowers, 5 inches across, perfect under glass and, surprisingly for so large a flower of this colour and texture, reliable outdoors. In 1967 'Elsie Jury' won the Aubrey Harris Award of the American Camellia Society and, in 1968, the Edward Metcalf Award of the Southern California Camellia Society, for the outstanding hybrid of the year. This is a compact upright grower.

'Daintiness', *saluenensis* x 'Magnoliaeflora' has clear pink flowers of lovely form, early, under glass, but outdoors it is too like 'Brian' or 'Barbara Clark', with only a claim to the longest lasting flowers to give it supremacy. Had it appeared first it would have stayed first!

Using 'Debutante' as the *japonica* parent, Les Jury raised 'Debbie', A.M. 1971, a hardy camellia in every way. Not every camellia has the substance to obtain an award of merit after being blown off the roof of a car! Its downward sweeping branches are wreathed with perfect 3 to 4 inch paeony flowers which drop whole before they become brown. The colour is such a bright 'blue' pink that I prefer 'Debbie' planted in a group on its own, when it is outstanding early and late. There are two Australian *japonica* camellias almost identical in form and size, 'Centenary', presumably 1870, a crimson pink, and 'Chandler's Victory', salmon pink, introduced in 1947. The American variety, 'Aaron's Ruby' matches them in a rich ruby red.

'Highlight' is a *reticulata* 'Purple Gown' x *saluenensis* cross, with dark burnished leaves on upright growth. Under glass it is a winner with large shining vinous red semi-double flowers. Outdoors it appears to be bud-tender except in the south-west.

Les Jury has still some new ones coming along, among them 'Wilbur Foss', a large paeony flower in a full-bodied claret on a strong upright bush. 'Gay Time', contrary to its name, is a quiet flower, a soft orchid pink rose-form double, 4 inches across.

'Water Lily', on the other hand, justifies its name completely. It is a

formal double, 4 inches across, with a rosebud centre, raised by Les Jury's brother Felix. The lavender-pink petals have a translucent glow and a dark rolled rim, the whole instantly reminiscent of a water lily. This is a true *williamsii* hybrid, *saluenensis* x 'K. Sawada'. I have not seen Felix Jury's 'South Seas', a pink semi-double raised from *saluenensis* x 'C. M. Wilson', but the same cross made by Miss Carlyon in Cornwall has yielded a nice high crested flower.

I wonder how many British nurserymen would get away with the lavish mixture of flamboyant challenge and philosophy which adorns the catalogue of Roly Barry of South Taranaki Nurseries. To quote–'Morning Glow–quite honestly I think this is a waste of a good name and, by sales, others must too' and, of 'Josephine Duell', 'It would be said that repetition and sameness destroy a value. Thus again we see floral beauty jostling for position in the estimates of man. It is truly a beautiful flower; however the right of choice is yours but do not pass it lightly without pausing to picture and evaluate its possible influence in your daily living'. This latter dictum could apply to many, many, pink camellias and, indeed, the hybrids raised by Mr. Taylor of Christchurch, New Zealand, must surpass it if they are to make their way over here. 'Wynne Rayner', raised by B. J. Rayner of Stafford, New Zealand, is already making its mark in the USA.

There are some surprises among the newer Australian hybrids yet to be introduced. 'Donation' has a penchant towards producing good formal doubles, such as 'Rose Parade' from the USA, and one wonders if 'Corinne Dawn' and 'Robyn McMinn' from Australia are as good. 'Ann Hazlewood' is a red semi-double seedling from 'Donation'.

Some people under-rate 'Cornish Snow' because the individual flowers are small, but Fred Tuckfield, noted for large reticulata seedlings, has, with admirable catholicity, named two pink seedlings from it 'Bellbird' and 'Turkish Delight'. It will be interesting to see how they compare with the *cuspidata-japonica* cross, 'Cornish Spring', exhibited by Miss Carlyon at Truro Show in 1971, with its beautiful bronze foliage.

Progress would not have the hallmark of modernity without a *granthamiana* hybrid and, sure enough, Mrs. McMinn has crossed this species with 'Spencer's Pink' to get 'Autumn Glory', a white and pink single.

Professor Waterhouse, in the 1965 Year Book mentioned the advent of 'Ellie Rubensohn' upon the Australian scene as a major event. How right he was! Since then no less than thirteen other *reticulata* seedlings from Australia, and sixteen from New Zealand, have appeared in *Camellia Nomenclature* and there are more to come. Many of these hold out an unrewarding prospect for British nurserymen because they are semi-double pinks and the, relatively few, buyers of *reticulata* camellias in Britain take a lot of convincing that there is anything better than 'Captain Rawes'. Therefore the ones I would like to see are Mr. Spencer's 'Emily Box', a rose-form to formal double; Mr. Sebire's paeony-form 'Cherry Glow'; Mr. Tuckfield's paeony 'Winter Sun' and the rose-form to formal double named after himself, 'Fred Tuckfield'.

From New Zealand Mr. Clark's 'Lisa Gael', a pink rose-form double

excites interest. His hybrid between 'Barbara Clark' and 'Somersby', a formal double pink, named 'Anzac', may provide some confirmation that 'Barbara Clark' is really a *reticulata* hybrid. 'Anzac' and 'Highlight' are the only two hybrids among a company of straight *reticulata* seedlings, perhaps because, in both Australia and New Zealand, *C. reticulata* is such a superb success outdoors that there is no incentive to cross it with *japonica* camellias.

I have concentrated, so far, mainly on hybrids because the indications are pretty clear that they will capture the market in Britain, and, for that matter, France, as their range of colour and form is extended. This is being done not only in the Antipodes but also by at least two British raisers, working to the standards of Les Jury, and so the wheel of change comes full circle.

Following Professor Waterhouse's lead, I would say of *japonica* camellias that what is needed is a re-valuation of the old varieties alongside a comparative trial of the new. California has cottoned on to 'Great Eastern' (1873); 'Australis' (1862) attracts attention here, 'Centenary', 'Mariana' and 'William Bull' are fine camellias and, among the more recent ones 'Waverley', 'Janet Waterhouse', a neat white, 'Jean Lyne', a variable flower, 'Paul Jones', 'Laurie Bray', 'Red Ensign' and 'William Bartlett' are good. There are many others, but none of them hits the headlines because of its massive show form, like 'Drama Girl' in the USA and it is easier, therefore, to overlook varieties which could be very fine over here. I am making a modest planting of one of each in rather cramped space in Cornwall but we do need an equivalent, over here, to the E. G. Waterhouse Memorial Garden, first phase *seven acres*, in Australia.

Perhaps influenced by the success of 'Spencer's Pink', Australia has produced more single camellias than any other country. 'Alexander Hunter', with red petals and eucryphia-like stamens, is the best known here but 'Teringa' is a reflexing brick-red, 'Mattie Cole' an improvement on 'Daitarin' ('Hatsu-zakura'), 'Jennifer Turnbull' a delightful pink, 'Henry Turnbull' a good white.

The Australian camellia 'Aspasia Macarthur', raised in 1850, has probably given rise to more sports than any other in the Antipodes, and continues to do so. Dr. Smart recently showed one of the most attractive, 'Margaret Davis', an ivory white with an eye-catching narrow red edging, registered in Australia in 1961. The colouring is reversed in 'Jean Clere', a sport from Hawera in New Zealand, registered in 1969, with red flowers edged white. If these are as sportive as 'Betty Sheffield Supreme' heaven help the poor propagator who can never take a cutting without wondering what sort of flowers it will produce and living in perpetual fear of the wrath to come!

In conclusion let me dispel one illusion. Many people assume that camellias from the warmer climates of California, Australia and New Zealand must be lacking in hardiness. This is not so. Hardiness is built into the plant and much research is going on to determine where it resides. At present, in *japonica* and *williamsii* camellias, and in *reticulata* hybrids too, it is a matter of proof not origin. 'Berenice Boddy' from California is rock-hardy, whereas 'Souvenir de Bahuaud Litou' from France is useless outdoors.

On the other hand the problem of acclimatising a camellia rudely transplanted from its quiet autumn rest in Australia into the rigours of midsummer

growth in Britain is a very real one, accentuated by the fact that they come over with the roots washed free of soil. It may take the importer three years to prove the variety and raise a stock but the problem of acclimatisation is his alone, in the first year, and does not pass to the gardener with the plants.

CAMELLIAS AT SOUTH LODGE, HORSHAM

EDITH GODMAN

Camellia 'Donckelarii' takes me back to my earliest recollections of flowers in the nursery, picked from a large plant on the south wall of the house. This must now be well over 100 years old, as it was too good a shrub for my father to disturb when he rebuilt the house in 1883. It flowers abundantly every year, usually from about the end of January to the end of April, and this year even until mid-May, but it has been known to open its first bud in December. Against nurserymen's advice to plant camellias with a north aspect, it flourishes facing south and flowers far more profusely, but the dangers of drought have to be avoided by heavy watering in summer. Opinions differ as to the cause of the more or less extensive white flecks on the red flowers, but we have found that the earliest blooms to open are more speckled and the later ones more often are whole-coloured.

Two other plants which may well be centenarians are *C.* 'Mathotiana' and *C.* 'Imbricata Alba' which were moved as fair-sized trees to a cold north-facing greenhouse when the conservatory was pulled down in 1911. These two flower abundantly every year and although 'Imbricata Alba' begins before Christmas, and gets browned by the frost from time to time, it continues almost uninterruptedly until April. 'Mathotiana' is scarcely out in time for the early Camellia Show and has a shorter flowering season, but it is smothered with huge blood red flowers in March–April.

It was probably in the 1930's that my mother was given a collection of camellias from Portugal, which we grew out of doors. Amongst these were 'Mathotiana' and 'Augusto Gouveia Pinto' (a sport of 'Mathotiana'). Neither of these plants was happy, and their growth was thin and straggly with small flowers of plum-colour and bluish pink respectively. We realised that the colour was due to cold, so we moved them to the greenhouse where, sheltered and well-fed, they regained their proper colouring of blood red and a beautiful rosy pink. Curiously enough, when we first flowered 'Augusto' out of doors and exhibited it at the R.H.S., it was greeted with enthusiasm as the 'blue Camellia of Portugal', but when shown later, a rich rosy pink, interest seemed to wane! It is strange that chilled camellias with a purple tinge are acceptable in shows, whereas the least touch of brown frosting is enough to disqualify them from a prize–'Augusto' shows its 'Mathotiana' origin by occasionally sporting red, or producing a red-streaked flower. Both these strains have the habit of dropping off the whole head intact and these will last in water floating like water lilies for more than a week. In contrast 'Imbricata Alba' falls petal by petal like a snow storm–and the white and pink 'Mathotiana' also disintegrate, although the former (not the latter) is supposed to be a true 'Mathotiana'.

Another large plant in the greenhouse, 'Adolphe Audusson', we brought back from France just after the war, when foreign currency was still so scarce that we could only afford two plants. There are probably more variants (and possibly more names) for Adolphe than almost any other camellia, but I understand that the Japanese recognise the clear stamens as the truest form,

though the many-petalled centre may be on the same plant. These broken centres are sometimes due to cultivation, or perhaps the lack of it, and are more frequent out of doors. In a similar way, by over-feeding 'Augusto' will become almost cabbage-like with wavy petals instead of the normal perfect arrangement. The pink 'Chandleri', which also came from France, similarly has a more perfect rosette of petals in the centre when it is doing well, though it may deteriorate into an uncertain double.

Two great additions to the garden were made by Colonel Stephenson-Clarke, 'Donation' and 'Salutation'–the latter fairly hardy but more difficult to propagate. 'Donation' forms a lovely Christmas-tree-shaped plant, and in its early days, about 4 feet high, received the Peer Trophy in two successive Camellia Shows, first by itself, and secondly as one of three plants considered the most beautiful exhibit in the show.

One of the very satisfying plants is 'Herme' with its frilly pink flowers edged with white. We first saw it and tried without success to obtain it under the name of 'Souvenir de Henri Guichard' in France. Later we were delighted to find its counterpart at Wisley under the name of 'Herme' and recently I was told it also rejoiced in a Japanese name, 'Hikarogense'.

Americans have added a whole host of camellias to our gardens, and there are now an endless variety flowering throughout the spring–so perhaps I should end by mentioning the latest flowering of them all, 'Dr. Balthazar', one of the Portuguese collection which is still producing flowers 4 inches across, firm enough to pick, beyond the middle of May. It is reminiscent of 'Countess Lavinia Maggi' with its blush pink flowers streaked with red, and its sports a rosy pink (with darker streaks), and also a deep pink–but it is outstanding for its sharply fimbriated edge. It is well worth growing in itself, and has the additional merit of extending the camellia season for another week or two.

May, 1972

MAGNOLIAS IN ASSOCIATION WITH RHODODENDRONS

T. H. FINDLAY
The Great Park, Windsor

It has been my good fortune to have grown a large number of rhododendron species and hybrids, and everyone knows that with the exception of the alpine species and their hybrids, they require some form of shade during the sunnier times of the day, especially in mid-summer.

I do very strongly advocate magnolias for this purpose. All types can be used as they enjoy the same conditions as the rhododendrons. Large, medium and small forms can be used; in addition the bush forms give a contrast in foliage and in flower. Here at Windsor we have had the opportunity to plant all the hardy types, and we are fortunate in being able to do this on a fairly large scale.

Magnolias are gross feeders, and it pays in the long run to give them the best of planting conditions. The hole for planting should be prepared widely as the magnolia is a surface rooter; old manure, bone meal and leaf soil should be incorporated during the preparation, and for the first season do not let the plants suffer from drought.

It is advisable to plant small plants; 1–3 feet high is large enough. March and April are the best planting months for them—never in mid-winter.

For the large garden, species both from America and China make trees sometimes attaining a height of 60 feet with ease. Those from North America include *M. acuminata, M. fraseri, M. macrophylla* (a magnificent foliage tree with very large leaves, and requiring a little wind protection), and *M. tripetala* the Umbrella tree. These magnolias flower in June and July, when the young leaves are on the trees.

From China and Japan we have the well-known *M. campbellii, M. dawsoniana, M. mollicomata* and its various forms, and *M. sargentiana robusta,* which is probably the best for general planting. The Chinese species all flower in early spring before the leaves appear, and no finer sight can be seen than trees 60 feet high carrying some 500–1,000 nine-inch wide, usually pink flowers.

The Japanese *M. obovata* is also a wonderful shade tree, but unlike the above mentioned Chinese forms it flowers in June when in full leaf, a very easy magnolia.

The well known hybrids between *M. campbellii* and the sub-species *mollicomata* are well worth planting. The hybrid 'Charles Raffill' has proved hardy, a good grower and free flowering, and the hybrid *M. veitchii* is one for all gardens.

Most of the plants mentioned above take from 10–15 years to flower from planting, and one may have to wait 20 years for *M. campbellii,* but meantime the young trees are giving beautiful and shade-producing foliage.

For the small garden *M. kobus* and *M. salicifolia,* and their many hybrids can be used. These make small trees up to 20–30 feet and flower, in early spring, soon after planting. They associate wonderfully with early rhododendrons in late April.

Another species for the small areas is *M. sprengeri* which makes a small, compact tree, up to 20–30 feet, and flowers freely after eight to ten years. The flowers come before the leaves. The best forms should be sought, these are deep carmine pink.

For shade purposes the above are all recommended magnolias. They can be easily pruned, and pruning is best carried out in May and June. A well balanced tree should have one third stem and two thirds branches.

When tree magnolias are planted they should be given root room; that is, do not plant rhododendrons close to the main stem, for magnolias hate their roots being injured.

AN ACCOUNT OF THE SPECIES OF RHODODENDRON FOUND BY THE UNIVERSITY COLLEGE BANGOR NEPAL EXPEDITION 1971

ROY LANCASTER

The aim of the above expedition was to collect the seed of wild species and cultivated crops in East Nepal.

The horticultural project, comprising Leonard Beer, Roy Lancaster and David Morris, was principally concerned with the introduction of new species and improved forms of hardy plants into cultivation.

The area covered by the horticultural project lay in N.E. Nepal, bounded in the east by the River Tamar, in the west by the River Arun, north to the border with Tibet.

To the best of our knowledge, only Dhwoj and Sharma, J. D. Stainton, and T. Spring Smyth had previously collected in this area.

In late June, 1971, Leonard Beer set out from Dharan on a reconnaissance which was to last three months.

In the following September the main expedition flew into Tumlingtar situated on the River Arun at approximately 1,500 feet.

During the next two months, until their return to Dharan on the 9th December, members of the horticultural project travelled between 400 and 500 miles, collecting in the following vegetational zones: deciduous and rhododendron forest (8–10,000 feet), conifer and rhododendron forest (10–13,000 feet), alpine (13–16,000 feet).

The number of seed collections made totalled 401, of which 32 were of rhododendrons.

These collections have since been distributed among 80 shareholders and several major institutions, including The Royal Horticultural Society, The Royal Botanic Gardens, Kew, and The Royal Botanic Garden, Edinburgh.

Rhododendron Species Recorded

Herbarium specimens were made of the majority of rhododendrons encountered by the horticultural project. As part of the main collection these have been deposited with the Botany Department of the British Museum.

The following list of herbarium specimens is published through the kind co-operation of Mr. L. H. J. Williams of the above institution. All identifications are those of Mr. H. H. Davidian to whom the expedition is extremely grateful.

It is of some considerable satisfaction to members of the horticultural project that Mr. Davidian's list confirmed all but three of their field identifications.

8214	*R. lepidotum*	8236	*R. cinnabarinum*
8225	*R. lepidotum*	8237	*R. setosum*
8226	*R. camelliiflorum*	8238	*R. anthopogon*
8233	*R. dalhousiae*	8239	*R. wightii*

8240	*R. campanulatum*	10732	*R. triflorum*
8247	*R. lepidotum*	10740	*R. fulgens*
8276	*R. anthopogon*	10766	*R. campanulatum*
8287	*R. wightii*	10767	*R. campylocarpum*
8325	*R. setosum*	10770	*R. wightii*
9420	*R. lepidotum*	10780	*R. lepidotum*
9489	*R. camelliiflorum*	12210	*R. lepidotum*
9551	*R. pumilum*	12226	*R. thomsonii*
10056	*R. ciliatum*	12229	*R. ciliatum*
10064	*R. glaucophyllum*	12250	*R. virgatum*
10065	*Cf. R. lepidotum*	12263	*R. dalhousiae*
10094	*R. thomsonii*	12273	*R. vaccinioides*
10176	*R. lepidotum*	12288	*R. dalhousiae*
10177	*R. lepidotum*	12308	*R. camelliiflorum*
10178	*R. fulgens*	12309	*R. ciliatum*
10181	*R. wightii*	12319	*R. glaucophyllum*
10625	*R. grande*	12326	*Cf. R. imberbe*
10637	*R. camelliiflorum*	12333	*R. lepidotum*
10666	*R. lepidotum*	12335	*R. fulgens*
10674	*Cf. R. cinnamomeum*	12336	*R. vaccinioides*
10686	*R. nivale*	12339	*R. pumilum*

Also found by the horticultural project but specimens not collected were the following species: *R. arboreum, R. barbatum* and *R. hodgsonii.*

Seed Collections

A total of 32 collections were made representing 17 species. The collections are as follows:

B.L. & M.		B.L. & M.	
26	*R. ciliatum*	287	*R. wightii*
92	*R. wightii*	294	*R. campanulatum*
153	*R. camelliiflorum*	298	*R. virgatum*
217	*R. setosum*	300	*R. dalhousiae*
220	*R. cinnabarinum*	305	*R. dalhousiae*
228	*R. thomsonii*	314	*R. ciliatum*
231	*R. anthopogon*	315	*R. glaucophyllum*
233	*R. hodgsonii*	323	*R. hodgsonii*
234	*R. cinnabarinum*	324	*R. ciliatum*
239	*R. triflorum*	325	*R. barbatum*
260	*R. thomsonii*	327	*R. campanulatum*
279	*R. lepidotum*	329	*R. glaucophyllum*
280	*R. cinnabarinum*	330	*R. fulgens*
281	*R. anthopogon*	332	*R. anthopogon*
283	*R. campanulatum*	336	*R. vaccinioides*
286	*R. setosum*	344	*R. campanulatum*

An Account of the Species

The following individual accounts are based on observations made in the field.

The following points should be noted:

(*a*) The upper tree line in the area worked by the horticultural project occurred between 12,000 and 13,000 feet, sometimes continuing a little higher in sheltered valleys.

(*b*) Tree species occurring between 12,000 and 13,000 feet consisted mainly of the following: *Abies spectabilis, Juniperus recurva, Betula utilis, Acer papilio,* and various *Sorbus* sp. including probably *S. microphylla.*

(*c*) The altitude range shown for each species is that recorded by the horticultural project.

(*d*) Seed collection numbers are indicated after the localities in which they were found.

(*e*) Rhododendrons were encountered in the following 13 locations, all of which are indicated on the accompanying plan (Fig. 14): Milke Danda; Jaljale Himal; Topke Gola (Fig. 1); Mewa Khola; Syamjung Khola; Thudam; Lhesa Khola; Bagang Khola; Piling Khola; Upper Arun; Barun Khola; Iswa Khola; Kasuwa Khola; Lower Arun.

R. anthopogon (9,800–16,500 feet)

A common species above tree-line and together with *R. setosum* forming low thickets rather like the common heather on a pennine moor. Sometimes, forms were found in which the normally greyish-green leaf upper-surface was brown, and occasionally both forms occurred growing together, the two looking very distinct.

Milke Danda; **Jaljale Himal**, including a single specimen with a late terminal cluster of small reddish flowers; Syamjung **Khola**, here forming low blasted scrub between high screes at 15,000 feet; **Lhesa Khola**, with *R. setosum* and *R. nivale* at 16,500 feet the last shrubby vegetation before the Tibetan border; **Piling Khola**, (B.L. & M. 281); Bagang **Khola**, (B.L. & M. 231); **Barun Khola**, (B.L. & M. 332), growing on hillsides above 14,000 feet with *R. fulgens* and *Juniperus squamata.*

R. arboreum (6,500–10,000 feet)

A common species and usually the first rhododendron met with in the hills, forming forests, with single-stemmed specimens up to 40 feet or more.

The heavy leaf canopy creates a dark, damp and cool atmosphere and the stems are clothed with thick layers of moss, lichen, filmy ferns and others. Other epiphytes include *Cymbidium* spp. and other orchids, *Hydrangea heteromalla, Pentapterygium serpens* and *Vaccinium retusum.*

At lower altitudes the typical form possesses leaves with a silvery reverse; occasionally forms with a buff indumentum occur usually in the upper range of the species.

Milke Danda, here mixed with several deciduous trees including *Acer campbellii, A. sterculiaceum, A. pectinatum, Magnolia campbellii* and *Sorbus cuspidata*; **Mewa Khola**; **Bagang Khola**; **Upper Arun**, often on exposed hillsides with *Elaeagnus umbellata* var. *parvifolia;* **Barun Khola**; **Lower Arun.**

R. arboreum ssp. cinnamomeum (11,500–12,800 feet)

A form with rich rust-red indumentum occurred above 11,000 feet and here it was the dominant form often forming forest and thicket with specimens of 15–35 feet high. On exposed hillsides above Thudam it formed dense rounded bushes 3–6 feet in height.

R. barbatum (9,400–11,300 feet)

A superb species wherever it occurred, sometimes with specimens up to 30 feet high, the bark plum-coloured and delightfully peely. Usually growing with other species such as *R. arboreum* and *R. hodgsonii*, but occasionally forming large thickets as in the Barun Khola.

Milke Danda; **Thudam**; **Bagang Khola**; **Barun Khola**, (B.L. & M. 325) at 11,300 feet.

Under the number 12326 a specimen was collected from 10,500 feet in the Barun Khola which Davidian thinks resembles *R. imberbe.* Several shrubs were present, all of which resembled *R. barbatum* except that the slightly larger leaves were a distinct sea-green above and were carried on smooth petioles.

R. camelliiflorum (9,500 feet)

An uncommon species found on only three occasions, always as an epiphyte. A loose-habited shrub, the older stems with reddish, peeling bark; young shoots, buds and leaves beneath covered with small brown scales; leaves elliptic, 2–3 inches long, tapering to a blunt tip with a small mucro point, cuneate, dark green above; capsules borne singly or in pairs, short-stalked (½ inch), oblong, ¾ inch long with a short (¼ inch) bent style.

Mewa Khola, several small plants growing on moist rocks in a shady gully, also a large plant (B.L. & M. 153) 6 feet x 10 feet growing on top of a 20 foot high boulder; **Barun Khola**, as epiphyte on *Tsuga dumosa.*

R. campanulatum (10,500–14,000 feet)

One of the commonest species, found throughout the collecting area except in the Kasuwa Khola where it was replaced by *R. fulgens.*

Normally a medium-sized shrub, but variable in habit and leaf, some individuals were found with leaves 5 inches long.

Usually occurring in dense thickets, or mixed with *R. campylocarpum* and *R. cinnabarinum.* In the Topke Gola region commonly found with *R. wightii* and on the Jaljale Himal, with *R. thomsonii.*

Milke Danda; **Jaljale Himal**; **Topke Gola**; **Thudam**, (B.L. & M. 294); **Bagang Khola**; **Piling Khola**, (B.L. & M. 283); **Barun Khola**, (B.L. & M. 327).

R. campylocarpum (10,500–14,300 feet)

Normally found as a medium-sized shrub up to 12 feet, growing with other species such as *R. campanulatum* and *R. hodgsonii*, rarely forming

thickets of its own. A tree-like specimen of 15 feet with a single stem was found in the village of Thudam.

Milke Danda; **Topke Gola**; **Mewa Khola**; **Thudam**; **Lhesa Khola**, the last specimen a shrub of 3 feet at 14,300 feet: **Bagang Khola**; **Barun Khola**; **Kasuwa Khola.**

R. ciliatum (7,500–10,500 feet)

A dwarf shrub up to 3 feet, often forming dense low thickets particularly in wet flushes and in moist shady gullies.

Milke Danda, (B.L. & M. 26), a single plant on ridge; **Piling Khola**, a single plant; **Barun Khola**, (B.L. & M. 314 and 324), plentiful on both sides of the river from 9,500 to 10,500 feet. Large patches mixed with *R. glaucophyllum* and *Gaultheria semi-infera.* Several specimens showing precocious flowers which were white with a faint pink flush; **Lower Arun**, a single plant on a ridge at 7,500 feet.

R. cinnabarinum (9,400–13,000 feet)

Common throughout the collecting area, usually mixed with other species such as *R. barbatum* at lower levels, and with *R. campanulatum, R. campylocarpum* and *R. hodgsonii* higher up. Rarely forming thickets of its own. Shrubs typically tall and 'leggy', with sea-green leaves.

Milke Danda; **Jaljale Himal**; **Topke Gola**; **Thudam**, (B.L. & M. 280); **Lhesa Khola**; **Bagang Khola**, (B.L. & M. 234); **Barun Khola**; **Kasuwa Khola.**

R. dalhousiae (7,300–7,800 feet)

Always found as an epiphyte, growing on rocks, trees or dead stumps. A rather untidy shrub, erect and 'leggy', with leaves gathered towards the ends of the branches. Leaves elliptic-oblanceolate, 4–5 inches long, subacute, broad cuneate, green and glabrous and slightly rugose above, paler and speckled with small glandular scales beneath, petioles stout, ⅔ inch long; young shoots green, speckled with glandular scales; flower-buds terminal, large and conical, the broad, ovate scales fringed with minute hairs at the apiculate apices; capsules 2–4 borne on stout 1 inch long pedicels, each capsule 2 inches long, stout, tapering slightly to stout base of style, five-ribbed and gland-dotted, calyx large and glabrous, sepals ovate-elliptic, ½ inch long.

Upper Arun, (B.L. & M. 300), five plants growing among rocks on a rather dry, open hillside between Chepua and Honggaon at 7,800 feet. Accompanying shrubs included *Vaccinium dunalianum, Elaeagnus umbellata* var. *parvifolia, Viburnum erubescens* and *Osbeckia* sp. Several specimens 8–10 feet high growing on damp shady rocks in forest above Hatia (B.L. & M. 305), here growing with *R. vaccinioides, Embelia floribunda* and *Vaccinium gaultheriifolium*; **Kasuwa Khola**, several plants in forest growing on tall dead stumps; **Lower Arun**, several specimens again seen on dead stumps including one approx. 40 feet from the ground.

R. fulgens (12,900–15,000 feet)

In the form collected by the expedition, a most ornamental shrub 5–10 feet high with attractive peeling, pink, cinnamon and grey bark, in fact

quite the equal to *R. barbatum.* The elliptic leaves 4–5 inches long were rounded, with a small mucro-tip, cordate at base, polished dark green above, clothed with a thin woolly, fawn indumentum below; leaf buds pointed; flower buds rounded and conspicuous.

In general appearance it looked a feasible cross between *R. campanulatum* and *R. thomsonii*, with the leaves of the former and the bark and flower-buds of the latter.

