THE DAFFODIL AND TULIP YEAR BOOK, 1971

This issue is dedicated to Patrick M. Synge, V.M.H., for some 25 years Editor of the R.H.S. The emphasis in this book is on the breeding of daffodils, with articles on Classic Ancestors, Double Pink Daffodils, Narcissus Poetaz and N. 'Quick Step' by well-known raisers. Of intense and historic interest is an account of Mr. Peter Barr, The Daffodil King of his day, and His Contemporaries. Once again a discursion is included on Daffodils in Britain, followed by a collated report on the Daffodil Season in Britain. There is a valuable contribution on Virus Diseases of Narcissus from the Glasshouse Crops Research Institute at Littlehampton. As is usual the book contains invaluable reports on the Daffodil Seasons in the U.S.A. and New Zealand. Critical articles on the results of the Trials at Wisley of Daffodils, Cottage and Darwin Tulips and Tulip Species will be of great help to all who are interested in newer varieties as garden plants. Articles on Some Peruvian Amaryllidaceae and Freaks or Natural Variations of Snowdrops are an attractive addition to *Narcissus*, the leading family of the Amaryllidaceae.

The book is well illustrated with black and white plates.

THE LILY YEAR BOOK, 1971

This Year Book is dedicated to Mr. Bertram Anderson, V.M.H., who is known to many for his profound knowledge of the Liliaceae and his great success in the cultivation of many difficult species and hybrids. Hybridization plays an important part in this issue with valuable contributions from the U.S.A. and Britain. History is not passed over, with an intriguing article on Philipp Franz von Siebold and his introductions of Japanese plants in the nineteenth century. Other articles are concerned with growing lilies under glass and their marketing. There are contributions from lily growers in the Midlands, the North and Dartmoor. Full reports of Lily Group Discussions on *Scilla* and *Chionodoxa* and *Hosta* coupled with articles on Yuccas and Agapanthus as garden plants, the Liliaceae of the Kurile Islands and *Colchicum* broaden the interest and outlook of a Year Book which remains already indispensable to all lovers of these attractive plants.

The book is fully illustrated in black-and-white.

Price per Year Book **£2.00** Postage and packing **3s. (15p)**

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R.H.S. RHODODENDRON AND CAMELLIA YEAR BOOK 1971
25

THE RHODODENDRON AND CAMELLIA

YEAR BOOK—1971

THE ROYAL HORTICULTURAL SOCIETY

THE contents of this issue are particularly varied and interesting, with articles on *Rhododendron* species which, if available, should be more widely grown, on dwarf hybrids raised at Windsor, on suitable shade trees, on a fine garden at Mt. Dandenong, Australia and more on An Adventure in Rhododendrons at Nymans. There is an important article on the classification of the Rhododendron. Then there are accounts of collecting *Rhododendron* species in Sabah and the resistance to cold of Malesian rhododendrons in Melbourne, and notes on Rhododendrons in Westmorland.

The Camellia section of the book is very strong. Among the articles is one on Camellias in London including, by gracious permission of Her Majesty the Queen, those grown at Buckingham Palace, one on *Camellia* species in cultivation other than *C. japonica*, another on Camellias growing in Italy and a most helpful contribution on recent Camellia Hybrids from the U.S.A. Reports on Camellia and Rhododendron Shows and Competitions are given more than adequately and many Notes give additional interest. The book is profusely illustrated in black and white.

COVER ILLUSTRATION

Camellia 'Leonard Messel'

Photo: Ernest Crowson

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Acknowledgements

TO THIS ONLINE EDITION

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Photo: Ernest Crowson

Fig. 1—Rhododendron 'Loderi King George' at Leonardslee (see p. 181).

THE RHODODENDRON AND CAMELLIA YEAR BOOK 1971

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FIGURES

FOREWORD

THIS year's edition of the Rhododendron and Camellia Year Book is full of interesting articles for enthusiasts of both genera of plants.

The description of a garden – a usual feature of the book – is of Kenron Park in Australia, and how well Rhododendrons flourish there. Also with a foreign flavour is Mr. E. F. Allen's article on "Rhododendrons from Sabah", whilst Mr. A. W. Headlam describes how plants from Malaysia survive around Melbourne. An article on Taiwan Rhododendrons breaks new ground, whilst Mr. Michael Black reports on how recently introduced varieties (among others) fare in Westmorland. Dwarf Rhododendrons feature in several articles, showing their well-deserved popularity. The Azalea festival at Kurume is described by Mr. Leslie Riggall who has some interesting comments on the Wilson collection, and also on the pitfalls of Camellia cuttings. But perhaps the notes and short articles contributed by many, on various aspects of Rhododendrons, provide food for thought.

Camellia articles cover a wide range of subjects. Colonel Durrant's description of Italy and the magnificent old plants he saw there show how well they thrive in such hot climates. Hybridising is touched upon by Mr. Charles Puddle in his article on Camellia species, whilst Mr. David Trehane describes many in detail, of these various crosses. Some of his conclusions, that they require testing out in various parts of this country, and both indoors and outside, are very