Bagang Khola, a few scattered plants on a ridge at 12,900 feet, growing with *R. campanulatum, R. campylocarpum, R. cinnabarinum, R. hodgsonii* and *R. thomsonii*; **Barun Khola**, (B.L. & M. 330), occurring first with *R. wightii* at 13,000 feet and then climbing away higher, eventually petering out as low gnarled bushes at 15,000 feet; **Kasuwa Khola.**

Collected under the number 10178 is a specimen identified by Davidian as the above species. This deserves special mention in that it appeared so distinct in the field that we were tempted to refer to it as *R. campanulatum* var. *aeruginosum.* We found it on two occasions, both on the Jaljale Himal. The first time was at 14,000 feet, by the shore of a small lake. Here it formed a large, low thicket 2½ feet high of densely tangled stems not unlike those of *R. campanulatum* which grew nearby. The habit was neat and compact. The leaves oblong-elliptic, 4–5 inches long, of a striking sea-green above, covered on the undersurface with a pale, almost white indumentum, becoming buff-tinged with age and finally, on old leaves a rich rust colour. Later the same day and at a similar elevation we came across 'seas' of this same rhododendron in a remote valley. Here again we were struck by the remarkable uniformity of height, habit and leaf-colour, contrasting markedly with the variable *R. campanulatum* all around. In no way were we reminded of this rhododendron when we encountered *R. fulgens* two months later.

R. glaucophyllum (9,400–10,500 feet)

A low-growing twiggy shrub with slender wiry branches 1½–2 feet high; bark chestnut-brown, thin and flaking; young shoots green and glandular-scaly; leaves mainly clustered towards the ends of the branches, elliptic to narrowly so, 1–2 inches long, acute, broadly cuneate, dark glossy green above, glaucous beneath, speckled with glands, aromatic when rubbed; fruit-capsules terminal, three to five in an umbel, pedicels erect and glandular-scaly, 1 inch long, capsule ellipsoid, just over ¼ inch long, nodding or inclined, glandular-scaly and enclosed by the 'leafy' sepals.

Milke Danda, a single plant on ridge at 9,400 feet; **Barun Khola**, (B.L. & M. 315 and 329), plentiful on both sides of the river, often mixed with *R. ciliatum* and *Gaultheria semi-infera* from 9,800 to 10,500 feet.

R. grande (9,000 feet)

A superb species found only once at just over 9,000 feet in the Mewa Khola. We found several specimens forming loosely-branched trees of 20–30 feet, with stout green and glabrous young shoots, the large rounded terminal buds with tightly-appressed scales. These contrasted with those of *R. hodgsonii* which are long and pointed, with scales free at tips. The handsome leaves were mainly gathered at the ends of the branches. They varied in

size from 10–18 inches long and were elliptic to elliptic-obovate, acute, rounded at base, dark glossy green above, covered with a thin silvery indumentum below. Each leaf was carried on a stout petiole 2 inches long.

R. hodgsonii (10,500–12,500 feet)

This was the first of the large-leaved species encountered on the Milke Danda. It was also the commonest, and was preferred to all other species by the sherpas and porters for use as firewood. It often formed thickets and small forest between 11,000 and 12,500 feet, with specimens up to 25 feet or more.

In a sheltered gully in the Bagang Khola we walked early one morning through a small wood composed entirely of this species. The majority had superb 20–30 feet tall trunks with cinnamon and pink-tinged bark peeling in large sheets as in the American Paper Birch (*Betula papyrifera*). The ground beneath was patched with freshly-fallen snow, and this, heightened by the slanting shafts of wakening sun painted a picture and a memory we shall never forget.

The large obovate leaves were green and shining above, with yellowish-green midrib and veins. The undersurface was clothed with a pale buff indumentum which became silvery on exposure to the light. Young vigorous specimens looked splendid, with leaves often to 15 inches long, the upper surfaces sprinkled with hoar-like indumentum.

Milke Danda; **Topke Gola**; **Mewa Khola**; **Thudam**, including a single stemmed specimen of 18 feet in the village; **Bagang Khola**, (B.L. & M. 233); **Piling Khola**; **Barun Khola**, (B.L. & M. 323); **Kasuwa Khola**, forms with green, and purplish-brown leaf buds.

R. lepidotum (10,000–15,000 feet)

A common species throughout the collecting area, occurring just below and well above the tree-line where it mixed with *R. anthopogon* and *R. setosum*. It is a variable species in habit and leaf size and shape, and the number of herbarium specimens collected by the horticultural project reflects this variation. Much of the *lepidotum* seen had already assumed the orange, bronze and red tints of autumn.

Milke Danda; **Jaljale Himal**; **Topke Gola**; **Syamjung Khola**; **Thudam**; **Lhesa Khola**; **Piling Khola**, (B.L. & M. 279); **Barun Khola**, including a single bush with terminal umbels of purple flowers.

R. nivale (16,500 feet)

This little shrub was found only once at 16,500 feet in the Lhesa Khola, an hours march away from the Tibetan border. It formed low hummocks of tangled wiry stems 5–6 inches high. Young shoots reddish and scaly; leaves elliptic, up to ¼ inch long, greyish-green and scaly above, covered with green and reddish scales beneath. The whole plant was aromatic when bruised. It occurred in some quantity on exposed slopes on both sides of the valley, usually in company with *R. anthopogon* and *R. setosum*, these three species being the last woody vegetation in the upper reaches of the valley.

R. pumilum (13,300 feet)

Found only once on the main expedition, this species had been collected in the Iswa Khola by Leonard Beer on the reconnaissance.

The second finding occurred at 13,300 feet on a ridge in the Kasuwa Khola. Here several plants grew by the track, accompanied by *Gaultheria pyroloides* and *Diplarche multiflora*. The prostrate branches were shortly ascending (2–3 inches) at the tips and the young shoots reddish and slightly scaly; leaves elliptic, ½ inch long, acute or subacute and mucronate, rounded to broad cuneate at base, shining bronze-green above and slightly scaly or glabrous, pale green and speckled with scales beneath, margins slightly revolute; capsules ½ inch long, born singly on slender erect pedicels 2–2½ inches long from the tips of the shoots, one to three per shoot.

R. setosum (12,000–16,500 feet)

A common species above tree-line, forming dense carpets on hillsides and high plateaux, usually in the company of *R. anthopogon*. The general leaf colour was brownish-green or greyish-green but in the Lhesa Khola a single plant was found which possessed golden-yellow leaves. Small rooted pieces of the latter were carefully detached and hopefully potted-on but unfortunately they have since perished.

Jaljale Himal, often with *Cassiope fastigiata;* **Topke Gola**, **Syamjung Khola**; **Lhesa Khola**, at 16,500 feet with *R. anthopogon* and *R. nivale*, (B.L. & M. 217); **Piling Khola**, (B.L. & M. 286).

R. thomsonii (11,000–13,000 feet)

One of the most attractive species with its smooth flaking creamy-brown or pink-tinted bark. Variable in leaf, sometimes orbicular and dark green with a striking bloom above, others elliptic-orbicular or ovate-orbicular, medium green and without bloom. Often occurring as dense continuous forest between 11,000 and 12,000 feet, with specimens up to 15 feet high. Usually found mixed with other species, such as *R. campanulatum*, *R. campylocarpum* and *R. cinnabarinum*.

Milke Danda; **Jaljale Himal**; **Lhesa Khola**, here forming imposing piles of sea-green foliage between the warm orange-brown stems of *Betula utilis;* **Bagang Khola**, (B.L. & M. 228); **Piling Khola**, (B.L. & M. 260); **Barun Khola**, mixed thickets with *R. barbatum* at 11,300 feet; **Kasuwa Khola**.

R. triflorum (8,300–10,000 feet)

A loose-habited shrub, forming tangled bushes of slender crooked stems with flaking pinky-chestnut bark. The ovate-elliptic leaves 2–2½ inches long were green and glabrous above, glaucous beneath and dotted with brown glands. The oblong, brown, scaly capsules were carried in threes or occasionally in pairs at the tips of the shoots. Plants in open positions attained 5 or 6 feet whilst under trees straggly specimens of 8–10 feet occurred.

Bagang Khola, (B.L. & M. 239), common amongst undergrowth of *Gaultheria fragrantissima, Leycesteria formosa* and *Hypericum hookeranum;* **Upper Arun**, a few plants growing by the track between Chyamtang and Chepua, in a relatively dry, exposed situation with *R. virgatum*, *R. arboreum* (silver-backed leaf) and *Elaeagnus umbellata* var. *parvifolia*.

R. vaccinioides (7,600–8,400 feet)

This well-named epiphytic shrub was found on three occasions, but not until we found it in fruit were we able to confirm that it was in fact a species of *Rhododendron.*

Stems slender and flexible 1–1½ feet long, greyish-brown and swelling to form a thick, tuber-like base at point of attachment; young shoots rust-coloured and verrucose; leaves clustered towards the ends of the branches, oblanceolate, ½–⅔ inch long, retuse and mucronate, attenuate at base into short (1–2 mm) petiole, glossy dark green above, paler and with scattered glands beneath; capsules slender and curved, 1–1¼ inches long, reddish in colour and slightly pendulous, borne singly on a slender ½ inch long pedicel at the ends of the branches.

Upper Arun, on a tree by the track near Honggaon and on damp shady rocks above Hatia; **Kasuwa Khola,** (B.L. & M. 336), growing in the crotch of a tree 7 feet from the ground in forest at 8,400 feet.

R. virgatum (8,300 feet)

This rare species was found only once (B.L. & M. 298), growing by the track between Chyamtang and Chepua at 8,300 feet. Several plants occurred on a dry, exposed hillside, accompanied by *R. triflorum, R. arboreum* (silver-backed leaf) and *Elaeagnus umbellata* var. *parvifolia.* It formed an erect shrub 3–4 feet high, with slender straight, brown-scaly stems. The oblong to narrowly-lanceolate, bronze-green leaves 2 inches long were densely glandular-scaly below; capsules ⅓ inch long or just over, borne singly in the leaf axils, appearing racemose at leaf fall, style twice as long as capsule.

R. wightii (12,000–14,000 feet)

A common species, becoming dominant and forming dense continuous thickets in some of the higher valleys. Sometimes whole hillsides covered by this one species. It formed a medium-sized to large shrub or a small tree, occasionally to 15 feet in sheltered places. Its stems were a distinct grey colour which in the young shoots was almost white. This same colour showed itself in the buds and petioles. Leaves elliptic-obovate, acute, broad cuneate to almost rounded at base, green above, covered beneath with a thin smooth buff indumentum, becoming a rich rusty colour on older leaves; buds stout, the outer scales with recurved points.

Jaljale Himal; Topke Gola, (B.L. & M. 92), often mixed with *R. campanulatum;* **Thudam; Lhesa Khola,** dominant on north facing hillsides from 12,000 to 14,000 feet; **Piling Khola,** (B.L. & M. 287); **Barun Khola,** here dominant from 12,000 feet, giving way to *R. fulgens* at 13,000 feet.

RHODODENDRON HYPERYTHRUM

K. WADA

I was one of the people who wanted to grow in Japan many different kinds of rhododendron species as seen in Britain, and have been enthusiastically trying to raise such plants from imported seeds. I think that there are many others throughout the world who have similar ambitions. Unfortunately I have had little success because, as I discovered, our climate was wrong.

Most of the rhododendron species inhabit the southern part of Asia, at higher elevations. Nearer to the equator the difference between winter and summer temperatures becomes smaller. At higher elevations temperatures in summer and winter are lower and air humidity increases. Therefore, rhododendron species which flourish in the high elevations of Himalaya and the southern part of China do not experience a hot summer, a cold winter, nor dry air. They have no need to possess tolerance to extreme heat or cold, or to a dry atmosphere. In Japan, we are nearer to the North Pole and in a low-land area. The nearer to the North Pole that a locality is situated, the greater the difference between the summer and winter temperatures. The dry air in our lowlands cannot be tolerated by rhododendron species as they have not been accustomed to it in their native habitats. In the British Isles the story is rather different, because they are affected by the ocean current and kept warmer during winter and at high humidity.

Our winter in Japan is not very cold but our summer is too hot for most of the rhododendron species. The long spell of heat during the summer starts from the beginning of July and lasts to the beginning of September, never dropping below 80°F. throughout a whole day, day and night. Most rhododendron species except a few heat-tolerant ones, have their fibrous roots completely destroyed during the long spell of heat and gradually die.

The seeds of many different species of rhododendron given to me by generous English rhododendron people germinated very well and started to grow. But in the first summer, almost all of them gradually died. Some survived the first summer but looked unhealthy and did not survive the second or third summers. There were only a few exceptions, which I now call 'heat-tolerant species'. They could tolerate our summer heat without too noticeable deterioration and had enough vigour to grow and flower. These were *R. discolor, R. fortunei,* some forms of *R. decorum,* such species as originated from lower elevations of the more northerly part of China. Among the few survivals was *R. hyperythrum* and I found I could bring to flower many seedlings raised from the seeds given by generous Englishmen. It seemed to me very curious and interesting that related species from China and Formosa so far tried by me had failed to show such a degree of heat-tolerance.

In *The Species of Rhododendron* the native habitat of *R. hyperythrum* is given as Mt. Shichisei and the central regions of Formosa. But nobody has reported that *R. hyperythrum* has been found in central regions of Formosa. Several years ago Dr. Creech of USDA explored central regions of Formosa but seems not to have been able to find this species there. Central regions of Formosa have high mountains including Yushan (about 13,190 feet) and areas very high in humidity and nicely cool in summer (below 70°F.); these are

most suitable environments for rhododendrons. I think it was natural that many botanists were misled into thinking that the higher elevations in central regions could be a home of hardy species and that the low mountains in the north could only be a home of tender species.

Mt. Shichisei is the highest peak of Tatau Mountains and is reported 3,400 feet high, located 18 miles north of Taipei City. The home of *R. hyperythrum* is not the summit of Mt. Shichisei but the slopes facing north at lower elevations where there are not many frosts during winter; this area could be a home of tender species. At such low elevations in the sub-tropical area the summer may not be so cool as at the high elevations, 8,000 to 11,000 feet, which are the rhododendron homes in central Formosa. It is natural that this species must be able to tolerate high heat to flourish in such a sub-tropical area but I do not know why it has proved so winter-hardy. *R. hyperythrum* is most closely related to the *R. morii* from the high central regions of Formosa and may have migrated, having gained adequate heat-tolerance to adapt to low elevation hot-summer climates without losing its winter hardiness. *R. kawakamii* and *R. ellipticum (leiopodum)* are distributed at higher elevations but have not proved so winter-hardy as *R. hyperythrum.* These two species may have migrated from frost-free winter areas without losing too much of their original tenderness.

In *The Species of Rhododendron* it is also stated that the flowers of *R. hyperythrum* are spotted purple. The plants grown in English gardens have unspotted flowers, which are very pale pink opening to pure white. In the wild, *R. hyperythrum* plants have flowers that are pink to pinky white (darker in buds) with clear rosy purple spots on the upper lobes. Therefore I take the English *R. hyperythrum* plants to be an albino form of the type which comes true from seeds. When the albino form is crossed with other species the progeny sometimes show the characteristic spots of the type, but when self-pollinated the spots do not appear.

Near to Mt. Shichisei there is a town called Yangmingshan, famous for the hot springs, and rich men in Taipei City have summer houses there. This town has a better climate (cooler summer) for gardening than Taipei City and there *R. hyperythrum* will grow. I think it might be possible that some plantsman found the beautiful albino form in the wild and planted it in his garden, probably in Yangmingshan; some Englishman then obtained seeds from this plant and sent them to English gardens. The English white *R. hyperythrum* plants have a beauty of their own that the wild ones may not rival. More than a thousand plants of *R. hyperythrum* were recently collected in the wild and transported to Japan, and I hope some good clones will be selected from these collections. Most of these plants were collected not in or near Mt. Shichisei but east of Taipei City, near Kee Lung Kang, another home of *R. hyperythrum,* about 30 miles south-east of Mt. Shichisei.

I find *R. hyperythrum* is one of the few important species to produce heat-tolerant hybrids and is as heat-tolerant as *R. fortunei* and *R. discolor.* I expect we shall have some day many beautiful hybrids from this species that can grow like an evergreen oak in less favoured climates like ours and enrich those gardens where beautiful rhododendrons cannot at present be grown.

RHODODENDRON GIGANTEUM IN AUSTRALIA

A. W. HEADLAM

It was interesting to read Lord Aberconway's notes in the June, 1971 *Journal* about *R. sinogrande* at Bodnant, having set three flower buds after a wait of 38 years, and his hope that he would at long last see the flowers, provided that the next few weeks were free from frosts.

An interesting event in Australia has been the recent flowering of *R. giganteum* after a wait of 44 years. This rhododendron was imported from England (Gill's) in 1927, by Bert Chandler & Sons, Como Nursery at The Basin, Victoria. It was planted on a sheltered slope in the nursery, but did not appear to be happy in its location, and was subsequently moved by the late Mr. Bert Chandler to a site by a stream in a deep fern gully, which, over-shadowed by eucalypts, permits only filtered sunshine to penetrate and provides good protection against strong winds.

This year, six flower buds were formed and they were anxiously watched as the season progressed; although some frosts do occur at The Basin, they are less frequent and certainly not as severe as those at Bodnant, and in due course the trusses, carrying up to 25 florets, deep rose-crimson in colour, opened and were greatly admired by all who saw them.

Unfortunately, Mr. Bert Chandler, who recently died at the age of 90 years, did not see the flowers, which he for so many years looked forward to with great anticipation.

It is interesting that the leaves have only over the last four to five years, developed a thin grey indumentum.

THE SETTING OF FLOWER BUDS IN SOME RHODODENDRON SPECIES

GEOFFREY GORER

It is a matter of common observation to anybody who grows rhododendrons that different plants vary considerably in when, in the summer or autumn, flower buds can be unambiguously distinguished from growth buds; but, to the best of my knowledge, these variations have never been noted systematically.

In the summer of 1970, I took fortnightly notes on some of the rhododendron species in my garden in Sussex. I did not take notes on any of the plants in the Azalea Series nor on the dwarfs; and I also excluded species where the buds are axillary rather than terminal, such as *R. keysii, R. lutescens* or *R. scabrifolium.* I have also excluded those rhododendrons which I grow in a cool greenhouse; the plants of the Maddenii Series noted below are growing outside.

The summer of 1970 was a warm and dry one (after a rainy June) and very favourable for bud formation; it is probable that plants were a little earlier in forming their buds than they would be in less favourable seasons. But unsystematic observations in earlier years suggest that the sequence of bud formation is consistent from year to year.

By July 1, 1970, the following species already had identifiable flower-buds: *R. annae, chaetomallum* var. *hemigynum, chamaethomsonii, erubescens, insigne, melinanthum, orbiculare, oreodoxa* var. *reginaldii, souliei, succothii, vernicosum* var. *euanthum, wardii* (some clones only), *wightii.*

By July 15, 1970, the following had also set their buds: *R. aberconwayi, chaetomallum, caloxanthum, campylocarpum, discolor, fargesii, fulvum* (one clone), *leucaspis, mallotum* (one clone), *neriiflorum, praevernum, pseudochrysanthum, repens* var. *tumescens, smirnowii, sutchuenense, sutchuenense* var. *geraldii, thomsonii* (some clones), *uvarifolium, yunnanense.*

By July 30, 1970, the following had also set their buds: *R. anwheiense, augustinii* (some clones), *campanulatum, charitopes, crassum, davidsonianum, decorum, diaprepes, falconeri* (one clone), *fictolacteum, fulgens, hunnewellianum, johnstoneanum, oreodoxa, polyandrum, roxieanum, sperabile, sperabiloides, telopeum, venator, williamsianum.*

By August 14, 1970: *R. ambiguum, arizelum, auriculatum, bullatum, burmanicum* (one clone), *callimorphum, ciliatum, cinnabarinum* (L & S form), *concatenans* (some clones), *crinigerum, hardingii, imberbe, melinanthum, moupinense, panteumorphum, pocophorum, ponticum, praestans, strigillosum, thayerianum, valentinianum, xanthocodon.*

By August 29, 1970: *R. baileyi, beanianum, bureavii, cardiobasis, cinnabarinum* var. *roylei, concinnum, dichroanthum, formosum, glischroides, habrotrichum, haemaleum, hanceanum, makinoi, morii, rude, supranubium, tephropeplum, wallichii.*

A further 11 species developed their buds between the beginning and end of September; they were *R. adenopodum, argipeplum, burmanicum* (one clone), *ciliicalyx, carolinianum, cinnabarinum* var. *magnificum, erosum, griersonianum, hyperythrum, meddianum, makinoi.*

As can be seen, there is no apparent connection between the season when the buds are formed and the season of flowering; indeed some of the latest flowering species, such as *R. auriculatum* and *R. diaprepes,* form their flower buds comparatively early, almost at the same time as they open their flowers, and so carry their flower buds for nearly twelve months; whereas some of the early flowering species develop their flower buds comparatively late, and only carry flower buds for six or seven months.

There does appear to be some consistency within the series; nearly all the plants in the Fortunei and Thomsonii Series (with the exception of *R. meddianum*) form their buds comparatively early, and those in the Barbatum and Ponticum Series comparatively late. The plants in the Maddenii Series appear anomalous; members of the Maddenii Sub-series form their buds relatively early, those of the Ciliicalyx Sub-series relatively late. I wonder whether the season of bud-formation could be used as a diagnostic sign for assigning plants to their series or sub-series.

MALESIAN RHODODENDRONS

Something old, something new.

A. W. HEADLAM
Bentleigh, Australia

When writing on Malesian rhododendrons on the subject of something old, ones thoughts immediately turn to the only rhododendron indigenous to Australia, *R. lochae.*

In July, 1885, an expedition was led by A. C. Gregory in search of Ludwig Leichardt, an explorer who with a party of seven, had attempted to cross the continent from east to west, and whose fate remains one of the mysteries of Australian exploration. Gregory had as a botanist Baron Ferdinand von Mueller, who in 1853 had been appointed to the position of Victoria's first Government Botanist by Governor Latrobe, on the recommendation of Hooker. On seeing the mist-shrouded outline of Mount Bellenden Ker, von Mueller speculated whether rhododendron, vaccinium and plants characteristic of the cool Malayan sylvan regions would be found in its rain forests, but it was not for another 32 years, in 1887, that the first ascent to the mountain was made by Messrs Sayers and Davidson, when they did, in fact, find a rhododendron and a plant closely allied to *Vaccinium.*

The rhododendron was named *R. lochae,* after Lady Loch, in recognition of the patronage given by her to Victorian horticulture.

Over the years, a number of expeditions have been made to the rain-forests of North Queensland, Mount Bellenden Ker, Mount Bartle Frere and Black Mountain, and plants and seed of *R. lochae* have been collected, usually from altitudes of 2,000 ft and over, growing amongst the rocks and clefts in boulders, nearly always so placed that its roots are protected from sun and wind.

Plants, usually about 5 ft. high are often of a straggly nature, and have every indication of a battle for survival; the rather long branches occasionally layer themselves between rocks, and they have also been found growing epiphytically, their host being usually *Eugenia ventenatti.* There appears to be no mention of any attaining the height of 20 ft. as given in a description of the plant in the *Victorian Naturalist* of 1887.

The various plants and seed of *R. lochae* collected from these mountains have all produced the typically bright red flowers with little variation, and have been grown by discerning gardeners for many years.

R. lochae does well in a container with a very open mixture of peat moss, fern fibre and oak leaves, whilst some of the best specimens are grown in fern logs (*Dicksonia antarctica*) hollowed out sufficiently to hold some leaf mould and rotted vegetation. Given a modicum of protection from frost, they produce a profusion of bright red flowers over quite a long period during the summer months, in fact, odd flowers are produced throughout the whole of the year.

On the subject of something new among Malesian rhododendrons it was in 1959 that seed of *R. christianae,* collected in the Daga country of New

Guinea by Reverend Canon Cruttwell, reached the Australian Rhododendron Society through a member, Mr. Brian Clancy. Later seed of *R. arfakianum, R. konori, R. inconspicuum, R. macgregoriae, R. zoelleri* and *R. phaeopeplum* was received from Dr. Sleumer.

Seed was germinated by the Society and eventually seedlings were distributed to Members in 1961, probably the first distribution of plants of New Guinea rhododendrons anywhere in the world.

Flowers were eagerly awaited, and it was in February 1964 that *R. christianae* produced trusses of up to 6 florets with deep yellow tubes shading to bright orange at the lobes. Flowers soon followed on other plants, and Mr. T. Lelliott made a number of crosses, amongst them being *R. macgregoriae* x *R. lochae, R. lochae* x *R. christianae.* In 1966 plants of these hybrids were distributed to members.

Mr. Clancy's means of hastening the process of flowering by striking cuttings as soon as seedlings were large enough (*1969 Year Book,* p. 129) helped considerably in the production of new material, and he has also made a number of crosses.

Unfortunately, of the many hybrids flowered to date, there has been nothing either markedly different, or even as good as the parents. There is little doubt, however, that *R. lochae* has produced additional vigour and a degree of increased frost hardiness in its hybrids.

In the cross *R. lochae* x *R. christianae,* the number of florets per inflorescence has increased from 6 or 7 occasionally 11, but the colour has been dominantly that of *R. lochae.* Likewise the *R. macgregoriae* x *R. lochae* cross resulted in increased vigour and frost hardiness, and a change of colour from the deep yellow and orange of *R. macgregoriae* to again something closely approximating that of *R. lochae. R. christianae* x *R. jasminiflorum,* another early hybrid, produced flowers varying but little from those of *R. jasminiflorum,* and the pattern so far has followed fairly closely along these lines with the locally raised hybrids, the flowers being either fairly close to or intermediate between the parents.

Dr. R. M. Withers, perhaps better known for his work in the field of the genus *Lilium,* is a very keen grower of Malesian rhododendrons. He has successfully raised a number of new species, the seed of which continues to flow from friends in New Guinea. It may be of interest to comment on some of the hybrids grown by Dr. Withers—these are not locally raised, but are some of the hybrids made by Messrs Veitch nearly 100 years ago:

'Pink Delight', the best inflorescence to date with 14 flowers, produced a spherical truss some 7 inches across, the colour being in the pink tonings, and set off to advantage by an attractive collar of bright green leaves.

'Souvenir of J. H. Mangles' ('Crown Princess of Germany' x *R. javanicum*) has produced trusses with up to 9 flowers measuring 2¾ inches across, orange-red in colour. 'Clorinda' with flowers of a pleasing shade of rose pink, is also attractive for the shape of the truss and the collar of green leaves produced.

'Triumphans' ('Duchess of Edinburgh' x *R. javanicum*) with up to 9 florets is undoubtedly the brightest in the red tonings. 'Pink Seedling' has produced a prolific crop of flowers in the paler shades of pink.

What was the secret of success in these early hybrids with so little material to work with?

The plants available were *R. javanicum*, discovered by Blume on Mountain Salak in Java, and by Dr. Horsfield on the volcanic range extending through Java in dense forests at an elevation of 4,000 feet above the level of the sea. It produces flowers of orange with overtones of crimson. *R. lobbii*, named after Thomas Lobb, a plant collector for Messrs Veitch, is mentioned in *The Gardeners' Chronicle* of October 4, 1871, as a stove shrub, with bright crimson flowers, introduced from Borneo. *R. brookeanum*, discovered in Borneo, being the least common of the genus on the island, is said to be allied to *R. javanicum*, and finally, *R. jasminiflorum*, which was introduced from Mount Ophir, Malacca, has white flowers with a pink eye.

It may be necessary to follow this pattern again to produce something outstanding, rather than hybridizing with the surfeit of seed of new species as it comes to hand, and the production of F_2 material is something which should not be overlooked—some work is being done along these lines, and only time will tell if success can be achieved.

On the question of crossing these colourful tropical rhododendrons with those from the Asian mainland, success so far has eluded the hybridists.

It is interesting to read the notes in *The Gardeners' Chronicle* of July 5, 1879 on this subject by Mr. J. H. Mangles.

'As to the possibility of crossing this Malesian tribe with other members of the genus inhabiting other regions of the globe, I know next to nothing, and shall be very grateful for information. The Messrs Veitch have from time to time most kindly and liberally supplied me with pollen of their hybrid strain. I find that in 1876 I used it upon four different rhododendrons, on *Azalea amoena*, three kinds of *Azalea indica*, and *Azalea pontica* of five varieties wholly without result. In 1877 I used it upon two seedlings of *R. molle* (what used to be *Azalea mollis* at Kew is now *R. molle*), and on various Azaleas and Rhododendrons and hybrids, again without success.

In 1878 I used it upon *R. multiflorum, ciliatum, formosum, maddenii, glaucum, molle*, 'Princess Alice' and 'Sesterianum' and *Azalea amoena* and many others.

This year I have used it upon most of the above again, and also upon *R. dalhousiae, calophyllum, pendulum*, 'Lady Sefton', *gibsonii hybridum* and *glaucum hybridum* (the last three raised by Mr. Davies, of Ormskirk), *boothii, campylocarpum, lepidotum, triflorum* and a number of hardy hybrids and others.

So far (and I have omitted my work with Malayian species), I see no sign of success, but I must not yet wholly despair as to the experiments of this year'.

Hybridists of today must also not despair, and keeping in mind 'Grierdal', continue with their efforts, which could, if successful, result in a range of brilliant new colourings, particularly in the yellow, orange and red tonings.

RHODODENDRON BROOKEANUM GRACILE 'RAJA'

This very attractive variety differs from the type not only in the flower colour but also in its more erect habit of growth and flatter leaf blades. It seems to me to justify specific rank but perhaps more field study is required before a decision is made.

The seedlings which we collected from Mt Kinabalu were not easy to handle and only one survived to flowering size. Its life history, to date, may be summarized as follows:

January, 1966.	Collected as small seedling.
April, 1969.	First flower truss with 10 flowers.
April, 1970.	Flower truss on side shoot with 7 flowers.
March–April, 1972.	Five flower heads with 11, 10, 7, 5 and 8 flowers respectively.
2 May, 1972.	Awarded F.C.C. (Fig. 10).

From the first flowering seed was allowed to ripen and a little was sown and the rest distributed. Three healthy seedlings are well established and also one rooted cutting. Further cuttings are currently being rooted.

When the first flowers were opening on 22 March, 1972, the plant was removed from glasshouse to a cool entrance hall with windows facing north. This had several beneficial effects: in the cooler atmosphere the flowers lasted much longer than in previous years and they were also protected from pollinating insects which experience had shown would otherwise induce early falling of the waxy, yellow corollas. The evanescent scent, very noticeable in the cool and moist moss forest, was also more lasting than in the glasshouse. Lastly, the buttercup yellow (15B) flower colour matched the shade we remembered in the forest, whereas in the stronger light of the glasshouse the flowers of previous years had developed a less attractive pink and yellow colour blend.

In the forest this plant grows as an erect shrub and our specimen is now well branched in a 10 inch clay pot. Individual growths are much more slender and also shorter than in the epiphytic type species and we have found it easier to retain a symmetrical shape than when growing such clones as *R. brookeanum* 'Mandarin'.

E. F. Allen

NOTES ON HYBRIDIZING RHODODENDRONS

GEOFFREY A. JUDSON

I read with interest the Symposium on 'Six Hybrid Rhododendrons I would like to raise or see in flower', which appeared in the 1970 *Rhododendron and Camellia Year Book*, and as my own experience, limited though it is, throws some light on a number of the questions raised, I thought that a personal report might be of interest.

Looking at my notebook, I see that my first successful attempt at rhododendron hybridization started in 1949, with R. 'Doncaster' pollinated by R. 'Mayday'. The first seedling from this cross flowered in 1957, with deep rose flowers of *R. griersonianum* shape, up to 13 blooms in a loose truss, rather like R. 'Damozel'. A second seedling did not bloom until 1960, with blooms tending more to crimson, and more campanulate in shape. Unfortunately, further experience showed that the plants tended to become lank and straggly, and worse, were not hardy enough to stand the rigours of a Kentish winter without a number of flowers in each bud aborting: so that by 1965 I decided to give away all plants of this cross. This was but the first of many disappointments, and partial or complete failures in my experiments in rhododendron hybridization.

Like Mr. Geoffrey Gorer, I have always been a lover of the tender, scented rhododendrons of the Maddenii and Edgeworthii Series and their hybrids, and one of my early aims was to raise a hardier, scented rhododendron of compact growth, my principal line of attack being by crossing the scented species and hybrids with hardy species of the Triflorum Series. Alas, I must report almost complete failure in this direction, as either the crosses produced no seed, or the seedlings survived as weakly plants for a few years or less, and then petered out. I had thought it possible that this failure was due to having used, in many cases, the species of the Triflorum Series as the pollen parent. However in 1971 I tried putting *R. ciliicalyx* pollen on a plant of *R. davidsonianum* F.C.C. without success.

Crosses of tender scented species with plants of the Cinnabarinum Series appear easier to achieve successfully, but this line has been pretty thoroughly explored, and the hybrids, though lovely, are not compact, and the scent generally seems to be lost. However, in 1957 I made a cross by pollinating *R. cinnabarinum* var. *roylei* with pollen from *R. brachysiphon*, and raised several plants, two of which I have here in Devon, while others were given to the National Trust Garden at Emmetts, Ide Hill, Kent. Several plants started to flower in 1971, and have typical blooms of *R. cinnabarinum* shape, but larger, creamy white heavily suffused rosy red, giving a somewhat striped effect, usually 3 or 4 to a truss, and under favourable conditions it is possible to detect a slight fragrance, reminiscent of lilies-of-the-valley. However, so far these plants are not very free flowering, and not bud hardy—in a hard winter the flower buds are liable to be killed by frost. One of my most successful crosses was from a dwarf form of *R. oreotrephes* (purchased as *R. timeteum*), pollinated by *R.* 'Lady Chamberlain'. All the resulting plants

were attractive and very floriferous, but some remained very dwarf and compact, while others were quite vigorous, and there was also an appreciable variation in colour and size of bloom. Unfortunately the dwarf forms have proved rather tender and of poor constitution, and have mostly been lost. The taller forms continue to do well. Some of these plants were given to the garden at Emmetts. Messrs. Reuthe have taken over my remaining plants, and after selecting the best form have agreed to register it under the name 'Olive Judson', in honour of my wife, and to propagate it for general distribution. Though this plant has aromatic foliage, the rosy-carmine flowers have no scent. The general appearance is somewhat similar to *R.* 'Youthful Sin'.

Another cross made in the hope of retaining scent was *R. dichroanthum* pollinated by *R. fortunei*. The resulting plants were of interest in that 5, 6 and 7 lobed blooms occurred on the same plant, and the fairly large, funnel-shaped blooms were quite colourful, predominantly yellow and red: but the flower stalks were very long, producing a lax, floppy truss, and there was no scent. Mr. Walter Reuthe, to whom I showed this cross, was horrified by my jocular suggestion that in view of its colouring I should name it *R.* 'Ho Chi Minh'. I have recently read that if this hybrid were self pollinated, and F2 seedlings raised, there is a fair chance that some of them might produce scented flowers: but I fear I am now too old for it to be worth while trying this, and in any case these plants were left behind when I moved to Devon in 1968.

The only strongly scented hybrids I have successfully raised were made by putting pollen from *R. johnstoneanum* on to a good form of *R. bullatum*. The hybrid produces creamy coloured flowers with a yellow blotch in the throat. I have two distinct forms of this cross. The one which flowered first not uncommonly produces flowers with an extra two petals in the throat, giving a hooded effect, and a scent inclining to *R. bullatum*. Recently this plant had become rather unhealthy, with a bare stem of about 9 inches, and a straggling, flattish head. In the hope of inducing it to sprout from the base, I decided to try turning the whole plant, in its pot, upside down for a month or so. As regards sprouting from the base, this experiment was not a great success, but to my surprise, the whole plant was remarkably rejuvenated, and is now covered with healthy new growth. The other plant I have from this cross produced flowers similar in colour, but single, usually 3 or 4 blooms to a truss, with a strong, sweet scent inclining to *R. johnstoneanum*, and the leaves incline more to that species. This one is my favourite, and may, I think, be worth registering. Though from its parentage it seems tailor-made for the name *R.* 'John Bull', I think I might name it *R.* 'Geoffrey Judson'.

Mr. Geoffrey Gorer in his article also mentioned how much he admired the glorious foliage of *R. bureavii*, and wished it could be combined with the finer blooms of other species—an opinion which I fully endorse. With this end in view, in 1957 I put pollen from a fine form of *R. bureavii* on my plants of *R. dichroanthum* and *R. haematodes*. The *R. dichroanthum* x *bureavii* cross first bloomed in 1968, and has lax trusses of drooping bells, creamy yellow with rosy red lips, and brown speckles in the throat: unfortunately the indumentum on the leaves is rather thin and scurfy, little better

than *R. dichroanthum* and not a patch on *R. bureavii.* My jocular name for this hybrid is *R.* 'Celestial Kiss', but to be honest, it is hardly worth naming. The *R. haematodes* x *bureavii* cross, on the other hand, has glorious foliage. as good as *R. bureavii,* dark green with red suede underside, and the young growth is particularly attractive. The plant of this hybrid which I have in my present garden flowered for the first time in 1972, and has fairly large campanulate blooms in trusses of three or four, opening a deep red, with a few brown speckles in the throat, and fading with age to deep rose pink. I am hoping that in future years the number of flowers in a truss will be increased, but even as it is, this is a worth while plant. Apart from one or two plants in the garden at Emmetts, I let Messrs. Reuthe have the remainder of my stock, and they are going to select the best form, register it as *R.* 'Suede', and propagate it for distribution.

Another cross I made between two woolly leaved species, in 1959, was *R. haematodes* pollinated by *R. smirnowii,* of which I raised about a dozen plants, some of which were left in my former garden at Orpington, some presented to Emmetts and two are in my present garden. These plants have an excellent woolly indumentum on the leaves, buff, deepening with age. The funnel-shaped blooms open deep red, almost as dark as *R. haematodes,* but fade to a rather unattractive pink. The flowers on one of the plants here have a petaloid calyx, not present on the other. My friend Mr. George Joy at Emmetts says this hybrid produces good ground cover plants, but must otherwise be regarded as one of my failures. However, in a gamble with time I have in 1972 pollinated both this hybrid and *R.* 'Suede' with a good dark form of *R. beanianum,* hoping to improve the colour of the blooms of the offspring.

Tentative conclusions I have come to from my experiments in rhododendron hybridization may be summed up as follows:

Flower scent appears to be a recessive hereditary trait—if both parents have scent, so will the hybrid offspring. If only one parent has scent, generally the hybrid will have little or none. A similar rule appears to apply as regards indumentum—indumentum is practically absent in hybrids of *R. yakusimanum* for instance, unless the other parent had indumentum.

THE RHODODENDRON SPECIES FOUNDATION

DAN E. MAYERS

The Rhododendren Species Foundation was organized several years ago, in America, for the purpose of collecting the best forms of the various rhododendron species and propagating them so that they might become widely available to interested amateur gardeners. Despite extremely stringent import regulations—all earth must be washed from the roots of the plants and they must be fumigated as well—the Foundation is well on its way to establishing one of the world's greatest collection of rhododendron species.

The real significance of the Foundation, however, rests in its linking of its collection with the amateur rhododendron enthusiast. In effect, every interested American amateur, no matter how modest his garden, can, if he is sufficiently keen, be coupled (or interface with, to use the barbarous language of the computer) to the Species Foundation collection. He will be able to obtain authentic pollen, authentic selfed seed, and, in due course, rooted cuttings. Any amateur can embark upon his own breeding program, as modest or ambitious as he wishes, with the assistance of the foundation's collection. Of course, this costs money—and contributions to the Foundation, from any source, will be most welcome.

The English enthusiast lacks any facility comparable to the Species Foundation. True, such outstanding firms as Hillier & Sons, Reuthe Ltd., Knap Hill, Glendoick Gardens, Hydon Nurseries, to name the most important—offer an unparalleled collection of commercially available rhododendron species and hybrids. But the great gardens of England—Wisley, Windsor, Bodnant, etc.—remain, to all intents and purposes, entirely closed to the English amateur. Nor is it for lack of good will on the part of these gardens; they have all cooperated most helpfully with the Species Foundation. No doubt they would cooperate with equal good will if there were a British equivalent of the Species Foundation. But there is not.

As an American, observing the British scene, it is clear that until steps are taken to integrate the great gardens of England, with their marvellous rhododendron collections, and the ordinary amateur gardener—no matter how remote the link, so that it is seen to exist—it will not be possible to generate the broadly-based interest in rhododendrons which would otherwise be possible. Perhaps the British equivalent of the Species Foundation is not the precise answer. But it is important to recognize that a real and vital problem exists in establishing the linkage between the great gardens and the amateur, and it is in everybodys' interest to work towards its solution.

RHODODENDRONS FROM SEED

ARTHUR TURNER
RHS Garden, Wisley

My first introduction to the techniques of raising rhododendrons from seeds came whilst I was working as a journeyman under the late Francis Hanger in the glasshouse section of Exbury Gardens. That was in the late 1930's, but with only a little adaptation to suit present day facilities and knowledge I still use and prefer the methods which were in use at Exbury at that time.

In the Royal Horticultural Society's Garden at Wisley our requirements, numerically, are small. Just a few plants of any species raised, and when we are raising hybrids numbers are strictly limited by available space. For this reason we sow our seed in small containers, a 3½ inch pot giving ample seedlings to meet our needs. We are at the moment in a transition period, using both our old clay pots and pans and newer plastic ones. Results are equally good with either type of container.

Our rhododendron seed, with few exceptions, is sown on a good horticultural grade of sphagnum peat. This is passed through a ¼ inch sieve to take out the coarser particles and is then packed firmly and evenly into the containers. It is essential that the peat is moist before use or when the seed bed is made it will repel any water applied overhead and defy efforts to water by capillary means. The peat for the top ¼ inch layer of the seed bed is passed through an ⅛ inch sieve and then firmed with a wooden presser, giving a fine textured level surface only just below the rim of the containers. The seed is then sown, and whilst some growers give a light sprinkle of sand over the seed I prefer to let the seed lie uncovered at this stage but when germination starts I give a little shake of sand to anchor the emerging radicle onto the peat bed.

At Wisley we place our rhododendron seeds under intermittent mist with a bottom heat of 70°F. and with a minimum night air temperature of 50°F. They stay under mist until the cotyledons are developed and the young roots have a good hold on the peat; at this stage they are moved onto another section of staging with no mist but still with bottom heat provided by warming cables in a sand bed. We find this method gives us good germination and complete freedom from 'damping-off'.

Where no mist unit is available a closed propagating case is a useful alternative or the containers can be covered with a sheet of glass and placed in a glasshouse or garden frame. Where facilities are very limited the clear plastic domes now available for use with plastic pots or trays can provide reasonable conditions for germinating seed near a radiator in the home or growing on the seedlings on a window ledge. Except where a mist unit is being used it is necessary with seed or seedlings to shade from hot sunshine in order to prevent excessively high temperatures, rapid drying out or, when the seed has germinated, burning of the young foliage.

Any seed collected at Wisley is normally sown in January, the young seedlings then get the benefit of the lengthening days and better growing

conditions of spring early in their lives and have a long growing season before the onset of another winter. Where seed is to be raised in a cold house or garden frame sowing should be delayed until early March when there is warmth in the sunshine; temperatures should then be reasonable by day and less unkind at night. In addition to any seed we harvest ourselves we receive at various times throughout the year seed which has been collected in the wild and which in some instances has been several months in transit or storage before reaching us. All of these wild-collected seeds we sow as soon as possible as the viability of rhododendron seed falls off rapidly toward the end of its first year under normal storage conditions.

Rhododendron seeds usually germinate in about three weeks in the conditions we provide and the initial pricking-off is done as soon as the seedlings are just large enough to be handled conveniently: that is, when the first true leaf has formed and the second one is visible. The root system at this tender age is incredibly well developed and the seedlings can be lifted each with a little ball of peat adhering to its roots. This first move is made into a compost consisting of two parts sphagnum peat, one part acid loam, one part sand. A pH test is carried out on all loam delivered for use in potting composts and the reading usually lies between pH 5.5 and pH 6.0.

If grown on in a temperature of about 50°F. (night minimum) rapid growth is made and when the foliage has covered the available space another move is given; this time into a compost of two parts loam, two parts peat and one part sand. The containers used are 2½ inch deep seed trays and the seedlings are spaced 35 to a tray. Toward the end of the first year the seedlings are moved to garden frames with no heating other than frost protection.

In recent years seeds have been reaching this country from rhododendron species growing wild in New Guinea and these require a seed bed and a growing compost which is lighter and better aerated than those already mentioned. Some growers advocate using only clean, fresh, chopped sphagnum moss. I prefer a mixture of one part sphagnum moss, one part peat for seed sowing, adding one part sphagnum moss, suitably chopped, to the usual growing-on composts. I think the pulverised pine bark now being publicised and sold for various horticultural purposes may well prove useful in these composts.

Soft water, preferably rain water, should be used where possible. At Wisley we have a problem in this respect as our storage capacity does not allow us to manage without some use of water from the river Wey which runs off the chalk hills and therefore is far from ideal.

Finally, a cheerful note on which to end. We find that rhododendron seedlings generally are far less prone to attack by pests or diseases than most of the young plants which pass through our propagating house. The odd aphid is easily dealt with and little else ever bothers them.

HONEY FUNGUS IN A CORNISH GARDEN

E. G. W. W. HARRISON

In commenting upon the effects of honey fungus it seems necessary first of all to make some general comments about my garden. When I started to garden in 1946 it contained a number of mature trees and an orchard, but very few flowering shrubs and ornamental trees. It is about five acres in extent and since 1946 about 2,000 rhododendrons, 600 camellias and a number of other shrubs and smaller ornamental trees have gradually been planted. Some of the original trees were dangerous, and together with the orchard, were removed; knowing nothing at the time of honey fungus, enough care was certainly not taken in the removal of stumps and roots.

During the period around 1960 I reckon that I was losing about 40 to 60 rhododendrons a year and of course a number of other shrubs and trees including a 40-foot cedar, *Cornus, Stewartia, Sorbus.* Much work has been done in the last 10 years clearing any remaining stumps and dead roots, and now I do not expect to lose more than 15 to 20 plants a year.

Let me make it clear that I know nothing scientifically about honey fungus, and my comments arise solely from an unfortunate experience.

I cannot remember ever losing a shrub earlier than four to five years after planting, and I have never lost plants from honey fungus in any of the four nurseries which are in different parts of the garden. When a plant dies of honey fungus I do not wait for a period before replanting, but I do dig up the soil as far around the site of the affected plant as possible, and I reckon that the new plant has a better chance of survival than others, because there is nowhere in the garden that I believe is free from the curse of honey fungus. This I think may show that the boot laces running through the soil are killed where they are severed from the root from which they emanate.

A plant may collapse and die within a week of showing any symptoms of ill-health, but that does not prove that the honey fungus has not been attacking the plant for a considerable period previous to death. A plant that appears in robust health may be so attacked. On the other hand a plant may die gradually branch by branch over a period of one or two years, and in such cases, if it is a big shrub it is difficult to know just when to dig it up and remove it.

At one time I laid four or five sections of the trunk of a tree on the grass to form seats in various parts of the garden. Upon moving one of them a few years later I found the underside covered in the bootlaces, and, on examining the other logs, all were so affected. Now I never use wood for staking a plant, if the stake is likely to be in position for any length of time.

In this connection I had an experience which to my mind proves the difficulty of eliminating this pest. A bamboo cane was used to stake a young rhododendron planted in June. It was an old cane that had been used before, but which had probably been lying in the tool shed for six months or more. In October of the same year a small bunch of honey fungus mushrooms appeared around the cane. Digging round the cane very carefully it was discovered that they emanated from the base of the cane; the plant was of course unharmed. So it appears that honey fungus can lie dormant for a considerable time.

Some kinds of plants seem more vulnerable than others, and I expect it is because they are shallow rooted, because I have not found the bootlaces at a greater depth than one foot. A big beech tree, probably over 100 years old and fortunately just outside my garden took two to three years to die from the time it began to look sickly. Only in two instances have I been suspicious that a camellia has died of honey fungus, and so it would appear that this genus is immune or nearly immune.

There was a windbreak in the garden of a huge mass of *Rhododendron ponticum* which had layered itself extensively, but which eventually could be removed to make way for something better. It was in perfect health, but when it was dug up perhaps two barrow loads of bootlaces were extracted from among its copious rooting system. It might indicate that *R. ponticum* is immune, in which case grafted plants would become more acceptable. There are few grafted rhododendrons in the garden, but I cannot recollect losing one from honey fungus.

There is one firm conclusion from my experience which is that the utmost trouble should be taken to remove all vestige of roots from any tree that is felled or dies, but this may in many instances be impossible to do. It may be inadvisable to plant such trees as *Prunus,* that have shallow and far reaching roots, in a garden infected with honey fungus.

FOUR NEW RHODODENDRON SPECIES

H. H. DAVIDIAN, B.Sc.

Rhododendron rothschildii Davidian, sp. nov.

Species *R. basilico* Balf. f. et W.W. Sm. affinis sed indumento strati superi tenui granulari interrupto, pilis infundibuliformibus in foliis juvenilibus flavidis-brunneis differt.

Arbor vel frutex, 2.75–6 m altus, cortice scabro; ramuli moderate vel dense tomentosi, tomento tenui pallide brunneo vel brunneo, eglandulosi, sub inflorescentia 1–1.2 cm diametro; alabastra foliorum magna, conoidea, atro-chermesina, dense tomentosa tomento pallide brunneo, perulis deciduis extimis ovatis brevissime acuminatis. Foliorum lamina coriacea, oblongo-obovata, 21–36 cm longa, 6–14 cm lata, apice rotundata, basi cuneata vel obtusa decurrens, supra viridis paulo rugulosa nitens glabra, costa media sulcata glabra, venis primariis 15–20 impressis, infra indumento bistrato, strati superi tenui granulari interrupti, pilis infundibuliformibus pallide brunnei in foliis juvenilibus flavidis-brunneis, strati inferi tenui continui pilis rosulatis, costa media prominenter floccosa vel glabra, venis primariis elevatis floccosis vel glabris; petiolus 1.5–3 cm longus, supra planus paulo sulcatus vel haud sulcatus, lamina decurrente alatus, dense vel moderate tomentosus tomento tenui pallide brunneo vel brunneo eglandulosus. Inflorescentia racemoso-umbellata 12–17-flora, bracteae deciduae; rhachis 2 cm longa, dense rufo-tomentosa eglandulosa; pedicelli 2.8–4 cm longi dense tomentosi tomento pallide brunneo, eglandulosi. Calyx 8-lobatus minutus 1 mm longus, lobis triangularibus vel ovatis, extra et margine dense tomentosis eglandulosis. Corolla oblique campanulata ventricosa, 3.5–4.3 cm longa, pallide lutea vel ochroleuca basi atro-rubro-notata; lobi 8, 1–1.5 cm longi, 1.5–2 cm lati, rotundati emarginati. Stamina 13–15 inaequalia, 1.8–2.9 cm longa, corollae breviora; filamenta basi puberula. Gynoecium 3.5–4.5 cm longum; ovarium conoideum, 0.8–1 cm longum, 10–14-loculare, pilis fasciatis dense tomentosum, eglandulosum; stylus corollam aequans vel ei paulo brevior, glaber, eglandulosus, stigmate parvo discoideo. Capsula oblonga, 2–2.5 cm longa, 0.6–1 cm lata, recta vel paulo curvata, sulcata, pilis fasciatis dense rufo-tomentosa, eglandulosa, calyce persistente.

N.W. Yunnan. Mount Ta-Pao, between Wei-Hsi and the Mekong. Tree 5–6 m; fls. pale yellow. In fir forests; alt. 3850 m. September–October, 1929. J.F. Rock No. 18433.

Yunnan-Tibet Border. 1948. Rock No. 167.

Yunnan. 1931. G. Forrest No. 30528 (Holotype in Herb. Hort. Bot. Edin.).

Rock first found this plant in fruit in September–October 1929, on Mount Ta-Pao, between Wei-Hsi and the Mekong, north-western Yunnan, growing in fir forests at an elevation of 12,600 feet. He collected it again in 1948 on the Yunnan-Tibet border. In 1931, Forrest found it in north Yunnan.

R. rothschildii is a distinctive species belonging to the Falconeri Series. It is allied to *R. basilicum* from which it is readily distinguished by the thin, granular, discontinuous upper layer of the indumentum on the lower surfaces of the leaves, by the structure of the hairs, and by the yellowish-brown indumentum of the young leaves.

In cultivation the plant is hardy in a sheltered position, and is well worth a place in every collection of rhododendrons.

I have named this species after the late Mr. Lionel de Rothschild, in recognition of his most outstanding contributions to the cultivation of rhododendrons.

A tree or shrub, 2.75–6 m high, stem and branchlets with rough bark; branchlets moderately or densely tomentose with a thin, fawn or brown tomentum, eglandular, those below the inflorescences 1–1.2 cm in diameter, foliage-bud large, conoid, deep crimson-purple, densely tomentose with a fawn tomentum, bud-scales deciduous, outer scales ovate, shortly acuminate. Leaves oblong-obovate, lamina coriaceous, 21–36 cm long, 6–14 cm broad, apex rounded, base tapered or obtuse, decurrent on the petiole; upper surface green, slightly rugulose, shining, glabrous, midrib grooved, glabrous, primary veins 15–20 on each side, deeply impressed; under surface with a thin, granular, discontinuous indumentum of fawn or brown hairs (in young leaves yellowish-brown) over an under layer of thin, plastered, continuous, yellowish or fawn, rosulate hairs, midrib prominent, hairy or glabrous, primary veins raised, hairy or glabrous; petiole 1.5–3 cm long, flat above, with wings at the margins, slightly grooved or not grooved above, densely or moderately tomentose with a thin, fawn or brown tomentum, eglandular. Inflorescence a racemose umbel of 12–17 flowers; flower-bud scales deciduous; rhachis 2 cm long, rather densely hairy with short, rust-coloured hairs, eglandular; pedicels 2.8–4 cm long, densely tomentose with a fawn tomentum, eglandular. Calyx 8-lobed, minute, 1 mm long, lobes triangular teeth or ovate, outside and margin densely tomentose, eglandular. Corolla obliquely campanulate, ventricose, 3.5–4.3 cm long, pale yellow or pale creamy-white with a crimson blotch at the base; lobes 8, 1–1.5 cm long, 1.5–2 cm broad, rounded, emarginate. Stamens 13–15, unequal, 1.8–2.9 cm long, shorter than the corolla; filaments puberulous at the base. Gynoecium 3.5–4.5 cm long; ovary conoid, 0.8–1 cm long, 10–14-celled, densely tomentose with branched hairs, eglandular; style long, as long as the corolla or a little shorter, glabrous, eglandular; stigma small, discoid. Capsule oblong, 2–2.5 cm long, 0.6–1 cm broad, straight or slightly curved, ridged, densely tomentose with branched, rust-coloured hairs, eglandular, calyx persistent.

Rhododendron coxianum Davidian, sp. nov.

Species *R. formoso* Wall. affinis sed foliis majoribus apice acutis vel acuminatis infra squamis laxioribus, calyce et corolla majoribus differt.

Frutex nonnunquam epiphyticus ad 3 m altus; ramuli lepidoti, moderate vel sparsim setulosi. Foliorum lamina coriacea, oblanceolata, 5.3–11.5 cm longa, 1.5–3 cm lata, apice acuta vel acuminata et mucronata, basi cuneata decurrens vel haud decurrens, supra viridis elepidota vel sparsim lepidota, esetulosa vel sparsim setulosa, margine esetulosa, infra pallide glauca-viridis, squamis mediocris inaequalibus brunneis inter se 2–5 diametris distantibus praedita; petiolus 0.5–1 cm longus, lamina decurrente anguste alatus vel haud alatus, supra sulcatus, lepidotus esetulosus vel sparsim setulosus. Inflorescentia terminalis umbellata 3-flora; rhachis 2 mm longa elepidota, sparsim setulosa; pedicelli crassi 1.2–1.4 cm longi lepidoti esetulosi. Calyx 4–5 mm longus, lobis 5. inaequalibus ovato-oblongis vel ovatis, extra dense vel moderate lepidotis, glabris, margine sparsim lepidotis vel elepidotis moderate vel sparsim setuloso-ciliatis. Corolla tubuloso-infundibuliformis ventricosa, 7.3–7.5 cm longa, 5-loba, alba basi immaculata,

extra lepidota, tubo basim versus pubescente. Stamina 10 inaequalia, 3.4–5.3 cm longa, corollae breviora; filamenta triente inferiore dense pubescentia. Ovarium conoideum, 4–5 mm longum, 7-loculare, dense lepidotum; stylus gracilis rectus, corollam aequans vel ei paulo brevior, in dimidio inferiore lepidotus. Capsula oblongo-ovalia, 1.3 cm longa, 8 mm lata, recta, dense lepidota, calyce persistente.

Assam. Camp I, boggy area over first low ridge, S.E. of Apa Tani valley, Subansiri div. of N.E.F.A. Edge of sub-tropical rain forest bordering moist meadow. Ground soft and boggy. A somewhat straggling evergreen shrub, occasionally reaching 10 feet. Mature plants in marshy ground but young seedlings were seen epiphytic on fallen trees etc. The seedlings were densely hairy in the young stages. Flower buds swelling. One opened was seen to have a yellow corolla, or at least was yellow in bud. Rare as a mature plant. 5,400 feet. 22nd April, 1965. Cox and Hutchison No. 475B (Holotype in Herb. Hort. Bot. Edin. Details of the flower are taken from a cultivated plant).

This plant was discovered by Cox and Hutchison in 1965, south-east of Apa Tani valley, Subansiri division, Assam. It grows in soft and boggy ground, at the edge of sub-tropical rain forest at an elevation of 5,400 feet.

R. coxianum is a member of the Ciliicalyx Subseries, Maddenii Series. It is easily recognised by the long, narrow, oblanceolate leaves, acute or acuminate at the apex, by the widely spaced scales on the lower surfaces of the leaves, and by the tubular-funnel shaped white corolla without a blotch. In some respects it resembles *R. formosum*, from which it differs markedly in distinctive features.

The plant is in cultivation under Cox and Hutchison No. 475B–the type number.

The species is named in honour of Mr. E. H. M. Cox who has contributed tremendously to the cultivation and introduction of rhododendrons.

A shrub, sometimes epiphytic at least when young, up to 3 m high; branchlets scaly, moderately or sparsely bristly. Leaves oblanceolate, lamina coriaceous, 5.3–11.5 cm long, 1.5–3 cm broad, apex acute or acuminate, mucronate, base tapered, decurrent or not decurrent on the petiole; upper surface green, not scaly or sparsely scaly, not bristly or sparsely bristly, margin not bristly; under surface pale glaucous green, scaly, the scales medium-sized, unequal, brown, two to five times their own diameter apart; petiole 0.5–1 cm long, with or without narrow wings at the margins, grooved above, scaly, not bristly or slightly bristly. Inflorescence terminal, umbellate, three-flowered; rhachis 2 mm long, not scaly, sparsely bristly; pedicels somewhat stout, 1.2–1.4 cm long, scaly, not bristly. Calyx five-lobed, unequal, 4–5 mm long, lobes ovate-oblong or ovate, outside rather densely or moderately scaly, glabrous, margin sparsely scaly or not scaly, moderately or sparsely hairy with long hairs. Corolla tubular-funnel shaped, ventricose, 7.3–7.5 cm long, five-lobed, white without a blotch at the base, outside scaly, pubescent at the base of the tube. Stamens 10, unequal, 3.4–5.3 cm long, shorter than the corolla; filaments densely pubescent in lower third. Ovary conoid, 4–5 mm long, seven-celled, densely scaly; style slender, straight, as long as the corolla or a little shorter, scaly in lower half. Capsule oblong-oval, 1.3 cm long, 8 mm broad, straight, densely scaly, calyx persistent.

Rhododendron horlickianum Davidian, sp. nov.

Species *R. inaequali* Hutch. affinis sed foliis apice plerumque acute acuminatis infra squamis laxioribus, corollis extra dense vel moderate pubescentibus, stylo corollam aequante vel ei paulo breviore, et aream allopatricam habitans differt.

Frutex nonnunquam epiphyticus, 1.50–3 m altus; ramuli dense vel moderate lepidoti, esetulosi. Foliorum lamina coriacea, elliptico-lanceolata, oblongo-lanceolata, oblanceolata vel obovato-lanceolata, 5.3–11.5 cm longa, 1.8–3.3 cm lata, apice acute acuminata vel breviter acuminata et mucronata, basi obtusa vel cuneata, supra atroviridis elepidota esetulosa, margine esetulosa vel sparsim setulosa, infra pallide glauca-viridis, squamis inaequalibus brunneis inter se 1–1½ diametris distantibus praedita; petiolus 0.4–1.6 cm longus, dense vel moderate lepidotus, setulosus vel esetulosus. Inflorescentia terminalis umbellata 2–3-flora; rhachis 2 mm longa, dense vel moderate lepidota, esetulosa; pedicelli crassi 5–8 mm longi, dense lepidoti, esetulosi. Calyx 5-lobatus vel annularis tantum, minutus 1 mm longus. lobis rotundatis extra dense vel moderate lepidotis esetulosis, margine dense vel moderate lepidotis sparsim setulosis vel esetulosis. Corolla late infundibuliformis 6.5–7 cm longa 5-loba alba vel eburnea basi lutei-notata, extra sparsim vel moderate lepidota, dense vel moderate pubescens. Stamina 10–11 inaequalia 3.2–5.2 cm longa, corollae breviora; filamenta triente inferiore pubescentia. Ovarium conoideum, 5–6 mm longum, 6-loculare, dense lepidotum; stylus gracilis, rectus, corollam aequans vel ei paulo brevior, basi lepidotus. Capsula oblonga 2–2.5 cm longa, 0.9–1.1 cm lata, recta, lepidota, calyce persistente.

N. Burma. Adung river (Adung-Seingku confluence). 27° 30′ to 28° 30′ lat. and 97° 30′ to 98° 30′ long. A small shrub growing high up in trees. Like No. 9130, but the leaves are longer and narrower, and the scales further apart, the capsule smaller, the style longer, and less scaly at the base. 4,000 feet. 26.1.31. F. Kingdon Ward 9170.

N. Burma. Adung valley. 27° 30′ to 28° 30′ lat. and 97° 30′ to 98° 30′ long. A slim but weak shrub when growing in thickets, 6–10 feet high but leaning, more compact and dwarfed when epiphytic in the rain forest where it more commonly occurs. Leaves with bristly petioles and margins even when mature; under surface closely lepidote, the scales about their own diameter apart, giving a dark colour to the surface. Seeds dark coffee coloured, flattened with short end-tails and marginal wing, about four times as long as wide. (This species also grows on the cliffs flowering in April. Leaves not so bristly, habit compact). 6,000–7,000 feet. F. Kingdon Ward 9361.

N. Burma. Adung valley. 27° 30′ to 28° 30′ lat. and 97° 30′ to 98° 30′ long. No. 9361 in bloom. Flowers white or cream, the upper lobe with a yellow mark inside, the outside with three pinkish purple stripes, giving a blush to the corolla. No scent. Calyx fringed with bristles. Corolla pubescent, especially towards the base, and laxly lepidote, chiefly on the lobes near the median line. (Truss two to three-flowered, visited by bumble bees). 16.IV.31. F. Kingdon Ward 9403 (Holotype in Herb. Arnold Arbor. (Harvard Univ.))

R. horlickianum was discovered by Kingdon-Ward along the Adung river, Northern Burma, in January 1931. He found it again in the same region later in the same year. It grows in thickets, on cliffs, and sometimes as an epiphyte in the rain forest, at elevations of 4,000–7,000 feet.

It is related to *R. inaequale*, in the Maddenii Series, but differs markedly in that the leaf apex is usually long acuminate, the scales on the lower surfaces of the leaves are widely spaced, the corolla is densely or moderately pubescent

all over the outside, and the style is as long as the corolla or a little shorter. Moreover, it occupies a different geographical area.

R. horlickianum was introduced into cultivation by Kingdon-Ward under No. 9403—the type number. It is suitable for a cool greenhouse.

The species is named in honour of Sir James Horlick, Isle of Gigha, as a tribute to his remarkable achievements in the cultivation of rhododendrons.

A shrub, sometimes epiphytic, 1.50–3 m high; branchlets rather densely or moderately scaly, not bristly. Leaves elliptic-lanceolate, oblong-lanceolate, oblanceolate or obovate-lanceolate, lamina coriaceous, 5.3–11.5 cm long, 1.8–3.3 cm broad, apex acutely or shortly acuminate, mucronate, base obtuse or tapered; upper surface dark green, not scaly, not bristly, margin not bristly or sparsely bristly; under surface pale glaucous green, scaly, the scales large, unequal, brown or dark brown, 1–1½ times their own diameter apart; petiole 0.4–1.6 cm long, densely or moderately scaly, bristly or not bristly. Inflorescence terminal, umbellate, two to three flowered; rhachis 2 mm long, densely or moderately scaly, not bristly; pedicels stout, 5–8 mm long, densely scaly, not bristly. Calyx five-lobed or a mere rim, minute, 1 mm long, lobes rounded, outside densely or moderately scaly, not bristly, margin densely or moderately scaly, sparsely bristly or not bristly. Corolla widely funnel-shaped, 6.5–7 cm long, 5-lobed, white or creamy-white, with pink bands outside the lobes, and a yellow blotch at the base, not scented or scented, outside sparsely or moderately scaly, rather densely or moderately pubescent. Stamens 10–11, unequal, 3.2–5.2 cm long, shorter than the corolla; filaments pubescent in lower third. Ovary conoid, 5–6 mm long, 6-celled, densely scaly; style slender, straight, as long as the corolla or a little shorter, scaly at the base. Capsule oblong, 2–2.5 cm long, 0.9–1.1 cm broad, straight, scaly, calyx persistent.

Rhododendron tamaense Davidian, sp. nov.

Aspectu species seriei Cinnabarini sed foliis deciduis vel semideciduis infra squamis laxioribus differt; a *R. oreotrephe* W.W. Sm. seriei Triflorum corolla tubulosa vel tubuloso-campanulata recedens.

Frutex saepe epiphyticus 90 cm–1.20 m altus vel arbor parva; ramuli lepidoti. Folia decidua vel semidecidua; lamina elliptica, oblongo-ovalia, oblongo-lanceolata vel oblonga, 2.5–5.8 cm longa, 1.5–2.6 cm lata, apice rotundata, obtusa vel acuta et mucronata, basi rotundata vel obtusa, supra viridis elepidota, infra pallide glauca-viridis vel brunnea, squamis inaequalibus brunneis, pallide brunneis vel rubro-brunneis, inter se 2–5 (raro 1) diametris distantibus praedita; petiolus 0.5–1 cm longus, lepidotus. Inflorescentia terminalis, breviter racemosa, 2–5-flora; rhachis 1–3 mm longa, lepidota; pedicelli 0.5–1.9 cm longi, lepidoti. Calyx annularis tantum vel 5-lobatus minutus 1 mm longus, lobis rotundatis extra et margine dense lepidotis. Corolla tubulosa vel tubuloso-campanulata, 3–4.6 cm longa, carnosa, 5-loba, atro-purpurea, purpurea vel pallide lavandulacea, extra moderate vel sparsim lepidota. Stamina 10, inaequalia, 1.5–3.1 cm longa, corollae breviora; filamenta basi villosa. Ovarium conoideum vel oblongum, 3–5 mm longum, 5-loculare, dense lepidotum; stylus gracilis, rectus, corollam aequans vel ei paulo longior, elepidotus. Capsula oblonga, 0.9–1 cm longa, 3–5 mm lata, recta, dense vel moderate lepidota, calyce persistente.

N. Burma. Kachin State. North Triangle (Uring Bum, above Ahkail). *Rhododendron.* § Oreotrephes. An erect shrub, almost a small tree. Leaves rather closely scaly beneath. Pedicel and calyx scaly; corolla with a few scales on the lobes only, rich purple. Stamens with a tuft of long cottony hairs at the base. Ovary scaly, style glabrous. In thickets on the fringes of forest. 10,000 feet. 27th May, 1953. F. Kingdon-Ward 20926.

N. Burma. Kachin State. North Triangle (Tama Bum). *Rhododendron oreotrephes* (affin). Cf. No. 21021. A small bushy crowned tree, or a shrub, often epiphytic at least when young. Leaves fairly distantly lepidote beneath, margin ciliate when young, brilliant green. Flowers purple, the corolla lepidote on the outside. Style pubescent at the base. Common along the ridge in Rhododendron moss forest. (Confused with No. 20981). 9,000–10,000 feet. 18th June, 1953. F. Kingdon-Ward 21003.

N. Burma. Kachin State. North Triangle (Tama Bum). *Rhododendron* sp. § Oreotrephes. A shrub. Flowers deep royal purple. A few scales on outside of corolla, not at base of tube. In Rhododendron–silver fir forest, and in thickets along the exposed ridge. This may be an Alpine form of No. 21003 but has claims to be a distinct species. The smaller corolla of a much deeper colour, and fewer more scattered scales; the shape of the leaf, more scaly, with almost black scales, and other points of contrast may be noted. Scales mostly red-brown, even on young leaves; later almost black. 10,000–10,500 feet. 20th June, 1953. F. Kingdon-Ward 21021 (Holotype in Herb. Brit. Mus.).

Kingdon-Ward discovered this plant in the North Triangle, North Burma, in 1953. It is found in rhododendron and silver fir forest, and in thickets at elevations of 9,000–10,500 feet.

R. tamaense shows a strong resemblance to the species in the Cinnabarinum Series in its tubular or tubular-campanulate corolla, but is distinguished by the deciduous or semi-deciduous leaves, and by the widely spaced scales on the lower surfaces of the leaves. In some respects it approaches *R. oreotrephes* in the Triflorum Series, from which it differs markedly in the shape of the corolla.

The species was introduced into cultivation by Kingdon-Ward. It is quite hardy and free-flowering.

A shrub, often epiphytic at least when young, 90 cm–1.20 m high or small tree; branchlets scaly. Leaves deciduous or semi-deciduous, elliptic, oblong-oval, oblong-lanceolate or oblong, lamina 2.5–5.8 cm long, 1.5–2.6 cm broad, apex rounded, obtuse or acute, mucronate, base rounded or obtuse; upper surface green, not scaly; under surface pale glaucous green or brown, scaly, the scales unequal, medium-sized and small, or large, brown, pale brown or reddish-brown, two to five times their own diameter apart or rarely their own diameter apart; petiole 0.5–1 cm long, scaly. Inflorescence terminal, shortly racemose, two to five flowered; rhachis 1–3 mm long, scaly; pedicels 0.5–1.9 cm long, scaly with large scales. Calyx a mere rim or 5-lobed, minute, 1 mm long, lobes rounded, outside and margin densely scaly. Corolla tubular, widened towards the top, or tubular-campanulate, 3–4.6 cm long, fleshy, 5-lobed, deep royal purple, purple or pale lavender, outside moderately or sparsely scaly. Stamens 10, unequal, 1.5–3.1 cm long, shorter than the corolla; filaments villous at the base. Ovary conoid or oblong, 3–5 mm long,

five-celled, densely scaly; style slender, straight, as long as the corolla or a little longer, not scaly. Capsule oblong, 0.9–1 cm long, 3–5 mm broad, straight, rather densely or moderately scaly, calyx persistent.

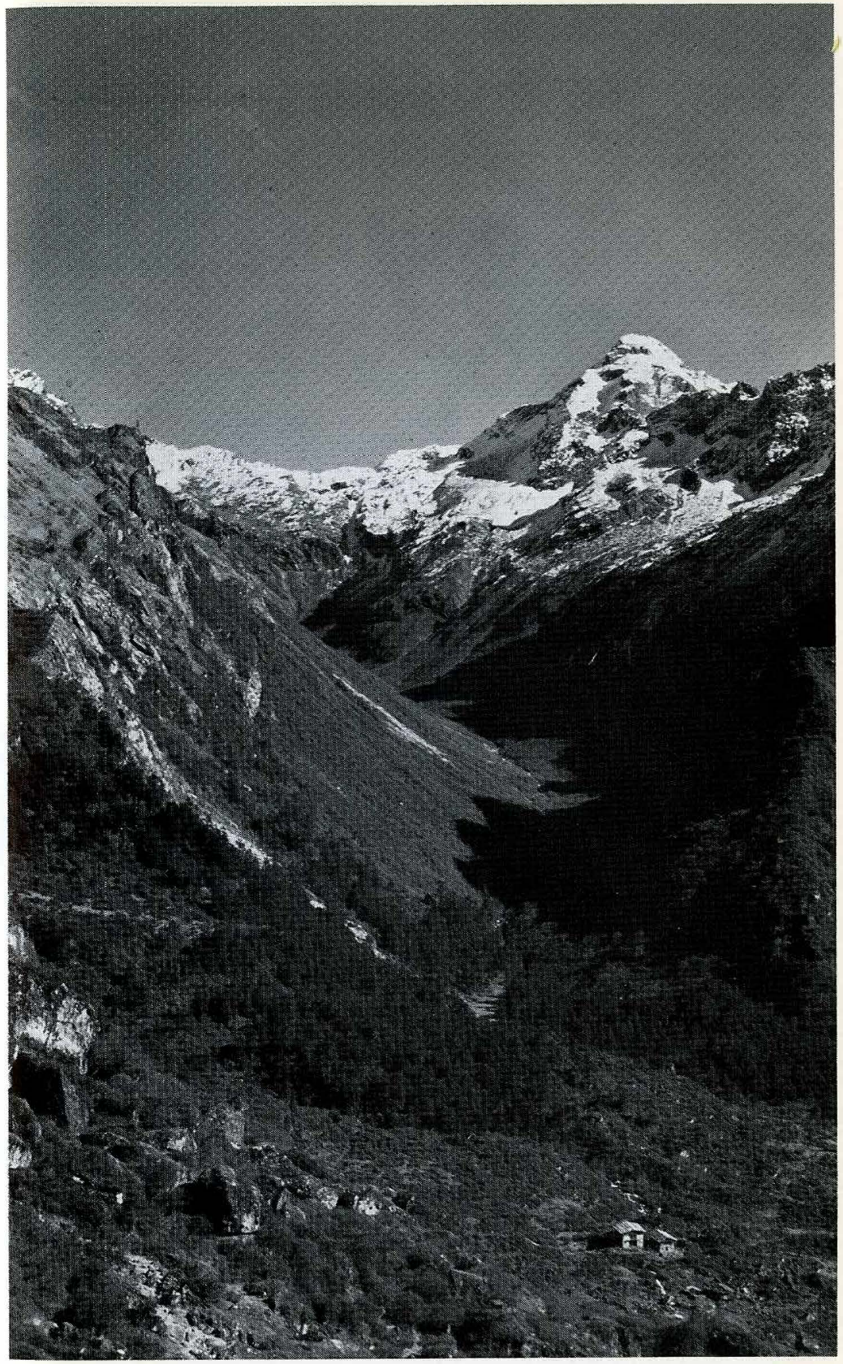


Photo: Roy Lancaster

FIG. 1 Valley in Nepal leading to Topke Gola (see p. 26)

Photos: A. D. Schilling

FIG. 2 *(left) Rhododendron insigne* (see pp. 5–8)

FIG. 3 *(right) Rhododendron taliense* (see pp. 5–8)

Photo: Tor Nitzelius

FIG. 4 *(top) Rhododendron cuprescens*, a newly described species (see pp. 57–58)

Photo: Ernest Crowson

FIG. 5 *(bottom) Rhododendron nakotiltum* from Blackhills in the Rhododendron Show, 1972 (see p. 59)

Photos: Ernest Crowson

FIG. 6 *(left)* Rhododendron 'P. J. Mezzit', **A.M.** 28th March, 1972 when exhibited by The Crown Estate Commissioners (see p. 77)

FIG. 7 *(below) Rhododendron tsangpoense* 'Cowtye', (KW5844), **A.M.** 2nd May, 1972. Raised and exhibited by Major A. E. Hardy (see p. 78)

Photos: Ernest Crowson

FIG. 8 *(right)* Rhododendron 'John Barr Stevenson', **A.M.** 20th April, 1971 when shown by Major-General E. G. W. W. Harrison (see p. 73)

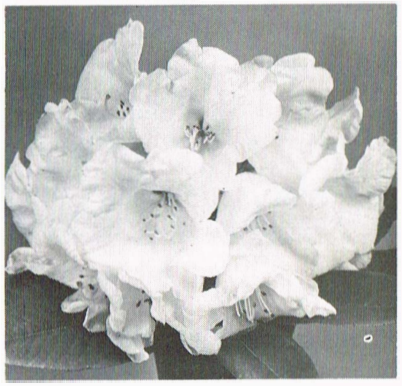
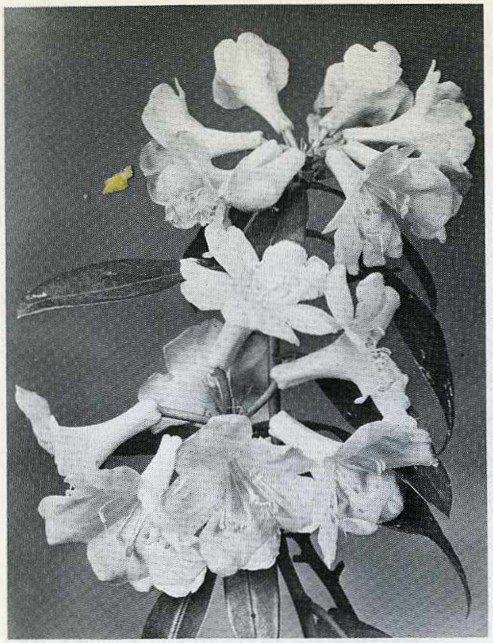


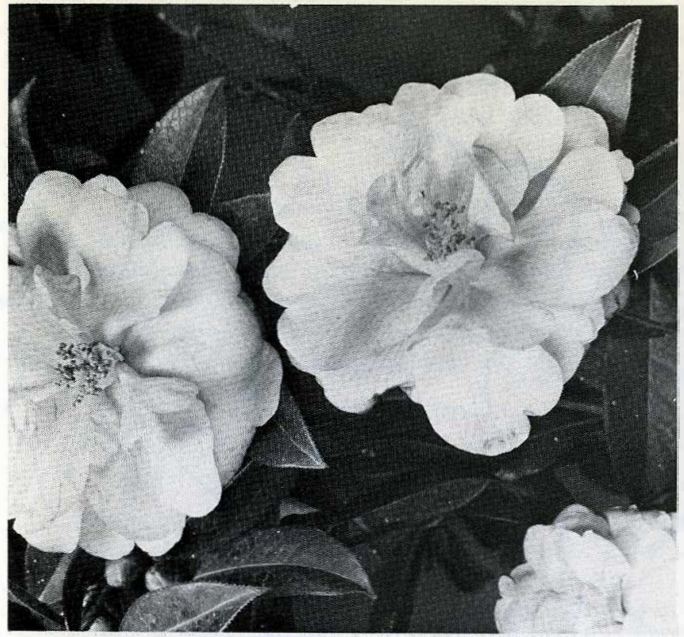
FIG. 9 Rhododendron 'Englemere', **A.M.** 22nd June, 1971 when shown by the Crown Estate Commissioners (see p. 73)



Photos: Ernest Crowson

FIG. 10 *(left) Rhododendron brookeanum gracile* 'Raja', **F.C.C.** 2nd May, 1972. Collected as a seedling in Sabah and exhibited by Mr. and Mrs. E. F. Allen (see p. 76)

FIG. 11 *(below) Magnolia campbellii* 'Betty Jessel', **A.M.** 18th April, 1972. Exhibited by Sir George Jessel, Bt., (see p. 71)



Photos: Ernest Crowson

FIG. 12 *(left)* Camellia 'Francie L', **A.M.** 14th March, 1972 when exhibited by Dr. J. A. Smart (see p. 71)

FIG. 13 *(right) Camellia reticulata* 'Willow Wand' (syn. 'Liu Yeh In Hung'), which received the Award of Merit in 1967 under the incorrect name of 'Osmanthus Leaf'.

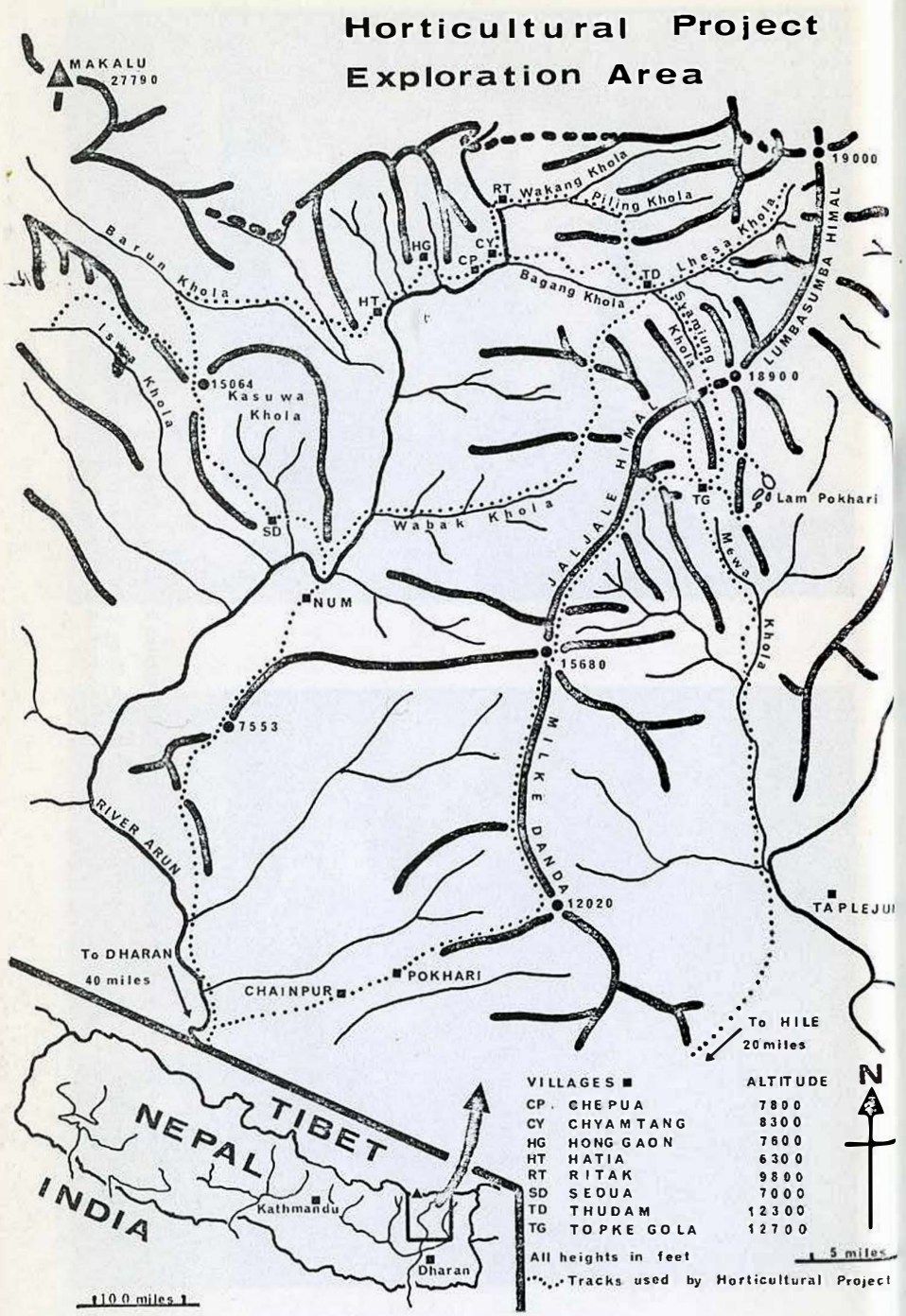


FIG. 14 Route taken by members of the Horticultural Project Exploration in Nepal 1971 (see pp. 24–32)

RHODODENDRON CUPRESCENS, A NEW SPECIES FROM WESTERN CHINA

TOR NITZELIUS
Botanical Garden, Göteborg

In the Botanical Garden of Göteborg some hitherto undetermined taxa of the genus *Rhododendron* have been in cultivation for more than 10 years. They were originally grown up from seeds collected 1934 in Western China by Dr. Harry Smith, Uppsala. Some specimens representing these taxa have in the course of the last years attained flowering size and subsequently allowed a closer determination.

In this connection it became evident that one taxon (H. Smith no. 13977) differs from other known and described taxa of *Rhododendron*. This taxon has here been described as a new species.

Rhododendron sect. *Hymenanthes* Seithe v. Hoff, Bot. Jahrb. 79: 367, 1960, subsect. *Argyrophylla* (Tagg) Sleumer Bot. Jahrb. 74: 548, 1949.

Rhododendron cuprescens Nitz. sp. nova is a 2–3 m high (possibly higher?) shrub with thick, straight branches, which are glabrous; the one-year-old shoots are green and the two- and three-year-old shoots cinnamon-brown; as a cultivated shrub, 29 years old and almost 2 m high in the Botanical Garden of Göteborg it has an upright, rather densely branched habit; leaves evergreen, coriaceous, often subopposite, more or less broadly ovate-lanceolate or oblanceolate, 7–15 (–20) cm long (including the petioles) and 2–5 cm broad, apex acute or shortly acuminate, cuspidate; base cuneate or rounded; upper surface of the leaf dark green, glabrous, (sometimes bloomy); midrib and primary veins distinctly impressed, which gives the upper side of the leaf a rugulose aspect; primary veins 15–20 on each side of the midrib (*R. insigne* has usually not more than 12–16); lower surface of the leaf at first covered with a shining, silvery-white, plastered indumentum, consisting of rosulate and ramiform hairs; later it shows a coppery lustre; midrib distinctly raised, glabrous towards the base only; primary veins less distinctly raised, concealed; petioles 1.5–2 cm long, thick, flattish above and grooved, glabrous; bud-scales of terminal buds ovate or obovate to spathulate, acute or acuminate 1–2 cm long, light brown, slightly viscous, ciliolate and more or less pubescent on both surfaces; bracts narrowly spathulate to linear (the lowest filiform), 1–3 cm long, yellowish brown, ciliate and more or less pubescent; flowers about 10 in a short corymbose and rather lax raceme; pedicels 2–3 cm long, reddish green, glabrous; calyx small, annular, with five broadly triangular, callous and glabrous (rarely slightly ciliate) lobes; corolla campanulate, 3–3.5 cm long and about 4 cm wide, at first pale pink, soon white, more or less spotted rose within; lobes 5, rounded, emarginate, 1–1.5 cm long, about 1.5 cm broad; stamens 10, 1.5–2 cm long, with glabrous filaments; pistil 3 cm long; ovary conical, with longitudinal grooves, 6 mm long, glabrous; style slender, glabrous, with a small, discoid stigma; capsule ovate-cylindrical, 1.5–2 cm long and about 7 mm broad, 5–6-chambered, glabrous.

Rhododendron cuprescens is close to *R. insigne* Hemsl. & Wils. by similarity of leaf-form and by the plastered, shining coppery indumentum on the lower surface of the leaves which gives both species a recognizable difference from the other members of the Section *Argyrophylla. R. cuprescens* has a habit similar to *R. insigne,* though with slightly more stout branches and darker green, on the upper surface, more rugulose leaves, which sometimes are covered with a greyish bloom. Furthermore it has white or slightly pink flowers (Fig. 4), whereas the flowers of *R. insigne* are deep pink and larger. An outstanding feature which, however, clearly separates *R. cuprescens* from *R. insigne* and the other known species of the section, are the glabrous ovaries, stamens and pedicels of the flowers. (*R. coryanum* Tagg & Forrest, however, has glabrous or thinly pilose ovaries).

Other plants of *Rhododendron* grown in the Botanical Garden in Göteborg, which have been raised from seeds collected by H. Smith at the same time and in the same locality of Western China sub n.-ris 13974, 13976, 13978 and 13980, seem according to their habit, leaf-form and type of indumentum to belong to the same species as described above. As no specimens belonging to the numbers mentioned have yet produced flowers, it is, however, too early to give a definite decision on their identity.

The habitat of *Rhododendron cuprescens* lies in the region of Tapao-shan, a mountain 30–60 km north of the town of Kangting (Tatsienlu), Lat. N. 31 and Long. E. 102 in the western part of the province of Szechwan, W. China.

In cultivation *R. cuprescens* seems to be valuable for its beautiful habit, lovely flowers and remarkably good hardiness. In the nursery of Mr. Magnus Johnson at Tveta, 35 km south of Stockholm, where the species was originally raised from seed and remained there more than 20 years before it was handed over to Göteborg, it survived unaffected in an exposed locality through some severe winters with a prolonged minimum temperature of −30°C.

THE RHODODENDRON SHOW, 1972

ALAN HARDY and T. HOPE FINDLAY

Species

For the Rhododendron, 1972 could hardly be called a vintage year, certainly some of the species classes had never contained so little of quality and so few entries. Therefore in writing this report I feel one must approach it in a slightly different way to that of the past as space is somewhat limited and repetition of superlative (when needed) is boring to the reader. Hope Findlay and myself found it easier this year to select what we considered outstanding, interesting and unusual plants to highlight and write fully on some of the more interesting and keenly contested classes.

In the class for eight species Mr. S. Christie, Blackhills, as usual produced not only a superb first prize group but to us one of the highlights of the show. The group contained *roxieanum* var. *oreonastes, campanulatum, vernicosum, prattii, rex, basilicum, fictolacteum* and *nakotiltum.* It would take too long to remark on each truss but the *nakotiltum* was something quite on its own. A member of the Lacteum Series, found by one of Forrest's native collectors, it bears no number in the book. We had the privilege of seeing trusses of what I believe to be the only plant in cultivation here; if there is another, we should be very glad to hear of it! It has a very compact truss typical of its close relation *lacteum,* of a pale creamy yellow, fine foliage with slight brown indumentum underneath and is a striking plant (Fig. 5). In Lord Aberconway's second prize group *euchaites* was very good and also good were *vernicosum* R. 03788 and the striped *arizelum.*

In the class for three species Major Magor's first prize group contained a nice white *decorum,* a very good *eximium* and his lovely form of *preptum.* Over the years much has been said of *preptum* but it certainly commands attention.

Class 4, The McLaren Cup for one species, we thought was the most disappointing overall we have seen. Apart from the *nakotiltum* again, which stood out an obvious winner, and also from Blackhills a nice truss of *fictolacteum* in second place, there was little else to note apart from Mr. Ingalls' *thomsonii* and a very attractive, good *sidereum* from the Countess of Rosse, Nymans.

The spray or branch class this year was well filled and was won by Sir Ilay Campbell with *macabeanum,* which had brown indumentum on its leaf undersurface instead of the more usual grey. Among the single trusses we shall move fairly quickly as in the early classes almost total absence of large leaved plants caused great gaps and, on the whole, in most of the others small entries. However for a start mention must be made of the *arboreum* forma *roseum* from Nymans, which regularly seems a certain prize winner. Sir Ilay Campbell's first prize *delavayi* in the other Arboreum class was another highlight. Among the Barbatums we saw the uncommonly seen *diphrocalyx,* a good pink with a very large calyx. The Boothii's showed clearly the forms of *tephropeplum* differing in flower size and variation of colour. In the

Campanulatums it now seems that the white forms are going to eclipse the others and Mr. Christie's first prize white one this year was memorable. Lord Aberconway's *lanatum* was pleasing to see, having a nice pale yellow, heavily red spotted truss set off with outstanding foliage. In the Falconeri Series we noted a nice truss of a seldom-seen member, *galactinum* from Mr. Cripps. This was a nice pale pink saucer-shaped flower slightly spotted. We noted a fine truss of *vernicosum* in the Fortune Series which won a first for Mr. Kleinwort. In the Grande Series we again saw Nymans' *sidereum,* which we have mentioned before, in first place. In the Irroratums, *aberconwayi* was at its best, and what more can we say of this lovely plant.

In the Maddenii Series classes competition gets hotter and hotter each year, and this year produced some of the most outstanding trusses in the show. In the Subseries Megacalyx, the Cox's *lindleyi,* collected by themselves under C.H. 399, was quite outstanding. With seven large bells of a very pure white in an immaculate upright truss it was again one of the highlights. Second prize was a five-pipped truss of *nuttallii* from Windsor, another splendid sight, while a good *lindleyi* also from Windsor was third. In the other class Windsor's *carneum* was a beautiful, well-filled truss of pale pink having ten pips, a large number for this plant. A large yellow-eyed form of *parryae* also from Windsor was second and *lyi* from Major Magor was third. This had five pips to the truss, of almost clear white with a green eye deep in the base and long rather narrow leaves. This class had 13 entries and showed the wide variation among the members of the Series. Others of note were the Cox's *formosum* C.H. 302, *inaequale* C.H. 301 and the double form of *johnstoneanum,* 'Double Diamond'.

A noticeably compact truss of *neriiflorum* was first in its class and a *euchaites* from Bodnant had unusually large flowers. In the Sanguineum Subseries Bodnant's deep red *aperantum* again won in its class; this also seems to be a certain prizewinner. Second was a very compact good coloured form of *haemaleum* from the Hon. E. Boscawen, High Beeches. Ponticums were very variable both in forms and in the plants shown. The Talienses once again produced an interesting class. In the Roxieanum Subseries we had tremendous variations of all sorts, both in colour and in forms. Mr. Christie's white *roxieanum oreonastes,* which won, was quite outstanding. A nice yellow *wasonii* was second. Of interest were two different forms of *cyanocarpum* which showed variations in their claret colour.

In the other class, out of 14 entries *prattii* came to the front in weight of numbers but a *detonsum* beat all comers. We also noticed here the seldom seen *glaucopeplum* and a good truss of *clementinae.* In the Thomsonii Series classes there was nothing much of note except Bodnant's outstanding form of *williamsianum.* In the Azalea Series the influence of the season showed by entries having more foliage than usual, but 11 entries in the other than *schlippenbachii* class made it a notable one and the Boscawens first prize *quinquefolium* was an obvious winner. The Anthopogons, usually a rather sparse class, were full of interest this year both in quality and colour. *R. trichostomum ledoides* was first and third whilst *sargentianum* 'Whitebait' was second. Also here was a very pretty pale yellow *hypenanthum,* one of

the gems of the series. Glaucophyllums made a good class of ten and showed wide variation, but the original pink probably from Hooker's seed still outshines the rest.

In the Lapponicums we had every colour, showing the wide range of the series, and the Cox's first prize *setosum* was an interesting plant not often seen here. In the Saluenenses the red form 'Gigha' is quite outstanding, this was also from the Cox's. In the Trichocladums it was interesting to see the *cowanianum* SSW9097. Triflorums this year were a disappointing lot overall and had nothing outstanding all the way through. In the final class, any species grown under glass not catered for, Windsor with their deep orange *xanthostephanum* beat a nice white Malesian *jasminiflorum.*

Hybrids

These classes were noteworthy not only for the large number of entries but also for much better quality than the classes for species. In the eight Hybrids class Mr. Kleinwort came first with a real quality group containing 'David', 'Matador', 'Idealist', 'Queen of Hearts', 'Beauty of Littleworth', 'Naomi', 'Laura Aberconway' and 'Yvonne'. Second, obviously very close, was General Harrison with a fine group which included notable 'John Barr Stevenson' and a lovely red 'Matador' x 'Barclayi'; third was Lord Aberconway.

In the class for three hybrids Mr. R. Strauss won with three old hybrids of tremendous form, 'Harvest Moon', 'Susan' and a quite remarkable truss of 'Chevalier Felix de Sauvage'. Second was Major Hardy with 'Luscombei', 'Idealist' and 'Cornish Cross' and third Mr. Cripps with 'Susan', 'David' and 'Mrs. G. W. Leak'.

The spray classes were nice but not outstanding. The class for six hybrids raised by the exhibitor was well won by Bodnant with 'Siren', 'Fair Maiden', 'Ruddigore', 'Gretia', *griffithianum* x *arboreum* and *thomsonii* x *kewense.* Second was Exbury with 'Hawk Crest', 'Yvonne', 'Naomi', 'Gibraltar', 'Queen of Hearts' and 'Cara Mia'.

In the class for any hybrid one truss, Nymans came first of the 17 entries with 'Anne Rosse', a worthy winner, being a cross of *sinogrande* and *macabeanum* and retaining the qualities of both parents. Second was 'Loderi Sir Joseph Hooker' from Mrs. Potter and third 'Hawk Crest' from Mr. Cripps.

In the classes for single trusses throughout it was interesting to note that the good 'oldies' can still beat some of their younger relations. This certainly applied to 'Boddaertianum' which won its class.

In the Loderi classes 'White Diamond' won for Sir Giles Loder. Second was Major Hardy's 'King George' and third 'Venus' from Windsor. I feel obliged to say it's a pity that when we were making notes on Tuesday afternoon the majority of these Loderis were nearly dead, as were several others throughout the competition; whilst we appreciate some are difficult to keep alive, water does help and care in staging would encourage visitors to be more complimentary on the second day if they were able to look at happy plants instead of corpses. However we digress. In class 71 'Yvonne' seems to have had it all her own way and the first prize one was a beauty. In class 75

'David' appears to have a monopoly and year in year out is the winner. In the Thomsonii Series class there were not as many entries as usual and Sir Giles Loder's 'Red Glow' won the first part, whilst a very good truss of 'Queen of Hearts' from Major Hardy won the other part; this again seems a certain winner here.

As usual there was a large entry for the next class for Griersonianums, in fact there were 20 and a fine truss of 'Matador' won it for Mr. Kleinwort. In class 79 'Siren' won for Nymans but Sir Ilay Campbell made a strong challenge gaining second and third with 'Laura Aberconway' and 'Ivanhoe'. The Lacteum hybrids were headed by Sir Islay Campbell's *lacteum* x *macabeanum* which closely follows *macabeanum* in its flowers but *lacteum* in foliage. 'Mariloo' came second and third. In the Cinnabarinums Exbury won with 'Dayan' (*concatenans* x Lady Chamberlain) which is a lovely plant. In the following class 'White Wings' won for Sir Giles Loder. Enough has been said previously about this lovely rhododendron, but it is such a pity that 'Saffron Queen', which came second for the Cox's, is so bud tender, for what a lovely plant it is. Third was 'White Wings' again. Class 83 was won by 'Russautinii' from Nymans for once eclipsing 'St. Tudy' from General Harrison. 'Augfast' from Col. Colville was third. This was a quality class.

From the next class comes the only sad story of the day. The class was won by 'Peace'; second was a vase of 'Electra'. Poor thing, she had been hounded from the species classes as N.A.S. and really she was *persona non grata* here as the cross is *augustinii* x *chasmanthum* which latter is really nothing other than *augustinii*!? Perhaps in the future she will find a happy home. 'Elizabeth' took all the prizes for Forrestii Subseries spray class and good they were too. Any lepidote hybrid contained an interesting winner from the Cox's in *sargentianum* x *kotschyi*. A very large pale pink *sargentianum* might be the nearest description of it. Class 90 contained a magnificent turn out and was won by Windsor with a lovely vase of 'Hawk Crest' x *litiense*, a really good yellow. Sir Giles Loder was second with 'White Diamond' and third was 'Seven Stars' from Mrs. G. Pilkington, Grayswood. The leaf class was won by Exbury; second was Mrs. Potter and third Major Hardy. Surely this is a class well worthy of support, as it seems from passing comments to be of great interest to the public. In the Azalea classes there were some nice vases, but it is difficult to write much on these very well known plants; all prizewinners were very worthy of their positions!

The trade stands this year again were of interest and the Rothschild Challenge Cup was won by Messrs Reuthe. Their stand contained many dwarf rhododendrons and included their good *hanceanum* x *keiskei*, *tsangpoense* and a nice hybrid 'Daphne Jervis'. It was also nice to see *pumilum* in excellent form as was their *camtschaticum*. Another fine bush in foliage was their *tsariense*, to me a gem of a plant, as is their *chryseum*.

Knaphill had an attractive stand, mainly of azaleas and one or two lovely plants including 'Winsome', the good red form of *calostrotum*, a nice hybrid 'War Lord' and a very fine bush of 'Fragrantissimum'.

Messrs Hilliers' exhibit as usual was full of interesting plants. They had a lovely form of *makinoi*, a good pink *crinigerum* and *insigne*. The main

centrepiece of 'Naomi Nautilus' was a fine plant as also was the vivid red 'W.F.H.'. In some plants the young growths are probably the most attractive character and the *fulgens* and *ririei* here were no exception.

Messrs Slococks had their usual position under the clock and their stand contained a good collection of hardy hybrids; of note were their 'China', 'Susan' and 'Sappho'.

THE TRURO SHOW 1972

ANN MAGOR

The Truro Show this year was held on April 26 and 27. Every year the date is changed, so that one year we have an early show, and another year we have a later show such as we had this year. Last year exhibitors were complaining of a late frost that had struck nearly all the gardens about two nights before the show. This year, the two week spell of summer that most of us experienced in March, had caused quite a few upsets, and the very dry summer of last year had not been a help to the plants in setting their flower buds. This was especially noticeable with the big leaved rhododendron species, and very few were shown.

The section for ornamental trees and shrubs is always well supported, and this year was no exception. Among the exhibits which caught my eye, was a large vase of *Camellia reticulata* 'Captain Rawes', also *Lomatia ferruginea* with its attractive new growth, and a vase of *Weinmannia.*

The magnolias this year had been quite outstanding, and although the show was unfortunately a little late for them, this did not mean that none were shown. Several interesting magnolias were shown, notably from Caerhays. Exhibiting in the competitive classes for the first time for many years, Mr. Williams showed *Magnolia fraseri, M. mollicomata* and *M.* 'Brozzonii'. The former caused quite a stir, as very few people had seen this yellow green magnolia from south eastern United States. A class in this section which attracted a lot of entries was for a single bloom of a species, hybrid or cultivar; amongst the many entries were *Magnolia nitida,* a very attractive new hybrid raised at Caerhays and, an as yet un-named, *mollicomata* x *liliflora nigra.*

The 32 classes for camellias were in most cases well supported, and the standard very high. A new class introduced for the first time this year was very well supported, for 12 different camellias, one bloom of each. The winner was Commander Penrose, who won the Camellia Cup. This was a very difficult class to judge, and a clearer dividing line between exhibits would have made it a little easier. Among those shown in this class were 'Drama Girl', 'Mrs. D. W. Davis', 'Elsie Jury' and 'Dear Jenny'.

Among the *Camellia japonica* shown were 'Devonia', 'Guilio Nuccio', 'Prof. C. S. Sargent', 'Kramer's Supreme', 'Margaret Short', 'Alexander Hunter', 'Mathotiana', 'Coquetti', 'White Nun', and 'Te Deum'. Major General E. G. W. W. Harrison won the class for six different camellias, to include three or more species or hybrids, one bloom of each; he included in his exhibit 'Haku Rakuten', 'Anticipation', and 'Leonard Messel'.

Camellia x *williamsii,* which seems to be one of the easiest to grow, was represented with 'Donation', 'Anticipation', 'Elsie Jury', 'Lady Gowrie' and 'Salutation'. Amongst the seven spray classes, was a class for any species other than *C. japonica* or *C. reticulata*; Trewithen showed a lovely spray of *C. tsaii.*

A very nice form of *R. niveum* was being shown in the class for six species, with *delavayi, sinogrande,* and *eximium.* The class for any species of the Falconeri or Grande Series only attracted four entries, and this was won by Trelissick's form of *R. arizelum,* which was very unusual in colour; the others shown were *R. eximium, R. sinogrande,* and *R. basilicum.*

In the spray classes there were some quite outstanding exhibits. In the class for three species one spray of each *R. williamsianum, R. thomsonii,* and *R. augustinii* were particularly good. There were eight entries for the class of any species of the Triflorum or Heliolepis Series, and five *R. davidsonianum* were shown of varying degrees of pink, the best being from Trelissick and Trewithen, which were a good deep pink without any trace of blue. A very dark form of *R. russatum* was shown in the Lapponicum class and was placed over *R. impeditum.* A class which only attracted three entries was for species not catered for in previous classes; this was won by a very floriferous form of *R. baileyi* shown by Colonel Colville, with Major Magor's *R. mollicomum* second and a very pale form of *R. glaucophyllum* placed third. Two quite different forms of *R. johnstoneanum* were shown in the class for sprays of the Edgeworthii or Maddenii Series. Mr. Holman has a very good form of *R. schlippenbachii,* which again won the class for any species of the deciduous Azalea Series. *Rhododendron morii* was shown by two gardens, and it was interesting to see the two different forms, one having a very distinct basal blotch of cherry red, whereas the other form was almost white with no distinct markings.

Major General E. G. W. W. Harrison won the class for six hybrids, which included 'John Barr Stevenson', 'Mariloo', 'Sir George Sansom' and 'Fortune'. Mr. Lionel Fortescue also exhibiting in this class was showing a new hybrid raised by him called 'Katherine Fortescue', which has a good full truss of a nice yellow with faint red spotting at the base. The next class for three hybrids was again won by Tremeer, showing 'Coral Pink', which is a most attractive cross between 'Lacs' and 'Barclayi', and 'Matador' x 'Gaul'. In the class for any hybrid raised by or in the garden of the exhibitor, 'Zyxya' which has a very attractive dark red stigma and mid-rib to the leaf and a very strong look of *R. griersonianum,* won, being shown by General Harrison. In the class for any hybrid of which one parent is a species of the Fortunei Series, Mr. Fortescue's 'Katherine Fortescue' was the undisputed winner, he also won the class for any hybrid between two species, with his *cinnabarinum* x *concatenans.* 'Matador' x 'Barclayi' won the class for any cross between two hybrids.

In the hybrid spray classes there were some really outstanding exhibits, perhaps the most outstanding was a large spray of *R.* 'Michael's Pride' shown by Caerhays, which easily won the class for any hybrid; it has a good truss with large flowers of cream becoming green towards the base; a large spray of 'Pink Pebble' was placed second, and third was a spray of *R. russatum* x *pseudoyanthinum* shown by Colonel Colville, which is very dark in colour and very free flowering. 'Saint Breward' won the class for any hybrid of which one parent is a species of the Triflorum Series, and *R. russatum* x *pseudoyanthinum* was second. In the class for any hybrid of which one parent is a species of the Cinnabarinum Series, Mr. Holman's 'Royal Flush' which was most attractive, with very large bells, won over 'Alison Johnstone'. He also showed *R.* 'Countess of Haddington' to win the class for any hybrid of which one parent is a species of the Edgeworthii or Maddenii Series.

THE RHODODENDRON GROUP'S TOUR OF CORNISH GARDENS, 1972

ANN MAGOR

Assembling in Truro on April 25, from all parts of the country, members of the group in the morning paid a visit to the Truro Flower Show. To many who were visiting Cornwall for the first time the Show aroused a lot of interest, as the Gulf Stream enables tender plants to be grown outside in many parts of the Duchy, with little or no protection, and to those who in other parts of the country struggle with these plants under glass, it was quite a revelation to see in the Show large vases filled with sprays grown outside.

Last summer we suffered from lack of rain, and the result was very noticeable in some of the rhododendron classes, especially among the 'big leaf boys'; a few trusses were shown, but the drought, which in some parts of Cornwall lasted from mid June through to October, resulted in foliage being half the normal size.

Mrs. Johnstone had very kindly invited the Group to tour the Trewithen Gardens in the afternoon of the first day and tea was provided, when we could tear ourselves away from the garden, which for the more enthusiastic members was not an easy task.

In front of the house the lawn stretches for 200 yards in a southerly aspect, and on either side are shrub borders. We moved down this lawn at a very slow pace, with all of us in turn disappearing like rabbits, only to re-emerge a little later on, and drag the rest of the party back to admire what one of us had discovered. A very fine plant of *Rhododendron eximium* held up the party for some time, as did a plant of *R. delavayi* and Trewithen's magnificent *R. macabeanum,* the best-shaped plant of any I have seen. This plant is dead-headed every year, and certainly benefits as a result. A planting of *R. davidsonianum* was very spectacular, the flowers being of a good deep clear pink. Another rhododendron which caused a certain amount of interest among the pundits who put their magnifying glasses to work, was thought to be *R. trichocladum,* but after studying it for some time, was then thought to be *R. caesium,* a very deep yellow; a larger plant of this was seen a little later on. A fairly recent planting of 'Trewithen Orange', was very interesting to see, a really beautiful hybrid, but it is very susceptible to rust, which is the reason perhaps why it is not more widely grown. *Camellia tsaii* had been exhibited at the show, and we were able to see three plants of it in flower. Previously I had only seen this tender species grown under glass at Kew. Mr. Michael Taylor, the head gardener, who very kindly took us round, was able to tell us the names of the many plants which had caught our eye, and he showed us a plant of *R. edgeworthii,* which does not flower as it is growing in a very shady position, but the foliage was quite exquisite. Among other plants were a large tree of *Eucryphia moorei* measuring 52 feet in height, and a stand of five *Eucryphia cordifolia,* all about 50 feet high, which must be a sight to behold when in full flower. There was also a large tree of *Reevesia pubescens* which is a member of the Cocoa family, and several plants of *Vaccinium retusum* in flower looked most attractive.

The following morning, we all met again at Caerhays—and in our eagerness to see this fascinating garden, many of us arrived much earlier than expected, but Mr. Julian Williams and his wife very kindly welcomed us and it was with some impatience that we waited for the 'late arrivals'. The Caerhays garden is situated behind the house, on the side of a hill with a south westerly aspect. and a lovely view of the sea, but fortunately the garden is well protected from sea spray, and with a very mild climate the many rare and tender plants from Forrest and other plant collectors grow here in great profusion.

We were only able to spend three hours in this garden, so Mr. Williams, who kindly took us round, conducted the tour at a pretty good pace. There is not enough space here to mention all the plants we were shown, so I hope I will be forgiven if I just mention a few, that attracted attention in one way or another. *R.* 'Yellow Hammer'—which originated in this garden—looked quite splendid, planted in a close group, to form what appeared at a distance a hedge of yellow. Other rhododendrons grown in this way were 'Countess of Haddington', *R. williamsianum* x *martinianum,* and 'White Wings', the latter growing along the top of a bank was cascading down to the path. The blood red form of *R. arboreum,* the most tender of the arboreums, which grows in the wild at approximately 5,000 feet, was to be seen here as a grove, and close to this were the lovely plants of *R. sinogrande,* plus three seedlings all in flower, and amongst them was a good yellow. The original clump of 'Blue Tit' in flower was a sight to behold, and 'Mella', also in full flower and covering an area of nearly 8 feet square looked very attractive, as did 'Saffron Queen'. There were several plants of *R. williamsianum,* all beautifully shaped; this species is well worth a place in any garden that can grow rhododendrons.

Bays cut into the laurel provide well sheltered areas for the members of the Maddenii Series, six plants of *R. burmanicum* were in flower, several plants of *R. lindleyi* were covered with buds and showing colour, and there were also some plants of *R. burmanicum* x *R. cubittii,* and *R. taggianum* x *R. cubittii. R. stenaulum* was looking very attractive with its young growth just coming out, and a very large plant of *R. wilsonae* of the same series bore very pretty sweet smelling pink flowers. Perhaps for myself, the most exciting rhododendron to be seen that morning was *R. anthopogonoides.* Having visited this garden several times, this visit was the first time that I saw the plant in flower, and Mr. Williams kindly allowed us to scramble down off the path to have a closer look at this very rare plant, which is I understand, the only one in cultivation. Another, that was almost as exciting was *R. longistylum*; the plant was growing close to the path and it looked very graceful covered with delicate white flowers. A Caerhays hybrid that attracted a great deal of admiration was *R.* 'Michael's Pride'. We had seen and admired it the previous day in Truro. Here it was planted in several places in the garden, all at different stages of flowering; the bells are the size and shape of *dalhousiae,* whilst the other parent *burmanicum* has given it its creamy green colour.

Camellia x *williamsii* was raised here by Mr. J. C. Williams, and I feel sure that those of us who saw the many plants growing here were very impressed. Always worth a place in a garden, as the hybrids are very free flowering and have a long flowering period.

Among other plants that caused much admiration was *Magnolia nitida*, an evergreen magnolia with very attractive young growth; how lucky we were to see this in full flower. Several plants of *Michelia* were also in flower, ranging in colour from cream to white. The other magnolia that attracted a good deal of attention and was greatly admired, was a young plant of *mollicomata* x *liliflora nigra*. This cross was made by Mr. Philip Tregunna, here at Caerhays, and the plant we saw and admired was the only seedling to survive. *Pieris forrestii* grows well in this garden, and several forms were in flower, among them 'Charles Michael' A.M. It was with great reluctance that we tore ourselves away as we had another garden to see in the afternoon, and I am sure that many of us would have been only too happy to have spent the rest of the day there.

After lunch we arrived at Chyverton, which is north of Truro. The house stands above the main part of the garden, being built on a levelled piece of high ground, with a fine view down to the pond. Magnificent plants of 'Cornish Red', which are to be found in nearly all the gardens in this part of the country, were in full flower, and growing alongside the pond, with branches sweeping down to the water's edge and so being reflected, looked quite beautiful.

Over the last 40 years a tremendous amount of planting has taken place in this garden, mainly magnolias in the early years, so that now they are very good sized trees, and if the tour had only been a few weeks earlier, we would have seen them in flower; this spring was a particularly good one for magnolias. In a shrubbery opposite the front door, two very dark forms of *R. augustinii* were looking quite magnificent, their situation in partial shade perhaps accounted for their particularly good colour; growing in the same area, but with little or no shade, was a very fine form of *R. schlippenbachii*. At the back of the house a border leading down to the main part of the garden is known as the United Nations Border, as here plants from every continent are to be found growing. Among them were *Edgeworthia papyrifera*, a large plant of *Michelia doltsopa*, and tucked into a cosy corner a very fine form of *R. burmanicum*, which unfortunately was not in flower. Another plant which I greatly admire is the white form of *R. campanulatum*: the form growing at Chyverton has lovely clean foliage and a dark indumentum. *R. hookeri* was looking very attractive with its new growth buds like tapering red candles.

Lysichitum and *Gunnera* both seem to like the conditions that they find at Chyverton, and appear to have gone wild. Mr. and Mrs. Nigel Holman very kindly took us round their delightful garden, and as the weather remained sunny and warm, we all thoroughly enjoyed our afternoon with them. Before leaving we were shown a small wall garden close to the house, which provides ample shelter for several tender rhododendrons and also a young tree of *Magnolia nitida*, which was flowering for the first time. Mr. Holman seems to be very successful with the tender rhododendron species, he has several young plants of *R. lindleyi* which were just about to come into flower.

Friday morning found us at the entrance to Trengwainton, which is in the extreme south west of the Cornish peninsula, facing due south. The

average annual rainfall is 46 inches. The home of the Bolitho family, the garden is administered by the National Trust. After an introductory talk by Major Simon Bolitho, we split up into three parties for our tour of the garden. Mr. Horder, the head gardener, to whose party I attached myself, started at the lodge, and we walked slowly up the long drive towards the house.

On both sides of the drive are well-kept beds, with both well-established plants and evidence of recent plantings. On the left-hand side a stream runs parallel with the drive. With bays cut out from the windbreaks, there are several new plantings, and in one of these a plant of *R. argipeplum* is growing, a rare member of the Barbatum Sub-series. Behind the long bed on the right-hand side of the drive are five wall gardens, and it is within these walls that one sees a wealth of tender plants, with representatives from every continent.

A large specimen of *Michelia doltsopa* in full flower was very impressive, and a plant of *Styrax japonica* caused quite a few comments, growing in a very strategic position on a bank at the top of a wall. The south-facing walls are well planted with various acacias and also provide protection for some of the more tender rhododendrons, such as *R. taronense, taggianum, lindleyi, nuttallii, dalhousiae,* and the hybrid 'Grierdal'. *Clematis indivisa* was making full use of a tree as a support to grow up. *Vestia lycioides* was in flower and so was a tree of a very dark coloured *Fuchsia*, said to be *exorticata*, and the very attractive *Grevillea rosmarinifolia*. *Berberis linearifolia* 'Orange King' looked very eye-catching, with its brilliant orange flowers.

Leaving the wall gardens and stepping back on to the drive, one was confronted with several large plants of *R. johnstoneanum*, both the single and double forms; the flowers of the latter were very yellow on one plant. Growing close by was 'Johnnie Johnstone', a most attractive pink hybrid of the double form. Making our way up to the house, we passed a new area of planting which has been named Queen Mother's Meadow, as here H.M. The Queen Mother had planted a tree whilst on a visit, and Princess Anne was to plant another later in the spring. In this area is a large circular bed well planted with *R. auritum* as well as a mass of *R.* 'Blue Tit' and 'Blue Diamond' which, given a few years, will be a sight to behold.

Nearer the house I spotted two plants of *R. virgatum* in flower, and not far from these, in a border parallel with the front door, was a clump of a very dark form of *R. tephropeplum*, growing with a few plants of *R. auritum*– one of these plants was sporting pink and yellow flowers. Approaching the front door one was assailed by a most heavenly scent, which proved to be from three very large plants of *R.* 'Lady Alice Fitzwilliam' in full flower, a really wonderful sight.

Three plants growing up against the house caught my eye, *Lapageria rosea, Dendromecon rigidum* which in flower is a most glorious yellow, and a *Clianthus*. Round the side of the house a rock garden containing a very comprehensive collection of the Lapponicum Series, has behind it another well-protected area where there were several *R. cinnabarinum* hybrids, and plants of *R. burmanicum, megacalyx* and *taggianum*. Leaving this area and going back towards the lodge, but keeping away from the drive, we came

across an enormous old plant of *R. falconeri,* this is easily the oldest species growing in the garden, perhaps one of the original Hooker plants. Here too were plants of *R. elliottii, lanatum, leptothrium* of a very good colour, and several plants of *R. genestierianum,* not one of the most beautiful in the family, but certainly an interesting one. *R. macabeanum* is well represented here, Trengwainton has the F.C.C. form.

The group was due at Trelissick, another National Trust garden, after lunch, so it was with reluctance that we said goodbye to our host and Mr. Horder, who had so kindly given up their morning to us.

At Trelissick the group became rather 'ungrouped' and only a small number of us were lucky enough to be taken round by Mr. Jack Lilly, who has been in charge of the gardens for many years.

If I may, I would once again like to mention *Michelia doltsopa.* A plant growing here, unprotected and in what I am told is a frost pocket, was planted 14 years ago by Mr. Lilly, has attained a height of approximately 30 feet, and in full flower was the best shaped tree we had seen on our tour. Nearby was a plant of *Acer pseudoplatanus* 'Brilliantissimum'. *Picea smithiana* was shown at its best, growing in the middle of a lawn it looked very elegant and was of a good height.

Species rhododendrons were not grown in any great numbers as they had been in the gardens we visited previously, but I saw nice forms of *R. barbatum* and *R. campanulatum.* Two plants of *R. concinnum* var. *pseudoyanthinum,* of a very deep and attractive purple, growing either side of stone steps, were very eye-catching. Hybrid rhododendrons are far more widely grown here, and Mr. Lilly was able to put a name to almost every one we passed. Large plants of the old hardy hybrids which seem to have a longer period of flowering than the more recent hybrids, were just beginning to come out and among the plants covered in flower, were 'Mary Swaythling', 'Helen Fox', 'Avalanche' and 'Little Bert'.

We were extremely fortunate in our weather, as the rain held off, and though the wind at times was bitterly cold, the sun shone for most of the tour.

AWARDS AT LONDON SHOWS 1971 AND 1972

Awards to Camellias 1971/1972

Camellia x williamsii 'Debbie' A.M. February 23, 1971, as a flowering plant for the cool greenhouse. Flowers up to 4¾ inches across, paeony-flowered, with two rows of petals encircling a tightly packed inner whorl of numerous small petaloids; larger petaloids gave added depth to the blooms; there were a few stamens in the centre of the flower. Flower colour Red-Purple Group 65B flushed with darker shades of 65A and 66D. The leaves were broad, dark green and glossy with widely spaced, barely discernible serrations. Raised by L. Jury, of New Zealand, exhibited by Dr. J. A. Smart, Marwood Hill, Barnstaple, N. Devon.

Camellia 'Francie L' A.M. March 14, 1972, as a flowering plant for the cool greenhouse. The parentage is stated to be (*C. saluenensis* x *C. reticulata* 'Buddha'), but there appears to be little sign of *C. saluenensis* in this cultivar. Flowers up to 6 inches across, semi-double, 20 to 22 petals in three or four rows with a conspicuous central group of stamens interspersed with a few petaloids. Colour Red Group 52B with deeper veinal markings of Red Group 52A (Fig. 12). Raised by Nuccio, exhibited by Dr. J. A. Smart.

Camellia 'Foundling' ('Inamorata' x *williamsii* 'Parkside') **P.C.** March 14, 1972, as a flowering plant for the cool greenhouse. Raised and exhibited by Crown Estate Commissioners, Windsor Great Park, Windsor, Berks.

Camellia japonica 'Mrs. H. Boyce' P.C. March 28, 1972, as a hardy flowering plant. Raised by Cremorne Nursery, Melbourne, Australia, exhibited by Captain Collingwood Ingram, The Grange, Benenden, Cranbrook, Kent.

Award to Magnolia, 1972

Magnolia campbellii 'Betty Jessel', A.M. 18 April, 1972, as a hardy flowering tree. The well known type species, *M. campbellii,* has already received a First Class Certificate in 1903, but the clone 'Betty Jessel' is distinct not only in the deeper colour of the flowers but also in the date of opening, in some years as late as May. The flowers of the plant exhibited when fully opened were nearly 10 inches in diameter, and the tepals ranged from 3½–5 inches in length by 1¾–2¼ inches across. The outer three segments were closest to Red Purple Group 57C on their inner surfaces, shading to white at the base, and nearer Red Purple Group 57B on the reverse, while the inner segments were slightly paler in colour (Fig. 11). The plant shown was raised from a seedling obtained from the Botanical Gardens, Darjeeling, India, by the exhibitor in 1937. Specimen in Herb. Hort. Wisley. Exhibited by Sir George Jessel, Bt., Ladham House, Goudhurst, Kent.

Awards to Rhododendrons 1971

Rhododendron calostrotum 'Gigha' F.C.C. May 4, 1971, as a hardy flowering plant. Flowers saucer-shaped, five-lobed, up to 1⅘ inch across in one to three flowered clusters. Flowers Red-Purple Group 61A with some paler colouring in the throat and upper three joined lobes heavily marked with

dark red-purple close to Red-Purple Group 185A; outer corolla hairy towards base, with some scaly indumentum occurring towards the centre of, and fringing, each lobe; calyx five deeply divided, irregular, reddish lobes up to 7 mm. in length, heavily scaly and fringed with long red hairs; pedicels reddish, scaly, up to 4/5 inch long. Leaves ovate, up to 10 mm. across and 15 mm. long, dark green above paler below, both surfaces covered with scaly brown indumentum. Leaf blade fringed with a few long red hairs. Petioles flattened, scaly up to 5 mm. in length. Raised at Tower Court, exhibited by E. H. M. and P. A. Cox, Glendoick Gardens Ltd., Perth.

Rhododendron 'Vanessa Pastel' (*R. griersonianum* x *R.* 'Soulbut') F.C.C. June 8, 1971, as a hardy flowering plant. Flowers five-lobed broadly funnel-shaped, 2¾ inches long and 3½ inches wide in loose eight-flowered trusses. Flowers Orange-White Group 159A deepening in throat to Greyed-Orange Group 163C, with some darker spotting; outer corolla Yellow-Orange Group 20C, suffused with Orange Group 27 and Red Group 54D, lightly hairy; calyx rudimentary, fused with pedicel; pedicels up to 1 inch long. Leaves narrow-elliptic, 4½ inches long, matt green and free from indumentum. Petioles up to 1 inch long. Crossed and raised by the 2nd Lord Aberconway, exhibited by Lord Aberconway and the National Trust, Bodnant, Tal-y-Cafn, Colwyn Bay, Denbighshire.

Rhododendron araiophyllum 'George Taylor' A.M. May 4, 1971, as a hardy flowering plant. Flowers openly campanulate, slightly fragrant, five-lobed, in loose seven- or eight-flowered trusses; truss 4 inches across, individual flowers 1¾ inches long and 2 inches across. Flowers White Group 155C, with blotching and markings of Red-Purple Group 60A in upper throat; calyx rudimentary, green; pedicels up to 1¾ inches, flushed red. Leaves elliptic, up to 1 3/10 inches across and 3½ inches long, dark green above, paler beneath; free from indumentum except for thick, light brown, woolly indumentum along mid-rib. Petioles flattened, up to 2/5 inch long. Collector not known, raised and exhibited by The Director, Royal Botanic Gardens, Kew, Richmond, Surrey.

Rhododendron 'Buttersteep' (*R.* 'Jalisco' x *R.* 'Crest') A.M. June 8, 1971, as a hardy flowering plant. Flowers openly funnel-shaped, seven joined lobes, carried in rather loose 12- to 14-flowered trusses; colour Yellow Group 10B deepening in throat to 10A, with a small blotch of Red Group 46A deep in upper throat; outer corolla faintly flushed orange-red; calyx seven joined irregular, deeply divided lobes up to 4/5 inch long, yellow edged and stained with Greyed-Purple Group 186A; pedicels up to 1½ inches long. Leaves elliptic up to 4 inches long and 1¾ inches across, pale green, free from indumentum. Petioles up to 1¾ inches long. Crossed, raised and exhibited by Crown Estate Commissioners, The Great Park, Windsor, Berks.

Rhododendron 'Churchill' (*R. falconeri* x *R. sinogrande*) A.M. May 4, 1971, as a hardy flowering plant. Flowers ventricose-campanulate, slightly fragrant, 10-lobed in trusses of 32 to 35, tight rounded, measuring up to 9½ inches across; flowers 2½ inches long and 2¼ inches across; Yellow Group 4D; the outer corolla being suffused with the deeper colouration of Yellow Group 4C; a small blotch of Red-Purple Group 60A at the base of the corolla; calyx rudimentary, fused with stout indumentum-covered pedicel; pedicels up to 1¾ inches long. Leaves elliptic, on specimen up to 6 inches across and 13½ inches long, dark green above, thickly covered with light brown, woolly indumentum beneath. Petioles sturdy, indumentum covered, up to 2 inches long. Crossed and raised by Lionel de Rothschild, exhibited by Edmund de Rothschild, Exbury, Southampton, Hants.

Rhododendron cremastum 'Bodnant Red' A.M. May 24, 1971, as a hardy flowering plant. Flowers five-lobed, solitary or in twos at the end of branchlets, 4/5 inch long and 1 inch diameter; Greyed-Purple Group 185B; calyx greenish brown, five deeply divided lobes, up to 3 mm. long; pedicels up to 1 inch long, sparsely scaly. Leaves elliptic, up to 1 inch long and ½ inch across, dark green above, paler beneath and sparsely scaly. Petioles flattened, up to 2 mm. long. Collector not known, raised and exhibited by Crown Estate Commissioners.

Rhododendron 'Englemere' (*R.* 'Jutland' x *R.* 'Royal Blood') A.M. June 22, 1971, as a hardy flowering plant. Flowers five-lobed, funnel-campanulate, 2 inches long and 1¾ inches across, carried in tight rounded trusses of up to 7 inches in diameter and containing up to 34 flowers per truss; Red Group 53C with a considerable amount of faint spotting in the throat; calyx five deeply divided unequal lobes up to 6 mm. long; pedicels up to ¾ inch long. Leaves narrowly elliptic, up to 6 inches long and 2 inches across, dark green above, paler beneath, free from indumentum. Petioles up to ¾ inch long. Crossed, raised and exhibited by Crown Estate Commissioners (Fig. 9).

Rhododendron 'Iberia' (*R.* 'Isabella' x *R. wardii*) A.M. June 22, 1971, as a hardy flowering plant. Flowers five-lobed, widely funnel-campanulate, 2 inches long and 2¾ inches across, carried in loose six- to eight-flowered trusses; White Group 155A strongly suffused with Yellow Group 4D, deepening in throat to Yellow Group 4C and with a small basal blotch of Red Purple Group 61A, the centre of each corolla lobe being faintly flushed with the same colour; calyx rudimentary, up to 3 mm., flushed red-purple and fringed with glandular hairs; pedicels up to 2 inches long, sparingly glandular. Leaves elliptic to broadly elliptic, up to 5 inches long and 2¾ inches across, apiculate, oblique, free from indumentum. Petioles up to 1 3/10 inches long. Crossed, raised and exhibited by Captain Collingwood Ingram, The Grange, Benenden, Cranbrook, Kent.

Rhododendron 'John Barr Stevenson' (*R. lacteum* x *R.* 'Logan Damaris') A.M. April 20, 1971, as a hardy flowering plant. Flowers openly campanulate, five-lobed, in rounded 14- to 16-flowered trusses up to 7 inches across; corolla 3¼ inches across and 2 inches long; Green-Yellow Group 1D with a small blotch of dark red-purple at the base of the upper throat; calyx green-yellow, comprising five irregular lobes up to 3 mm. in length; pedicel greenish, up to 1¾ inches long. Bud scales persistent. Leaves broadly elliptic, up to 6 inches long and 2½ inches wide. Petioles rounded, up to 1½ inches long. Crossed and raised by J. B. Stevenson, exhibited by Major-General E. G. W. W. Harrison, Tremeer, St Tudy, Cornwall (Fig. 8).

Rhododendron lophogynum A.M. April 20, 1971, as a hardy flowering plant. A deciduous small shrub, flowering before the new leaves appear. Flowers widely funnel-shape, 5 lobed, up to 4/5 inches long and 1 inch across, in three or four flowered trusses; corolla Yellow Group 7D with darker greenish yellow mottling in upper throat; outer corolla scaly and lightly hairy; calyx rudimentary, green scaly and densely hairy. Collector not known, raised and exhibited by Crown Estate Commissioners.

Rhododendron 'Morning Cloud' (*R. yakusimanum* x *R.* 'Springbok') **A.M.** May 24, 1971, as a hardy flowering plant. Flowers five-lobed, openly funnel-shaped, held in firm, rounded 16- to 18-flowered trusses; corolla 1½ inches long and 2¼ inches across; white flushed Red-Purple Group 65D with the outer corolla marked with darker shades of Red-Purple Group 65D and with slight greenish yellow marking in the upper throat; calyx five irregular joined lobes, up to 2 mm. long, densely hairy; pedicels up to 1 inch long. Leaves narrowly elliptic, dark green above, covered beneath with brown woolly indumentum. Petioles up to ½ inch long. Crossed and raised by A. F. George, exhibited by Hydon Nurseries Ltd., Hydon Heath, Godalming, Surrey.

Rhododendron pocophorum 'Cecil Nice' A.M. March 30, 1971, as a hardy flowering plant. Flowers tubular-campanulate, five-lobed, 1¾ inches long and 1¾ inches across, in loose six- to eight-flowered trusses; corolla a uniform deep red, close to Red Group 53A with darker marking in upper throat; calyx red, comprising five joined, irregular lobes up to 5 mm. long; nectaries large; pedicels red, up to ¾ inch long; calyx and pedicels lightly covered with short fine hairs. Leaves oblanceolate to narrowly obovate, up to 4 inches long and 1¾ inches across, dark green above, heavily coated beneath with woolly indumentum. Petioles flattened, up to ½ inch long. Collected by F. Kingdon Ward, raised and exhibited by the Countess of Rosse and The National Trust, Nymans Gardens, Handcross, Haywards Heath, Sussex.

Rhododendron stamineum A.M. May 24, 1971, as a flowering plant for the cool greenhouse. Flowers narrowly tubular, five-lobed, in loose 20- to 22-flowered compound umbels; corolla 1½ inches long and up to 2 inches across, with the corolla tubular for up to a third of its length; colour White Group 155D, the upper lobe flushed with yellow-orange; calyx rudimentary, green; pedicels up to 1½ inches long. Leaves narrowly elliptic, 5½ inches long and 1¾ inches across, thin, glossy, dark green above, paler beneath and free from indumentum. Collector not known, raised and exhibited by Crown Estate Commissioners.

Rhododendron 'Stanway' (*R. fortunei* x *R.* 'Jalisco') **A.M.** May 24, 1971, as a hardy flowering plant. Flowers seven-lobed, openly funnel-shaped in loose eight-flowered trusses; corolla 4½ inches across and 2 inches long; Yellow Group 8D with each joined petal showing deeper bar of colouring and deepening in throat to Yellow Group 8B; calyx irregular with several pointed lobes varying in length from 4 to 20 mm.; colour as for corolla; pedicels up to 2 inches long. Leaves narrowly elliptic to elliptic; 5½ inches long and 2 inches across; free from indumentum. Petioles 1½ inches long. Crossed, raised and exhibited by Edmund de Rothschild.

Rhododendron sutchuenense var. geraldii 'Sunte Rose' A.M. March 30, 1971, as a hardy flowering plant. Flowers open-funnel-campanulate five-lobed, 2½ inches long and 2½ inches across. Trusses flattened, up to 6 inches across, comprising 20 to 22 flowers per truss; flowers Red-Purple Group 66C in bud, paling on opening to Red-Purple Group 68D with a red-purple blotch at the base of the throat and associated light spotting of the upper throat; calyx rudimentary; pedicels sturdy, flushed red, paling at base, 1 to 1¼ inches long; bud scales persistent. Leaves oblong, 11 inches long and 3 inches across, dark green above, paler below, mid-rib prominent, covered with grey/white

woolly indumentum; leaf-blade free from indumentum. Petioles broad, flattened upper surface up to 1 inch long. Collector not recorded, raised and exhibited by G. Gorer, Sunte House, Haywards Heath, Sussex.

Rhododendron tricanthum 'Honey Wood' A.M. June 8, 1971, as a hardy flowering plant. Raised at Tower Court and exhibited by Major A. E. Hardy, Sandling Park, Hythe, Kent.

Rhododendron trichostomum var. ledoides 'Quarry Wood' A.M. May 24, 1971, as a hardy flowering plant. Flowers tubular, five-lobed in tight rounded trusses of up to 1 1/10 inches across and containing 18 to 20 blooms per truss; flowers up to 12 mm. long and 12 mm. in diameter, white, flushed with shades of Red-Purple Group 68D and 68C; calyx five-lobed, green, scaly and fringed with fine hairs, 2 mm. in length; pedicels scaly, up to 3 mm. long. Leaves linear-lanceolate, up to 1 1/10 inches long and 3/10 inches across, dark green above, under surface covered with dark brown, loose, scaly indumentum. Petioles flattened, up to 4 mm. in length. Collector not known, raised and exhibited by Mr. and Mrs. Martyn Simmons, Quarry Wood, Burghclere, Newbury, Berks.

Rhododendron 'Waterfall' (*R. cinnabarinum* x *R. crassum* (Coopers form)) **A.M.** June 8, 1971, as a hardy flowering plant. Flowers fragrant, tubular funnel shape, five joined lobes, carried in loose eight-flowered trusses; inner corolla Red-Purple Group 62D at lip deepening in throat to 62A with orange-red mottling in upper throat; outer corolla Red-Purple Group 62D at lip darkening through shades of Red Group 62D to Red Group 52B suffused with orange-red at the base of the corolla; calyx green, rudimentary, five joined lobes up to 4 mm. in length; pedicels up to 3/5 inch long. Leaves elliptic to broadly elliptic, up to 2½ inches long and 1 1/5 inches across, dark glossy green above, heavily scaly beneath. Petioles sturdy, up to 7/10 inch long, lightly scaly. Crossed and raised by the 2nd Lord Aberconway, exhibited by Lord Aberconway and The National Trust.

Rhododendron 'Whitmoor' (*R.* 'Grenadine' x *R.* 'Royal Blood') **A.M.** June 8, 1971, as a hardy flowering plant. Trusses full, rounded, 24- to 26-flowered. Flowers funnel-shaped, five-lobed, up to 2½ inches long and 2½ inches in diameter; Red Group 53C with considerable spotting in the upper throat; calyx five deeply divided unequal lobes, up to 2/5 inch long; pedicels up to 1¼ inches long. Leaves lanceolate, up to 6 inches long and 2 inches across, dark green above, undersurface showing traces of brown woolly indumentum. Petioles up to ½ inch long. Crossed, raised and exhibited by Crown Estate Commissioners.

Rhododendron wilsonae A.M. March 30, 1971, as a flowering plant for the cool greenhouse. Flowers widely funnel-shape, five-lobed, 1½ inches long and 1½ inches across, solitary, axillary in loose terminal clusters of four or five; Purple Group 76B with some deeper shading of Red-Purple Group 74D towards the base of the corolla and with brown mottling in the upper throat; calyx five linear segments, pale green, of unequal length; bud scales persistent; pedicels up to 1¼ inches long. Leaves whorled, up to 4¾ inches long and 1¾ inches across, dark green, glossy, narrowly elliptic to elliptic. Petioles rounded, up to ½ inch long. Introduced by E. H. Wilson, raised and exhibited by Crown Estate Commissioners.

Rhododendron hodgsonii 'Harp Wood' P.C. April 20, 1971, as a hardy flowering plant. Raised and exhibited by Major A. E. Hardy, Sandling Park, Hythe, Kent.

Rhododendron 'Kit Corynton' ((*R. cinnabarinum* x *R. maddenii*) x *R. concatenans*) P.C. May 4, 1971, as a hardy flowering plant. Crossed, raised and exhibited by Major-General E. G. W. W. Harrison.

Rhododendron 'Mah Jong' (*R.* 'Chink' x *R. valentinianum*) P.C. April 30, 1971, as a hardy flowering plant. Crossed, raised and exhibited by Crown Estate Commissioners, Windsor.

Rhododendron ovatum P.C. May 24, 1971, as a hardy flowering plant. Shown by the Countess of Rosse and the National Trust, Nymans, Haywards Heath, Sussex and by Crown Estate Commissioners.

Rhododendron sino-nuttalli 'Lhasa' (L.S.E. 12117) P.C. May 24, 1971, as a flowering plant for the cool greenhouse. Raised and exhibited by Crown Estate Commissioners.

Rhododendron 'Windle Brook' (*R. carolinianum album* x *R.* 'Cilpinense') P.C. April 20, 1971, as a hardy flowering plant. Crossed, raised and exhibited by Crown Estate Commissioners.

Rhododendron 'Woodcock' (*R.* 'Elizabeth' x *R. hyperythrum*) P.C. April 20, 1971, as a hardy flowering plant. Raised and exhibited by the Director, R.H.S. Garden, Wisley, Woking, Surrey.

Awards to Rhododendrons 1972

Rhododendron brookeanum gracile 'Raja' F.C.C. May 2, 1972, as a flowering plant for the cool greenhouse. Flowers five joined lobes, tubular funnel-shaped, 2 inches long and 3 inches across, in five to 11 flowered trusses; fragrant, colour Yellow Group 13A; calyx rudimentary yellow, pedicels up to 1⅖ inches long. Leaves narrowly-elliptic, mucronate, narrowly cuneate up to 5 inches long and 1⅖ inches across, dark green upper surface, paler beneath. Petioles up to ½ inch long. Collected (Sabah as a small seedling), raised and exhibited by Mr. and Mrs. E. F. Allen, Felcourt, Copdock, Suffolk (Fig. 10).

Rhododendron 'Coldstream' (*R.* 'Snow Queen' x *R.* ?) A.M. June 6, 1972, as a hardy flowering plant. Trusses rounded, 7½ inches across and 5½ inches in depth, 10- to 12-flowered; corolla seven-lobed, 2 inches long and 4 inches across; flowers open funnel-shaped, white, suffused in upper throat with Yellow Group 2D and lightly spotted with green; calyx seven irregular joined lobes up to 3 mm. long; pedicel up to 1¼ inch long. Leaves narrowly elliptic to elliptic, 5½ inches long. Cross made, raised and exhibited by Major A. E. Hardy, Sandling Park, Hythe, Kent.

Rhododendron hypoglaucum 'Heane Wood' A.M. May 22, 1972, as a hardy flowering plant. Truss loose, eight-flowered; corolla five-lobed, 1⅜ inches long and 1⅝ inches across; flowers wide funnel-campanulate, pink in bud opening to white, faintly suffused with red-purple and with light

spotting of Red-Purple Group 61A in upper throat; calyx rudimentary five-lobed; pedicels up to 1⅖ inches long. Leaves oblong-elliptic, up to 4½ inches long and 1 1/10 inches broad; under surface grey, plastered; petioles up to ½ inch long. Raised and exhibited by Major A. E. Hardy.

Rhododendron 'Joan Scobie' (*R.* 'Matador' x *R.* 'Gaul') A.M. April 18, 1972, as a hardy flowering plant. Flowers wide funnel-campanulate, up to 2¼ inches long and 2½ inches across, carried in 13- to 15-flowered trusses; corolla, five joined lobes, Red Group 50A; calyx rudimentary, reflexed; pedicels up to ½ inch long. Leaves narrowly elliptic to elliptic, up to 6 inches long and 2½ inches across, undersurfacing showing traces of light brown, woolly indumentum; petiole 1¼ inches long. Crossed, raised and exhibited by Major-General E. G. W. W. Harrison, Tremeer, St Tudy, Bodmin, Cornwall.

Rhododendron 'P. J. Mezzit' (*R. carolinianum* x *R. dauricum*) A.M. March 28, 1972, as a hardy flowering plant. Flower trusses up to 2½ inches across and 2 inches in depth, usually four-flowered, but occasionally up to nine flowers per truss; corolla openly campanulate, five-lobed, up to 1⅘ inch across and ⅗ inch long; Purple Group 75A, frequently with very slight deeper marking in upper throat; yellow anthered with purple filaments; calyx rudimentary, five joined lobes; pedicel up to ½ inch long. Leaves elliptic to broadly elliptic, up to 2½ inches long and 1⅖ inches across, aromatic, under surface lightly scaly. Crossed and raised by Western Nursery, U.S.A., exhibited by Crown Estate Commissioners, Windsor Great Park, Windsor, Berks. (Fig. 6).

Rhododendron 'Queen's Wood' (*R. souliei* x *R. aberconwayi*) A.M. May 22, 1972, as a hardy flowering plant. Trusses loose, up to eight flowers per truss; corolla five-lobed, ⅝ inch long and 3 inches across; flowers saucer-shaped, white, suffused with Red-Purple Group 66C, with some slight spotting and a blotch of Red-Purple Group 60B in upper throat. Leaves elliptic, up to 2⅛ inches long and 1 1/10 inches broad, dark green, reverse paler, sparingly covered with granular dark brown indumentum, petioles rounded up to ¾ inch long. Cross made by T. H. Findlay, for Crown Estate Commissioners: raised and exhibited by Crown Estate Commissioners.

Rhododendron trichostomum var. ledoides 'Lakeside' A.M. May 22, 1972, as a hardy flowering plant. Truss rounded, compact, 1⅛ inches across and ⅞ inches in height, up to 11 flowers in a truss; corolla up to 12 mm. long and 10 mm. across; flowers tubular, five-lobed, white flushed Red-Purple Group 68D to B; calyx five-lobed up to 3 mm. long; pedicels up to 2 mm. long. Leaves fragrant, narrowly oblong, up to 18 mm. long and 5 mm. broad; brown scaly. Raised and exhibited by Crown Estate Commissioners.

Rhododendron trichostomum var. radinum A.M. May 22, 1972, as a hardy flowering plant. Truss compact, rounded, 14- to 16-flowered, up to 1⅛ inches in diameter and ⅞ inch in height; corolla 13 mm. long and 11 mm. across; flowers tubular, five-lobed, Red-Purple Group 68D, strongly flushed with 68A, villous within throat, outer corolla densely scaly; calyx five-lobed, up to 4 mm. long; pedicels up to 2 mm. long. Leaves aromatic, narrowly oblong, up to 1⅕ inches long and 7/20 inch broad. Upper surface dark green and lightly scaly, under surface densely covered with brown scaly indumentum; petioles up to 6 mm. long, scaly. Raised and exhibited by Mr. and Mrs. Martyn Simmons, Quarry Wood, Burghclere, Newbury, Berks.

Rhododendron tsangpoense **'Cowtye'** (K.W. 5844) **A.M.** May 2, 1972, as a hardy flowering plant. Flowers five joined, deeply divided lobes, up to ½ inch long and 4/5 inch across, broadly tubular-campanulate, in three- to five-flowered trusses; colour Purple Group 77A with some dark spotting in upper throat and an overall glaucous waxy bloom; calyx green, five joined, deeply divided lobes, up to 5 mm. long, slightly reflexed. Leaves up to 2 inches long and 1 inch broad, obovate to elliptic-obovate, apiculate, obtuse, dark green above, glaucous beneath, both surfaces lightly scaly, pedicel 1/10 inch long. Collected by Kingdon Ward, raised and exhibited by Major A. E. Hardy, Sandling Park, Hythe, Kent (Fig. 7).

Rhododendron **'Wishmoor'** (*R. yakusimanum* x *R. litiense*) **A.M.** May 22, 1972, as a hardy flowering plant. Truss tight, rounded, 12- to 14-flowered; corolla seven-lobed, 1⅞ inches long and 3⅜ inches across; flowers campanulate, orange-red in bud, opening to Yellow Group 4D, the upper throat deepening to Yellow Group 4C; calyx rudimentary, red; pedicel 1½ inches long, green. Leaves narrowly obovate, up to 4 inches long and 1¾ inches broad, under surface lightly covered with indumentum; petioles up to ¾ inch long. Raised and exhibited by Crown Estate Commissioners.

Rhododendron virideścens 'Doshong La' (KW 5829) **A.M.** June 27, 1972, as a hardy flowering plant. Trusses rounded, four- to five-flowered; corolla five-lobed to 1¾ inches long and 1½ inches across; flowers open funnel-shaped, Yellow Group 2C, faintly flushed old rose at the segment tips and on the reverse and with olive green flecking (close to Yellow Green Group 15A) on the upper corolla lobes; calyx of five slightly irregular, small joined lobes; pedicels up to 1 inch long. Leaves elliptic to oblong elliptic to 1½ inches long (inclusive of petioles) and ¾ inch broad, glaucous to glaucescent, aromatic, glabrous and medium green above, paler moderately brown-scaly below. Young foliage bronze tinged, petioles to 3 mm. long. Two-year-old wood red-brown, one-year-old wood green. Specimen in Herb. Hort. Wisley. Raised from KW 5829, Doshing La Pass, S.E. Tibet (1924–5 Expedition) and exhibited by E. H. M. and P. A. Cox, Glendoick Gardens Ltd., Perth.

Rhododendron 'Dora Amateis' (*R. carolinianum* x *R. ciliatum*) **P.C.** May 2, 1972, as a hardy flowering plant. Cross made by Edmond Amateis (U.S.A.), exhibited by E. H. M. and P. A. Cox.

Rhododendron 'Rustic Maid' (*R.* 'Blue Diamond' x *R. russatum*) **P.C.** May 2, 1972, as a hardy flowering plant. Raised and exhibited by Capt. Collingwood Ingram.

Rhododendron 'Mill Reef' (*R. insigne* x *R. griersonianum*) **P.C.** June 6, 1972, as a hardy flowering plant. Crossed, raised and exhibited by Hydon Nurseries.

AWARDS TO RHODODENDRONS AFTER TRIAL AT WISLEY

I. In 1971

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 is that under which it was grown in the trial.

Colour references are to the RHS Colour Chart.

HARDY HYBRID RHODODENDRONS

Rhododendron 'Goldsworth Crimson' (*R.* 'Doncaster' x ?). (Raised, introduced and sent by Messrs. Walter C. Slocock Ltd., Goldsworth Nursery, Woking, Surrey.) **F.C.C.** May 12, 1971. Plant between 11 and 11½ feet high, 12½ feet spread, vigorous, upright and fairly compact habit, very free-flowering; leaves between 7 and 9 inches long, between 2¾ and 3¼ inches wide, dark dull green. Flower truss 7 inches diameter, 6 to 7 inches deep, compact, 12 to 14 flowers per truss; corolla between 2¼ and 2½ inches diameter, 1¾ inches long, fully expanded funnel-shaped, Red Group 53D deepening towards margins to Red Group 53C, fairly heavy spotting on upper segment and some spotting on adjacent segments of Greyed-Purple Group 187A, throat almost white. Flowering from May 6, 1971 (A.M. 1960). [25]

Rhododendron 'Kluis Triumph' (*R. griffithianum* x). (Raised and introduced by Mr. A. Kluis, sent by Mr. F. Street, Heathermead Nursery, West End, Woking, Surrey.) **F.C.C.** May 21, 1971. Plant 2¾ feet high, 3¾ feet spread, vigorous, upright and spreading habit, free-flowering; leaves 7¼ inches long, 2¼ inches wide, dark dull green. Flower truss 7½ inches diameter, 7½ to 8 inches deep, compact, dome-shaped, 15 to 18 flowers per truss; corolla 2½ inches diameter, 2 1/10 inches long, campanulate-shaped with widely expanded mouth, margins slightly waved with tips recurved, a colour near Red Group 53B, slightly lighter colour along mid-ribs and in throat, fairly extensive spotting on upper petal black. Flowering from May 18, 1971 (A.M. 1969): [105]

Rhododendron 'Windlesham Scarlet' (*R.* 'Britannia' x *R.* 'Doncaster'). (Raised (about 1930), introduced (1950) and sent by Messrs. W. Fromow & Sons, Windlesham Nurseries, Windlesham, Surrey). **F.C.C.** June 3, 1971. Plant 2½ feet high, 3 feet spread, vigorous, upright and compact habit, free-flowering; leaves 6 to 7 inches long, 2 to 2½ inches wide, medium dark dull green. Flower truss 6 inches diameter, 7 inches deep, compact, dome-shaped, 12 to 15 flowers per truss; corolla 3 inches diameter, 2¼ inches long campanulate-shaped with widely expanded mouth, margins waved and frilled, Red Group 53B, two lower petals a colour near Red Group 53C, spotting on upper petal black. Flowering from May 20, 1971 (A.M. 1968). [20]

Rhododendron 'Constant Nymph' (*R. campanulatum* x *R.* 'Purple Splendour'). (Raised (1931), introduced (1955) and sent by Messrs. Knap Hill Nursery Ltd., Woking, Surrey.) **A.M.** May 21, 1971. Plant 5¾ feet high,

7 feet spread, vigorous, upright, fairly compact and slightly spreading habit, free-flowering; leaves 5 to 6½ inches long, 2 to 2½ inches wide, dark dull green. Flower truss 7½ inches diameter, 7½ inches deep, compact, dome-shaped, 12 to 14 flowers per truss; corolla 4 to 4½ inches diameter, 2½ to 3 inches long, fully-expanded funnel-shaped, margins waved and slightly frilled, white with faint flush of Red-Purple Group 72C along centre of segments, colour fading slightly with age, buds white tinged and flushed Red-Purple Group 72C. Flowering from May 15, 1971 (H.C. 1969). [191]

Rhododendron 'Lady Clementine Mitford' (*R. maximum* cross). (Raised by Mr. A. Waterer, Knap Hill Nursery Ltd., sent by Mr. F. Street.) **A.M.** June 3, 1971. Plant 4 feet high, 5 feet spread, vigorous, upright and slightly spreading habit, free-flowering; leaves 6 inches long, 2¼ inches wide, dark slightly glossy green with grey hairy covering. Flower truss 5 inches diameter, 4½ inches deep, very compact, dome-shaped 17 to 18 flowers per truss; corolla 2 to 2½ inches diameter, 1¾ inches long, fully expanded, funnel-shaped white flushed all round margins Red-Purple Group 73B, upper segments spotted on lower margins with Red-Purple Group 64C and with Greyed-Orange Group 163B. Flowering from May 30, 1971 (H.C. 1970). [158]

EVERGREEN AZALEAS

Rhododendron 'Double Beauty' (No. 37G.1 x *R.* 'Vuyk's Scarlet'). (Raised, introduced and sent by Messrs. Vuyk van Nes, Zijde 17, Boskoop, Holland.) **A.M.** May 21, 1971. Plant 1¼ feet high, 3¼ feet spread, vigorous, spreading habit, very free-flowering; leaves 1½ inches long, ½ inch wide, light glossy green. Flower truss 4 inches diameter, 2 inches deep, compact, dome-shaped, two flowers per truss, corolla 2¼ inches diameter, 1 inch long, hose in hose, funnel-shaped, margins slightly waved, a colour near China Rose (H.C.C. 624/1) flushed slightly darker colour at throat and around margins, speckling at throat dull crimson wide streak of white along reverse of mid-rib. Flowering from April 29, 1971 (H.C. 1965). [53]

Rhododendron 'Beattie' (*R. mucronatum* (syn. *R. ledifolium*) x *R.* 'Betty'). (Raised, introduced and sent by **Mr. W. G. T.** Hyde, Woodlands Nursery Gardens, Carroll Avenue, Ferndown, Dorset.) **H.C.** May 12, 1971. Plant 1¼ feet high, 3 feet spread, vigorous, upright and slightly spreading habit, compact, very free-flowering; leaves 1¾ inches long, between ½ and ¾ inch wide, light dull green. Flower truss 2¼ inches diameter, between 2¼ and 3 inches deep, compact, two to five flowers per truss; corolla 2¼ inches diameter, 1 7/10 inches long, fully expanded funnel-shaped, a colour near Purple Group 78D flushed Purple Group 78C with very light touches of Purple Group 78C, spotting on lower segments of Red-Purple Group 59B. Flowering from May 7, 1971. [114]

Rhododendron 'Florida' (No. 37G.1 x *R.* 'Vuyk's Scarlet'). (Raised and introduced by Messrs. Vuyk van Nes, sent by Messrs. Vuyk van Nes and Messrs. Knap Hill Nursery Ltd.) **H.C.** May 21, 1971. Plant 1¾ feet high, 3¾ feet spread, vigorous, slightly spreading habit, very free-flowering; leaves 1¼ inches long, 9/10 inch wide, dark dull green. Flower truss 3¼ inches diameter, 1¼ inches deep, compact, one to two flowers per truss; corolla

2⅕ inches diameter, 1 3/10 inches long, funnel-shaped, double, a colour near Red Group 51A. Flowering from May 17, 1971. [20 and 67]

Rhododendron 'Stewartsoniana' (parentage unknown). (Raised and introduced by Mr. Joseph B. Gable, Stewartstown, Pennsylvania, U.S.A., sent by Mr. James S. Wells, 474 Nutswamp Road, Red Bank, New Jersey, U.S.A. 07701, and Messrs. Walter C. Slocock Ltd.) **H.C.** May 12, 1971. Plant 22 inches high, 32 inches spread, vigorous, upright, compact habit, very free-flowering; leaves ¾ inch long, ⅜ inch wide, medium dark glossy green, tinged red. Flower truss 2¼ inches diameter, 1½ inches deep, compact, two flowers per truss; corolla 1 inch diameter, 1⅛ inches long, fully expanded funnel-shaped, Red Group 47A with a very light flush of Red Group 42B along lower mid-ribs in throat, some very faint and indeterminate spotting of Red Group 53B on lower segment. Flowering from May 7, 1971. [75 and 98]

Rhododendron 'White Lady' (parentage unknown). (Raised by Messrs. L. J. Endtz & Co., sent by Messrs. Walter C. Slocock Ltd.) **H.C.** May 21, 1971. Plant 3 feet high, 5 feet spread, vigorous, upright and slightly spreading habit, very free-flowering; leaves 1½ inches long, ¾ inch wide, light glossy green. Flower truss 3¼ inches diameter, 1⅝ inches deep, compact, six to seven flowers per truss; corolla 2⅛ inches diameter, 1⅛ inches long, funnel-shaped, white, upper three segments and throat speckled with a colour near Yellow-Green Group 150B. Flowering from May 11, 1971. [45]

DECIDUOUS AZALEAS

Rhododendron 'Fal'. (Raised (1951) at The Royal Horticultural Society's Garden, Wisley, Ripley, Woking, Surrey.) **H.C.** June 3, 1971. Plant 4¼ feet high, 4 feet 2 inches spread, vigorous, compact and upright habit, free-flowering; leaves 3¼ inches long, 1½ inches wide, light green, tinged at margins with dark reddish purple. Flower truss 7 inches diameter, 2¾ inches deep, compact, globular-shaped, 13 to 16 flowers per truss; corolla 4⅕ inches diameter, 2 9/10 inches long, fully expanded funnel-shaped, a colour near Yellow-Orange Group 18B and Orange Group 29C, flushed Red Group 38A and Red Group 38C, with a blotch of Yellow-Orange Group 14D deepening in throat to Yellow-Orange Group 23B, and dark pink mid-rib. Flowering from May 25, 1971. [56]

Rhododendron 'Liffey'. (Raised at The Royal Horticultural Society's Garden.) **H.C.** May 21, 1971. Plant 3½ feet high, 6½ feet spread, vigorous, upright to slightly spreading habit, very free-flowering; leaves 2¾ inches long, nearly 1 inch wide, medium green. Flower truss 7½ inches diameter, 4 inches deep, fairly compact, dome-shaped, 16 flowers per truss; corolla 3 inches diameter, 2½ inches long, funnel-shaped, white with cream mid-ribs, and blotch on lower floret a colour near Orange Group 25B in centre, fading at margins to near Yellow-Orange Group 21B. Flowering from May 18, 1971. [15]

Rhododendron 'Wansbeck'. (Raised (1951) at The Royal Horticultural Society's Garden.) **H.C.** June 3, 1971. Plant 4¼ feet high, 4 feet 7 inches spread, vigorous, upright to slightly spreading habit, very free-flowering; leaves 2¾ inches long, 1⅜ inches wide, light green tinged dark reddish brown. Flower truss 5¼ inches diameter, 2¼ inches deep, crowded, globular-shaped, nine to 13 flowers per truss; corolla 3¾ inches diameter, 2¾ inches long,

fully expanded funnel-shaped, a colour near Red Group 55C with veining and margins a colour near Red Group 55A, blotch on upper floret a colour near Orange-Red Group 30C fading on upper edge of blotch to colours near Yellow-Orange Group 15A and Yellow-Orange Group 15C. Flowering from May 25, 1971. [59]

II. In 1972

HARDY HYBRID RHODODENDRONS

Rhododendron 'Diana Colville' (*R. yunnanense* x). (Raised, introduced and sent by Lt. Col. N. R. Colville, M.C., Penheale Manor, near Launceston, Cornwall) **F.C.C.** 4th May, 1972. Plant 6 feet high, 6¾ feet spread, vigorous, upright and spreading habit, very free-flowering; leaves 2¼ inches long, 1–1¼ inches wide, dark dull green. Flower truss in collection, 4–4½ inches diameter, 3¼–4 inches deep, compact, dome-shaped, 25 flowers per truss; corolla 1¾ inches diameter, 1 1/5 inches long, fully expanded funnel-shaped, margins entire and slightly undulate, Violet Group 84C fading almost to white at margins, spotting on upper petal at throat Greyed-Purple Group 185A, changing to yellow further into throat. Flowering from 28th April, 1972. (**A.M.** 1968). (40)

Rhododendron 'Sir Frederick Moore' (*R. discolor* x *R.* 'St. Keverne'). (Raised by the late Mr. Lionel de Rothschild, introduced by Exbury Gardens Ltd., sent by Messrs Hillier and Sons, Winchester, Hants.) **F.C.C.** 1st June, 1972. Plant 6½ feet high, 8 feet spread, vigorous, compact, fairly spreading habit; very free flowering; leaves between 5½ and 7 inches long, between 1½ and 2 inches wide, medium light dull green. Flower truss 8 inches diameter, 7 inches deep, compact, globular-shaped, 15 flowers per truss; corolla between 3 and 4 inches diameter, between 2 and 2½ inches long, widely expanded funnel-shaped, margins slightly frilled, Red-Purple Group 62A with slightly darker venation, fading almost to white at margins, blotched and heavily spotted in throat with Red-Purple Group 60A. Flowering from 22nd May, 1972. (134)

Rhododendron 'G.A. Sims' (Parentage unknown). (Raised by the late Mr. A. Waterer Junior, introduced and sent by Messrs Knap Hill Nursery Ltd., Woking, Surrey.) **A.M.** 1st June, 1972. Plant 4½ feet high, 6½ feet spread, vigorous, fairly spreading and upright habit; very free flowering; leaves between 6 and 7 inches long, between 1¾ and 2¼ inches wide, medium dark, fairly glossy, green. Flower truss between 5 and 6 inches diameter, between 4 and 4½ inches deep, compact, globular-shaped, 16 flowers per truss; corolla 2½ inches diameter, 1½ inches long, funnel-shaped, margins frilled, a colour near Red Group 46A flushed at margins with Red Group 53A, spotting on lower segments very dark red, almost black. Flowering from 26th May, 1972. (199)

Rhododendron 'Moerheim's Pink' (*R.* 'Genoveva' x *R. williamsianum*). (Raised by Herr Dietrich G. Hobbie, Linswege uber Westerstede, Oldenburg, Germany; sent by Messrs B. Ruys Ltd., Royal Moorheim Nurseries, Dedemsvaart, Holland.) **A.M.** 4th May, 1972. Plant 2½ feet high, 3¼ feet spread, vigorous, compact, upright habit; very free-flowering; leaves between 2 and 2¾ inches long, between 1¼ and 1¾ inches wide, dull, light to medium dark green. Flower truss between 5½ and 7 inches diameter, 6 inches deep, fairly compact, globular-shaped, 8 flowers per truss; corolla between 3 and 3½ inches diameter, between 1¾ and 2 inches long, widely expanded funnel-shaped, margins slightly frilled, very pale pink, colour deepening towards margins to Red-Purple Group 62C, spotting of Red Group 47A on a white ground on lower middle segment, beds Red-Purple Group 66C with darker venation. Flowering from 2nd May, 1972. (221)

Rhododendron 'Pink Queen' (Parentage unknown). (Raised at Leonardslee, Horsham, Sussex, about 1930, and sent by Messrs Knap Hill Nursery Ltd.) **A.M.** 4th May, 1972. Plant 5¼ feet high, 6 feet spread, vigorous, upright and spreading habit; free flowering; leaves between 5½ and 6½ inches diameter, between 2 and 2½ inches wide, medium dark, dull green. Flower truss between 8 and 9½ inches diameter, between 9 and 10 inches deep, compact, dome-shaped, 10 to 12 flowers per truss, corolla between 4 and 5 inches diameter, between 2½ and 3 inches long, widely expanded funnel-shaped, margins frilled, white with very pale pink veining, margins lightly flushed with Red-Purple Group 73C, slight smudged spotting of reddish brown in throat on upper segment. Buds very pale pink very heavily veined and flushed Red-Purple Group 66C. Flowering from 30th April, 1972. (68)

Rhododendron 'Baden-Baden' (*R.* 'Essex Scarlet' x *R. forrestii* var. *repens*). (Raised and sent by Herr Dietrich G. Hobbie; introduced by Herr Dietrich G. Hobbie and Mr. J. H. P. Holt, Virginia Water, Surrey.) **H.C.** 4th May, 1972. Plant 2 feet 10 inches high, 5 feet spread, vigorous, compact, upright habit; free-flowering; leaves between 3 and 3½ inches long, between 1¼ and 1½ inches wide, medium dark, glossy green. Flower truss between 4 and 6 inches diameter, between 3 and 4 inches deep, lax, globular-shaped, 6 flowers per truss; corolla between 2 and 2½ inches diameter, 1¾ inches long, widely expanded funnel-shaped, a colour slightly darker than Red Group 46B, with veining and spotting on lower segments of Red Group 46A. Flowering from 28th April, 1972. (94)

Rhododendron 'Pink Ghost' (*R. yakusimanum* x *R.* 'Pauline'). (Raised at The Royal Horticultural Society's Garden, Wisley, Ripley, Woking, Surrey; not yet generally introduced.) **H.C.** 4th May, 1972. Plant 4¼ feet high, 4 feet 10 inches spread, vigorous, upright, fairly compact habit; very free flowering; leaves 5 inches long, 1½ inches wide, medium dark, dull green. Flower truss between 6½ and 7 inches diameter, between 5 and 5½ inches deep, globular-shaped, compact, 15 flowers per truss; corolla 2 inches diameter, between 1¾ and 2 inches long, companulate to funnel-shaped, white, flushed very pale pink, spotting on lower segments of Greyed-Orange Group 163B. Buds Red Group 55B, paling towards base. Flowering from 30th April, 1972. (7)

AS A PLANT FOR FOLIAGE EFFECT

Rhododendron 'Elizabeth Lockhart' (Layer). (A sport from *R.* 'Humming Bird' (*R. haematodes* x *R. williamsianum*)). (Raised, introduced and sent by Professor R. D. Lockhart, M.D., Ch.M., 25 Rubislaw Den North, Aberdeen, AB2 4AL). **H.C.** 4th May, 1972. Plant 3 feet 7 inches high, 4½ feet spread, vigorous, compact, upright habit; free flowering; leaves between 1 and 2 inches long, between ¾ and 1¼ inches wide, glossy, medium dark green overlaid with a heavy flush of a slightly red chocolate-brown; younger foliage dark reddish-chocolate brown, very young foliage, very deep glossy red. Leaf stalks very dark red, almost black, stems brilliant deep red with short fairly light brown hairs. Flowers Red Group 53B paling very slightly towards centres of segments, veining and margins Red Group 53A. (No flower trusses available for detailed description when award made.) Flowering from 10th April, 1972. (224)

EVERGREEN AZALEAS

Rhododendron 'Beattie' (*R. mucronatum* (syn. *R. ledifolium*) x *R.* 'Betty'). (Raised, introduced and sent by Mr. W. G. T. Hyde, Woodlands Nursery Gardens, Carroll Avenue, Ferndown, Dorset). **A.M.** 4th May, 1972. Plant 1¼ feet high, 3 feet spread, vigorous, upright and slightly spreading habit, compact, very free-flowering; leaves 1¾ inches long, between ½ and ¾ inches wide, light dull green. Flower truss 2¼ inches diameter, between 2¼ and 3 inches deep, compact, two to five flowers per truss; corolla 2¼ inches diameter, $1\frac{7}{10}$ inches long, fully expanded funnel-shaped, a colour near Purple Group 78D flushed Purple Group 78C with very light touches of Purple Group 78C, spotting on lower segments of Red-Purple Group 59B. Flowering from 30th April, 1972. (H.C. 1971). (114)

Rhododendron 'Martha Hitchcock' (*R. mucronatum* x *R.* 'Shinnyo-no-tsuki'). (Raised at the Glenn Dale Station, Maryland, U.S.A., introduced 1948; sent by Messrs John Waterer, Sons and Crisp Ltd., The Nurseries, Jenkins Hill, Bagshot, Surrey and Messrs Knap Hill Nursery Ltd.) **A.M.** 1st June, 1972. Plant 1½ feet high, 2 feet spread, fairly vigorous, upright habit, very free flowering; leaves 2¾ inches long, 1¼ inches wide, dark dull green. Flower truss 4 inches diameter, 2½ inches deep, fairly compact, three to five flowers per truss; corolla 2½ inches diameter, 2 inches long, fully expanded funnel-shaped, margins slightly waved, Red-Purple Group 72C with spotting on all or part of three upper petals reddish-brown. It should be noted that these colours were matched with flowers taken from young plants of this entry. Flowering from 30th May, 1972. (H.C. 1967). (83 and 107)

Rhododendron 'Rosebud' (*R.* 'Louise Gable' x *R.* 'Caroline Gable'). (Raised by Mr. Joseph B. Gable, Stewartstown, Pa., U.S.A. sent by Messrs Knap Hill Nursery Ltd.; The Old Farm Nurseries, Messrs H. den Ouden and Son, Boskoop, Holland; and Mr. James S. Wells, 474 Nutswamp Road, Red Bank, New Jersey, U.S.A. 0 07701) **A.M.** 1st June, 1972. Plant 2½ feet high, 3½ feet spread, vigorous, compact, upright habit; very free flowering; leaves between 1 and 1½ inches long, ½ inch wide, medium light glossy green. Flower truss compact, 2 flowers per truss; corolla 1¼ inches diameter, 1 inch long, hose-in-hose, widely expanded funnel-shaped, margins smooth, Red-Purple Group 62A, flushed, and with a slight veining of, Red-Purple Group 61D. Flowering from 25th May, 1972). (73, 82 and 87)

Rhododendron 'Swansong' ((*R.* 'Mrs. Carmichael' x *R.* 'Willy') x (*R. mucronatum lilacinum* x *R.* 'Willy')). (Raised at the Glen Dale Station, U.S.D.A., U.S.A., and sent by Messrs Knap Hill Nursery Ltd.) **A.M.** 13th June, 1972. Plant 1½ feet high, 3¼ feet spread, vigorous, spreading, compact habit; very free flowering; leaves between 1½ and 2 inches long, ¾ inch wide, light dull green. Flower truss compact, 2 flowers per truss; corolla 3 inches diameter, 2 inches long, very widely expanded, almost flat, funnel-shaped, margins slightly waved, white, with very pale yellow spotting on upper segments. Flowering from 1st June, 1972. (111)

ADDITIONS TO THE INTERNATIONAL RHODODENDRON REGISTER, 1970/71

(Colour references, except where otherwise stated, are to the RHS Colour Chart.)

Ananouri ('Britannia' x *discolor*) raiser: Howard Phipps (U.S.). Red.

Angel ('Van Nes Sensation' x 'White Pearl') raiser: R. L. Rowarth (Aus.). White with pale mauve reverse: red feathering on upper lobe.

Anton Rupert ('Sir Frederick Moore' x 'Kilimanjaro') raiser: Edmund de Rothschild (U.K.). Pink, deepening in throat.

Apricot Nectar (Un-named hybrid x 'Jalisco') raiser: Marshall Lyons (U.S.A.). Scarlet at tip, fading to cadmium orange: base ox-blood red.

Arctic Pearl (form of *R. dauricum album*) raiser: Warren Baldsiefen (U.S.A.). White.

Autumn Beauty ('Searchlight' x ——) raiser: F. Lovegrove (Aus.). Rose.

Basileos ('Albescens' x *ciliicalyx*) raiser: Strybing Arboretum (U.S.A.). White flushed pink: deep pink stripes on reverse.

Bessie Farmer ('Olympic Lady' x 'Fawn') raiser: A. & M. Childers (U.S.A.). White.

Betty Arrington (Dexter Hybrid) raiser: G. A. Arrington (U.S.A.). Red with darker blotch.

Big Savage (Un-named hybrid x un-named hybrid) raiser: Henry R. Yates (U.S.A.). Lavender pink with greenish throat.

Bobo (*mucronatum* x 'Blaauw's Pink') raiser: H. van de Ven (Aus.). White, flushed purple Group 75D.

Bodnant Red (form of *R. cremastum*) raiser: Crown Estate Commissioners (U.K.). A.M. 1971. Greyed-Purple Group 185B.

Buttersteep ('Jalisco' x 'Crest') raiser: Crown Estate Commissioners (U.K.). A.M. 1971. Yellow Group 10B deepening to 10A, with small blotch of Red Group 46A.

Cecil Nice (form of *R. pocophorum*) raiser: Countess of Rosse and The National Trust. A.M. 1971. Near Red Group 53A with darker markings in upper throat.

Chelsea Seventy (*yakusimanum* x un-named hybrid) raiser: John Waterer Sons & Crisp Ltd. (U.K.). Salmon pink shaded rose pink.

Cherry Jubilee ('Fawn' x 'Lem's Goal') raiser: A. & M. Childers (U.S.A.). Light yellowish pink-light orange.

Church Lane (*yakusimanum* selfed) raiser: P. G. Valder (Aus.). Pink with yellow spotting on upper lobe.

David Forsythe (*catawbiense* var. *compactum* x 'Mars') raiser: S. Baldanza (U.S.A.). Dark scarlet.

Del's Choice ('Cecile' x ——) raiser: A. & M. Childers (U.S.A.). Deep pink, shading to strong purplish-red.

Denise ('Winter Favourite' x 'Chrysomanicum') raiser: V. J. Boulter (Aus.). Greyed-Yellow Group 160D, flushed Red Group 49C and 49D.

Doc (*yakusimanum* x 'Corona') raiser: John Waterer Sons & Crisp Ltd. (U.K.). Rose pink, lip shaded close to Red-Purple Group 62A, upper lobe spotted brown.

Doctor Henry Wade (*arboreum* x *griersonianum*) raiser: Mrs. Henry Wade (U.K.). Lilac pink with deeper edging and markings.

Dorothy Amateis ('America' x 'Purple Splendour') raiser: Warren Baldsiefen (U.S.A.). Purple.

Double Eagle ('Cecile' x ——) raiser: A. & M. Childers (U.S.A.). Light orange edged yellow, darker blotch.

Doug's Greeneyes ('King of Shrubs' x 'Flame') raiser: Halfdan Lem (U.S.A.). Red Group 55B at tip shading centrally to Yellow Group 11D, upper lobe spotted Yellow Green Group 144B.

Dr. Herman Sleumer (*phaeopeplum* x *zoelleri*) raiser: T. Lelliott (Aus.). Red Group 47A to 47B: green in throat.

Englemere ('Jutland' x 'Royal Blood') raiser: Crown Estate Commissioners (U.K.). A.M. 1971. Red Group 53C, with spotting in throat.

Epoch (*carolinianum* selfed) raiser: A. E. Kehr (U.S.A.). Near white.

Erchless (un-named hybrid x 'Mrs. Furnival') raiser: Howard Phipps (U.S.A.). Pale purplish pink with dark red eye.

Exalted Ruler (parentage unknown) raiser: Marshall Lyons (U.S.A.). Violet with maroon blotch.

Fal (parentage unknown) raiser: R.H.S. Wisley (U.K.). H.C. 1971. Near Orange-Yellow Group 18B and Orange Group 29C, flushed red and with yellow-orange blotch.

Fire Walk ('Britannia' x *delavayi*) raiser: H. van de Ven (Aus.). Red Group 46C.

Flora Donald (*discolor* x 'Lodauric Iceberg') raiser: Donald Smith (U.K.). Red-Purple Group 62D, with deeper flushing of 62B on reverse.

Francesca ('Britannia' x Dexter hybrid No. 202) raiser: Anthony Consolini (U.S.A.). Carmine red.

Frosty Morn (*mucronatum* x 'Blaauw's Pink') raiser: H. van de Ven (Aus.). Red-Purple Group 69A to 69D, spotted on upper lobe.

Gayblade ('Azma' x 'Mars') raiser: A. O. Wright (U.S.A.). Gaudy pink.

George Taylor (form of *R. araiophyllum*) raiser: Royal Botanic Garden, Kew (U.K.). A.M. 1971. White Group 155C with blotching and markings of Red-Purple Group 60A in upper throat.

Gladngay ('Cecile' x ——) raiser: A. & M. Childers (U.S.A.). Orange-yellow with reddish-orange overlay.

Golden Gate (form of *R. zoelleri*) raiser: Strybing Arboretum (U.S.A.). Orange-yellow.

Golden Superior (Knaphill azalea) raiser: Joh. Bruns (W. Germany). Yellow-orange Group 21A.

Golden Torch ('Bambi' x un-named hybrid) raiser: John Waterer Sons & Crisp Ltd. (U.K.). Yellow.

Görlitz ('Rinaldo' x *williamsianum*) raiser: Joh. Bruns (W. Germany). Pink.

Gräfin Kirchbach ('Scharnhorst' x *forrestii* var. *repens*) raiser: Joh. Bruns (W. Germany). Scarlet-red.

Green Goddess ('Mrs. Lindsay Smith' x 'Fabia') raiser: Marshall Lyons (U.S.A.). Chartreuse with green blotch.

Gwen (*mucronatum* x 'Blaauw's Pink') raiser: H. van de Ven (Aus.). Red-Purple Group 67C, lightly spotted upper lobe.

Happy Birthday (*mucronatum* x 'Blaauw's Pink') raiser: H. van de Ven (Aus.). Red-Purple Group 62B to 62D, spotted upper lobe.

Happy Day ('Lady Clementine Mitford' x 'Ladybird') raiser: Marshall Lyons (U.S.A.). Near Red-Purple Group 62B.

Harp Wood (form of *R. hodgsonii*) raiser: A. E. Hardy (U.K.). P.C. 1971. Red-Purple Group 74C, with darker veined markings of 74B and darker red-purple blotch.

Harry van de Ven (*mucronatum* x 'Blaauw's Pink') raiser: H. van de Ven (Aus.). Red-Purple Group 68D.

Harvest Queen ('Lady Bessborough' x 'Margaret Dunn') raiser: J. Russell (U.K.). Yellow Group 9D deepening to 9C in throat.

Hell's Fire ('Big Red' x ——) raiser: A. & M. Childers (U.S.A.). Strong red, lightly overlayed dark reddish orange.

Henry R. Yates (*litiense* ? x ——) raiser: Joseph B. Gable (U.S.A.). Ivory.

Honey Wood (form of *R. trichanthum*) raiser: A. E. Hardy (U.K.). A.M. 1971. Purple.

Hoppy (*yakusimanum* hybrid) raiser: John Waterer Sons & Crisp Ltd. (U.K.). Pink, deeper at lip with greenish speckling on upper lobe.

Hydon Hunter (*yakusimanum* x 'Springbok') raiser: Hydon Nurseries (U.K.). Red-Purple Group 58A, paling centrally, slight orange spotting.

Ian Wallace ('Marion' x 'Tally Ho') raiser: A. Howells (Aus.). Red Group 53D: slightly spotted upper throat.

Impact (parentage unknown) raiser: D. Warren (Aus.). Red-Purple Group 68A to 68B.

Jack Lyons ('Borde Hill' x 'Rose Red') raiser: Marshall Lyons (U.S.A.). Crimson to cardinal red.

Joe Gable ('Catalgla' x *wardii*) raiser: Joseph B. Gable (U.S.A.). Pale ivory.

Joe Kruson ('Vulcan's Flame' x 'Mars') raiser: Henry R. Yates (U.S.A.). Red Group 53B.

Kalimna ('Edith Boulter' x 'Unknown Warrior') raiser: V. J. Boulter (Aus.). Red Group 55B to 55D, light yellow-brown on upper lobe.

Kay ('Britannia' x 'Loderi King George') raiser: Marshall Lyons (U.S.A.). Red-Purple Group 62B with red spots.

King Elliott ('Scarlet King' x *elliottii*) raiser: E. W. E. Butler (N.Z.). Red Group 46A, darker at corolla fringe, inner corolla Red Group 46B.

Kit Corynton (*cinnabarinum* x *maddenii*) raiser: E. G. W. W. Harrison (U.K.). P.C. 1971. Greyed-Orange Group 163C, darkening to 163B at base of corolla and with sepals centrally flushed with Red Group 39B.

Leonard Frisbie (form of *R. occidentale*) raiser: F. D. Mossman & Britt M. Smith (U.S.A.). Red Group 51B with blotch of Yellow Orange Group 17A.

Lhasa (form of *R. sino-nuttallii*) raiser: Crown Estate Commissioners (U.K.). P.C. 1971. Flushed yellow.

Liffey (parentage unknown) raiser: R.H.S. Wisley (U.K.). White with blotch of Orange Group 25B.

Lingos ('Mrs. Lindsay Smith' x 'Jalisco Goshawk') raiser: C. Ingram (U.K.). Cream, fading to sulphur yellow in throat.

Lissabon ('Nova Zembla' ? x *williamsianum*) raiser: Joh. Bruns (W. Germany). Red Group 51A with margins Red Group 53B.

Madame Pompidou (parentage unknown) raiser: Kordus (U.S.A.). Salmon pink.

Mah Jong ('Chink' x *valentinianum*) raiser: Crown Estate Commissioners (U.K.). P.C. 1971. Yellow-Green Group 154C.

Malabar ('Coromandel' x 'Marmora') raiser: J. Russell (U.K.). Yellow Group 8B, deepening to 8A in throat.

Maletta (un-named hybrid x un-named hybrid) raiser: Henry R. Yates (U.S.A.). Cream, fringed rose.

Mamie Doud Eisenhower (parentage unknown) raiser: Kordus (U.S.A.). Vivacious pure pink.

Man of War ('Britannia' x 'Loderi King George') raiser: Marshall Lyons (U.S.A.). Rose-red with dark spots.

Marbella (*auriculatum* x *griffithianum*) raiser: C. Ingram (U.K.).

Marshall Lyons	('Ole Olson' x 'Loderi King George') raiser: Marshall Lyons (U.S.A.). Red-Purple Group 62B with deeper shades and red blotch.
Melba	('Marion' x 'Van Nes Sensation') raiser: V. J. Boulter (Aus.). Red-Purple Group 65A fading to 65D in centre.
Mini White	(*maximum* x *chrysanthum*) raiser: B. C. Potter (U.S.A.). White.
Molly Miller	(*yakusimanum* x 'Fabia Tangerine') raiser: John Waterer Sons & Crisp Ltd. (U.K.). Yellow tinged rose.
Monique	('Britannia' x 'Purple Splendour') raiser: Milton R. Nelson (U.S.A.). Light purple.
Morio	('Loderi King George' x 'Cup Day') raiser: H. van de Ven (Aus.). Green-White Group 157D.
Morning Cloud	(*yakusimanum* x 'Springbok') raiser: Hydon Nurseries (U.K.). A.M. 1971. White, flushed Red-Purple Group 65D.
Morning Frost	('Fabia' x un-named hybrid) raiser: John Waterer Sons & Crisp Ltd. (U.K.). White, tinged red-purple; greenish yellow spots on upper lobe.
Morning Magic	(*yakusimanum* x 'Springbok') raiser: Hydon Nurseries (U.K.). White, flushed Red Group 56A, with pronounced spotting.
Mountain Dew	(un-named hybrid x un-named hybrid) raiser: John Waterer Sons & Crisp Ltd. (U.K.). Yellowish-green with brown blotch in throat.
Mount Wilson	(*yakusimanum* x *yakusimanum*) raiser: P. G. Valder (Aus.). Pale pink, fading to white, yellow spotting on upper lobe.
Mrs. Howard Phipps	('Naomi' x hybrid) raiser: Howard Phipps (U.S.A.). Purplish red.
Mrs. Lammot Copeland	(*wardii* x 'Virginia Scott') raiser: H. L. Larsen (U.S.A.). Yellow Group 5B.
Mrs. van de Ven	(*mucronatum* x 'Blaauw's Pink') raiser: H. van de Ven (Aus.). Red-Purple Group 65A to 65D.
Murraba	('Marion' x 'Purple Splendour') raiser: V. J. Boulter (Aus.). Red-Purple Group 72B to 72D.
My Lady	('Forsterianum' selfed) raiser: M. H. Sumner (U.S.A.). White flushed light pink, yellow throat.
Noorook	('Marion' x *neriiflorum*) raiser: V. J. Boulter (Aus.). Red Group 46D with overall light spotting.
Norfolk Candy	('Milkmaid' x 'Marmora') raiser: J. Russell (U.K.). Yellow-Orange Group 20D with brown-orange blotch.
Owen Pierce	('Saffron Queen' x *burmanicum*) raiser: M. H. Sumner (U.S.A.). Yellow Group 6C.
Pantagruel	(form of *R. diaprepes*) raiser: G. Gorer (U.K.). White with green flush at base.

Pink Crepe	('Fawn' x 'Lem's Goal') raiser: A. & M. Childers (U.S.A.). Light purplish pink.
Pink Divinity	('Fawn' x 'Lem's Goal') raiser: A. & M. Childers (U.S.A.). Pale pink, throat deep yellowish pink.
Pink Punch	('Catalgla' x *fortunei*) raiser: Henry R. Yates (U.S.A.). Pink fading to pale pink edges, speckled gold.
Pom-Pom	('Cecile' x ——) raiser: A. & M. Childers (U.S.A.). Deep pink to orange, strong red blotch.
Professor Amateis	('Everestianum' x 'Van Nes Sensation') raiser: Warren Baldsiefen (U.S.A.). Dawn pink.
Pure Gold	('Cecile' x ——) raiser. A. & M. Childers (U.S.A.). Light orange with orange blotch, pink overlay.
Purple Heart	(un-named hybrid x 'Purple Splendour') raiser: John Waterer Sons & Crisp Ltd. (U.K.). Violet, with yellow-green blotch and markings.
Quarry Wood	(form of *R. trichostomum* var. *ledoides*) raiser: Mrs. Martyn Simmons (U.K.). A.M. 1971. White, flushed shades of Red-Purple Group 68D and 68C.
Ralph	(*mucronatum* x 'Blaauw's Pink') raiser: H. van de Ven (Aus.). Red-Purple Group 72B to 72C, lightly spotted on upper lobe.
Red Mill	('Fusilier' x 'Ruddy') raiser: Marshal Lyons (U.S.A.). Red Group 47A.
Robert Forsythe	(*catawbiense* var. *compactum* x 'Mars') raiser: S. Baldanza (U.S.A.). Rose red with brown blotch.
Rosa Perle	(*makinoi* x 'Kluis Triumph') raiser: Joh. Bruns (W. Germany). Deep pink.
Rothenburg	('Diane' x *williamsianum*) raiser: Joh. Bruns (W. Germany). Yellow Group 4D.
Sabine	('Goldsworth Orange' x 'May Day') raiser: Joh. Bruns (W. Germany). Red-Purple Group 57C, with throat spotted Red Group 49B.
Satin Bouquet	('Ray' x 'Dot') raiser: A. & M. Childers (U.S.A.). Off-white, light yellow-green centre.
Serendipity	(*yakusimanum* x *chrysanthum*) raiser: B. C. Potter (U.S.A.). Yellow Group 4D.
Silver Glow	(sport of 'Jean Haerens') raiser: D.W. & V.A. Walker Nursery (Aus.). Light lilac rose: variegated foliage.
Spanish Glory	(*elliottii* x 'Fabia') raiser: M. H. Sumner (U.S.A.). Red Group 45D.
Sunte Rose	(form of *R. sutchuenense* var. *geraldii*) raiser: G. Gorer (U.K.). A.M. 1971. Red-Purple Group 68D with red-purple blotch and associated spotting in upper throat.
Super Star	(*yakusimanum* x 'Doncaster') raiser: Joh. Bruns (W. Germany). Pink.

Sweet Sue	(un-named hybrid x un-named hybrid) raiser: John Waterer Sons & Crisp Ltd. (U.K.). Pink, speckled red on upper lobe.
Sydney Lock	(*discolor* x ——) raiser: C. Ingram (U.K.). A.M. 1970.
The Chief	('Romany Chal' x *elliottii*) raiser: A. & M. Childers (U.S.A.). Oxblood red, faint spotting (Nickerson 2.5 R 3/7).
Tiffany	('Anna Baldsiefen' x *keiskei*) raiser: Warren Baldsiefen (U.S.A.). Pink, almost bicolor.
Timothy James	(*yakusimanum* x 'Fabia Tangerine') raiser: John Waterer Sons & Crisp Ltd. (U.K.). Red-purple, darkening to Red-Purple Group 62B centrally, speckled brown.
Titan	(form of *R. brookeanum*) raiser: E. F. Allen (U.K.). Orange-Red Group 30D, fading to Red-Group 39D.
Tutu	('Mrs. Lindsay Smith' x un-named hybrid) raiser: Edwin Parker (U.S.A.). Cream.
Ulrike	('Goldsworth Orange' x 'May Day') raiser: Joh. Bruns (W. Germany). Red Group 50A with darker margins.
Wansbeck	(parentage unknown) raiser: R.H.S. Wisley (U.K.). Near Red Group 55C with orange-red blotch.
Waterfall	(*cinnabarinum* x *crassum* (Cooper's form)) raiser: Lord Aberconway and The National Trust (U.K.). A.M. 1971. Inner corolla Red-Purple Group 62D at lip darkening in throat to 62A; outer corolla shading to Red Group 52B at base.
Wesley Hayes	(parentage unknown) raiser: Mrs. Wesley Hayes (N.Z.). White Group 155B.
White Rosebud	('Vervaeniana Alba' x 'Rosebud') raiser: A. E. Kher (U.S.A.). White.
Whitmoor	('Grenadine' x 'Royal Blood') raiser: Crown Estate Commissioners (U.K.). A.M. 1971. Red Group 53C with spotting in upper throat.
Windle Brook	(*carolinianum album* x 'Cilpinense') raiser: Crown Estate Commissioners (U.K.). P.C. 1971. White Group 155B with pale green spotting.
Win Paul	('Soulier' x 'Diva') raiser: H. L. Larsen (U.S.A.). Red-Purple Group 73A, paling centrally to 73C, with Orange-Red Group 35A spotting.
Winter Beauty	('Marion' x 'Van Nes Sensation') raiser: V. J. Boulter (Aus.). Purple Group 75B with prominent yellow-brown spotting on upper lobe.
Yashmak	(*yakusimanum* x *campylocarpum*) raiser: C. Ingram (U.K.). Red-Purple Group 68C with blotching and spotting of Red-Purple Group 46A.
You Beaut	('Marion' x 'Van Nes Sensation') raiser: V. J. Boulter (Aus.). Red-Purple Group 62C.
Zellindo	('Mrs. Linsay Smith' x 'Muy Lindo') raiser: C. Ingram (U.K.).

ADDITIONS TO THE INTERNATIONAL RHODODENDRON REGISTER, 1971/72

(Colour references, except where otherwise stated, are to the RHS Colour Chart.)

Agnes Harvey (deciduous azalea – parentage unknown) raiser: Mr. and Mrs. Frank W. Harvey (U.S.). White, lightly flushed pale pink (Nickerson 2.5 R. 9/3).

Anah Kruschke (*ponticum* x ——) raiser: Wright's Nursery, Milwaukie, Oregon, U.S.A. 1955. Strong reddish purple with deep purplish red blotch.

Applause (*catawbiense* var. *album* 'Catalgla' x ('Adriaan Koster' x *williamsianum*)) raiser: David G. Leach (U.S.A.). White.

Arkle ('Carmen' x 'Moonshine Supreme') raiser: Hydon Nurseries (U.K.). Red Group 53B.

Attar (a form of *decorum* from Hu Expedition) raiser: Mrs. Leona Henny (U.S.A.). Red Group 65A shaded Yellow-Green Group 150D in throat.

Award ('Anna' x 'Margaret Dunn') raiser: Dr. Frank Mossman (U.S.A. 1969). White with yellow throat; green yellow blotch with darker green spots on upper petals; pink edging.

Baby Doll (*yakusimanum* x 'Holden') raiser: Ben Lancaster (U.S.A.). Cherry pink, lighter centre, fading to near white.

Ballad (Seedling Dexter L – 1 x 'America') raiser: David G. Leach (U.S.A.). Very pale purple edged moderate purplish pink, deeper on reverse, with bold dorsal red blotch.

Beattie (*mucronatum* x 'Betty') raiser: Woodlands Nursery Gardens (U.K.). H.C. 1971. Lilac pink.

Besse Howells (Red *catawbiense* hybrid x 'Boule de Neige') raiser: A. M. Shammarello (U.S.A.). 1961. Burgundy Red.

Bombay (*catawbiense* var. *album* hybrid) raiser: David G. Leach (U.S.A.). Brilliant greenish yellow, darker outside with dorsal blotch and spotting.

Brentor (*griffithianum* x 'Hawk' (Exbury A. var.)) raiser: L. Fortescue (U.K.). Red-Purple Group 26B, fading to cream with basal blotch of Red Group 47A.

Byron Mayo (deciduous azalea – parentage unknown) raiser: The Bovees (U.S.A.). Strong reddish-orange (Nickerson 7.5 R. 5/13).

Calcutta ((*dichroanthum* ssp. *scyphocalyx* x *kyawi*) x *catawbiense* var. *album* 'Catalgla') raiser: David G. Leach (U.S.A.). Brilliant yellow, thinly edged strong orange with scattered sparse brown spotting.

Catanea (form of *catawbiense*) raiser: G. Guy Nearing (U.S.A.). White.

Chelsea Reach (deciduous azalea – 'Rozanne Waterer' x ——) raiser: Knap Hill Nursery Ltd. (U.K.). Cream-white flushed mauve-lilac.

Clara Marie (evergreen azalea – parentage unknown) raiser: Girard Nurseries (U.S.A.). White.

Clara Raustein ((*decorum* x *discolor*) x *fortunei* hybrid) raiser: Alfred A. Raustein (U.S.A.). 1971. Buds Red Group 47A, opening a clear apricot, changing to Red Group 4C, shading deeper in throat.

Colossus (form of *R. calendulaceum*) collected by David G. Leach (U.S.A.) in N. Carolina. Orange with reddish orange dorsal blotch.

Custard ('China' x *decorum*) raiser: Mrs. Leona Henny (U.S.A.). Yellow Group 4D.

Dainty Jean (*williamsianum* x 'Helen Schiffner') raiser: The Bovees (U.S.A.). White, reverse flushed Red Group 56A.

Dark Eyes ('Kettledrum' x (*detonsum* x *griersonianum*)) raiser: G. Guy Nearing (U.S.A.). Bright rose, paler within corolla: dark red blotch.

Dolly Madison (*catawbiense* var. *album* x *fortunei* hybrid) raiser: David G. Leach (U.S.A.). White with reddish brown dorsal blotch.

Doshong La (form of *viridescens:* KW 5829) raiser: E.H.M. & P.A. Cox (U.K.). A.M. 1972. Yellow Group 2C with olive green flecking.

Elam ('Chesapeake' x ——) raiser: G. Guy Nearing (U.S.A.). Bright rose.

El Capitan ('Aladdin' x red Kurume seedling) raiser: Girard Nurseries (U.S.A.). Bright scarlet.

Elsmere ('Chesapeake' x ——) raiser: G. Guy Nearing (U.S.A.). Lemon yellow.

Esther Grace ('Countess of Derby' x 'White Swan') raiser: The Bovees (U.S.A.). White with few reddish-brown spots, reverse faintly tinged light pink.

Fair Lady (*arboreum roseum* x 'Loderi Venus') raiser: Mrs. Leona Henny (U.S.A.). Pink, upper lobe flushed crimson.

Fred Hamilton ((*neriiflorum* x *griersonianum*) x *dichroanthum*) raiser: Halfdan Lem (U.S.A.). 1965. Vivid yellow, edged and striped with strong yellowish pink, dense yellow-green spotting in upper throat.

General Eric Harrison (*yakusimanum* x 'Shilsonii') raiser: Hydon Nurseries (U.K.). Red Group 52A with slight darker spotting.

Georgette (*yakusimanum* x 'Exbury Cornish Cross') raiser: Hydon Nurseries Ltd., (U.K.). White with pale pink markings of Red Group 56C.

Gertrude Bovee	('Loderi King George' x Ostbo's 73) raiser: The Bovees (U.S.A.). Cream, blending to wide margin of pink (Nickerson 2.5 R8/5) upper petal spotted dark red (Nickerson 5 R. 3/7).
Golden Days	('Dondis' x *dichroanthum*) raiser: Mrs. Leona Henny (U.S.A.). Close to Yellow-Orange Group 21D fading to near Yellow Group 13C. Outer lobes Orange Group 29C.
Guy Nearing	(*detonsum* x 'Gilian') raiser: G. Guy Nearing (U.S.A.). 1972. Red Purple Group 63A; blotch on upper lobe Greyed Purple Group 187A.
Heane Wood	(form of *hypoglaucum*) raiser: Major A. E. Hardy (U.K.). A.M. 1972. White, faintly suffused red-purple with light spotting of Red-Purple Group 61A in throat.
Heather Macleod	('Eira' x *kaempferi*) raiser: Hydon Nurseries (U.K.). Red-Purple Group 63A.
Henry Allanson	(mollis azalea hybrid) raiser: John M. Keshishian (U.S.A.). 1971. Chrome yellow.
Hydon Rodney	(*augustinii* x 'Azamia') raiser: Hydon Nurseries (U.K.). Violet Group 88C with dark spotting.
Ice Cube	('Catalga' x 'Belle Heller') raiser: A. M. Shammarello (U.S.A.). 1961. Ivory white with lemon blotch.
Inca Chief	('Mars' x ('Mars' x *catawbiense* var. *rubrum*) raiser: David G. Leach (U.S.A.). Strong purplish-red with deep purplish-red blotch.
Isobel Baillie	(*discolor* x 'Betty Wormald') raiser: M. Haworth-Booth (U.K.). Red-Purple Group 61D with flare of red spots.
Jimmy	('Carolyn Grace' x *wardii*) raiser: The Bovees (U.S.A.). White with light flush of green in the throat.
Joan Scobie	('Matador' x 'Gaul') raiser: Major-Gen. E. G. W. W. Harrison (U.K.). A.M. 1972. Red Group 50A.
Kathy Ann	(evergreen azalea – parentage unknown) raiser: Girard Nurseries (U.S.A.). White.
Kings Ride	(*insigne* x *yakusimanum*) raiser: Crown Estate Commissioners (U.K.). White.
Lakeside	(form of *trichostomum* var. *ledoïdes*) raiser: Crown Estate Commissioners (U.K.). A.M. 1972. White, variably flushed with shades of Red-Purple Group 68D to 68B.
Lemon Lodge	('Prelude' x 'Prelude' ?) raiser: Pukeiti Rhododendron Trust Inc. (New Zealand). Yellow Group 4B with a few tiny spots at base of throat.
Macopin	(*racemosum* x ——) raiser: G. Guy Nearing (U.S.A.). Pale lilac.
Margaret George	('Eira' x *kaempferi*) raiser: Hydon Nurseries (U.K.). Red-Purple Group 61D.
Mary Fleming	(*racemosum* x *keiskei*) raiser: G. Guy Nearing (U.S.A.). Bisque yellow with salmon blotch and streaks.

Mary Meredith	('Eira' x *kaempferi*) raiser: Hydon Nurseries (U.K.). Red-Purple Group 67B.
May Song	('Bow Bells' x 'Day Dream') raiser: The Bovees (U.S.A.). Pale pink (Nickerson 2.5 R. 9/3) reverse lined and flushed strong purplish pink (Nickerson 5 RP. 7/9).
Midget	(a compact form of *leucaspis*) raiser: The Bovees (U.S.A.). White.
Mill Reef	(*insigne* x *griersonianum*) raiser: Hydon Nurseries Ltd., (U.K.). P.C. 1972. Red-Purple Group 61D with darker red dorsal spotting.
Oasis	('Fawn' x 'Dido') raiser: Mrs. Ray James (U.S.A.). Yellow Group 10B with pink overlay.
Osaka	('Mme Petrick' x 'Pink Dream') raiser: Institute of Ornamental Plant Growing, Melle (Belgium). Red-Purple Group 67D to Red-Purple Group 73C with blotch of Red-Purple Group 58B.
Pink Flair	(Red *catawbiense* hybrid x 'Boule de Neige') raiser: A. M. Shammarelle (U.S.A.). Pastel pink with red blotch.
Pink Queen	(Parentage not known) raiser: Knap Hill Nursery Ltd., (U.K.). Pink.
Pink Ripples	('Little Beauty' x *yedoense*) raiser: Girard Nurseries (U.S.A.). Magenta-rose.
Poppinjay	((*maximum* x *catawbiense*) x *dichroanthum* hybrid) raiser: David G. Leach (U.S.A.). Brilliant greenish yellow with strong yellow dorsal blotch, suffusion and spotting.
Purple Robe	(*poukhanense* x 'Purple Triumph') raiser: Girard Nurseries (U.S.A.). Deep, clear purple.
Queens Wood	(*souliei* x *aberconwayi*) raiser: Crown Estate Commissioners (U.K.). A.M. 1972. White suffused Red-Purple Group 66C with blotch Red-Purple Group 60B.
Rae Berry	(form of *R. trichostomum*) raiser: Mrs. A. C. U. Berry (U.S.A.). Strong pink (Nickerson 2.5 R. 7/8).
Ramsey Tinsel	('Chesapeake' x ——) raiser: G. Guy Nearing (U.S.A.). Ochre yellow.
Red Baron	(evergreen azalea) ('Granada' x 'Red Poppy') raiser: Stewart Barber (U.S.A.). Red Group 46B.
Robin Leach	(*catawbiense* var. *album* 'Catalgla' x ('Adriaan Koster' x *williamsianum*)) raiser: David G. Leach (U.S.A.). White with faint reddish dorsal spotting.
Romeo	(Red *catawbiense* hybrid x red *catawbiense* hybrid) raiser: A. M. Shammarello (U.S.A.). Red with darker red blotch.
Rudy's Fairytail	(Loderi x *arboreum roseum*) raiser: Mrs. Leona Henny (U.S.A.). Pink.

Scarlatti	(deciduous azalea – parentage unknown) raiser: Knap Hill Nursery Ltd. (U.K.). Red.
Scarlet Blast	('Mars' x ('Mars' x *catawbiense* var. *rubrum*)) raiser: David G. Leach (U.S.A.). Dark red, shading to moderate red (Red Group 53A) with light yellowish-pink dorsal blotch and a few moderate orange-yellow spots.
Scarlet Glow	(red *catawbiense* hybrid x red *catawbiense* hybrid) raiser: A. M. Shammarello (U.S.A.). 1969. Brick red.
Sham's Juliet	(Red *catawbiense* hybrid x 'Boule de Neige') raiser: A. M. Shammarello (U.S.A.). 1961. Apple-blossom pink.
Sham's Pink	(Red *catawbiense* hybrid x 'Boule de Neige') raiser: A. M. Shammarello (U.S.A.). 1961. Rose pink, darker at edges: light red blotch.
Skipper	('Fawn' x 'Indian Penny') raiser: Charles D. Thompson (U.S.A.). Cream, deepening in throat to Yellow Group 11D.
Small Wonder	('Fanfare' x ('Prometheus' x *forrestii* var. *repens*)) raiser: David G. Leach (U.S.A.). Dark red with small light centres.
Spring Frolic	(*catawbiense* var. *album* x *yakusimanum* 'Koichiro Wada') raiser: David G. Leach (U.S.A.). White.
Stanely Rivlin	(*yakusimanum* x 'Royal Blood') raiser: Hydon Nurseries (U.K.). Red Group 53D in bud, opening paler with outer corolla heavily flushed Red Group 54B: inner corolla densely spotted crimson.
Suez	(deciduous azalea – parentage unknown) raiser: The Bovees (U.S.A.). Stronge orange.
Taurus	('The Hon. Jean Marie de Montague' x *strigillosum*) raiser: Frank D. Mossman (U.S.A.). Red with black speckling in upper throat.
Tick-Tock	('The Hon. Jean Marie de Montague' x *williamsianum*) raiser: Harold Drear (U.S.A.). Rose pink (Nickerson 8 RP. 6/12) with slight markings on upper lobe.
Topaz	('Loderi' x 'Faggetter's Favourite') raiser: Mrs. Leona Henny (U.S.A.). Outer corolla pink, inner corolla white.
Vicki Reine	(parentage unknown) raiser: Roy W. Clark (U.S.A.). Deep rose red on lip of corolla, paling to white centrally.
Villa	(*poukhanense* x 'Kathleen') raiser: Girard Nurseries (U.S.A.). Light purple with violet case and deeper violet blotch.
Virginia Leach	((*maximum* x *catawbiense*) x un-named hybrid) raiser: David G. Leach (U.S.A.). Brilliant yellowish-green with rim of strong purplish pink: dorsal lobe deeper yellow with blotch of faint brownish-orange spots.

Westhaven	(form of *R. aberconwayi*) raiser: Thomas J. McGuire (U.S.A.). White with a few maroon-red spots in upper throat.
Willy-Nilly	('Harold Heal' x *williamsianum*) raiser: Ingram (U.K.). Creamy white.
Wishmoor	(*yakusimanum* x 'Springbok') raiser: Crown Estate Commissioners (U.K.). A.M. 1972. Yellow Group 4D/4C.
Woodcock	('Elizabeth' x *hyperythrum*) raiser: The Director, R.H.S. Garden, Wisley, Surrey. P.C. 1971.

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(a) *denotes Azalea.*
(*) *denotes an award after trial at Wisley.*

Rhododendrons listed in the Additions to the International Rhododendron Register, pp. 88–101, are not included in the index.

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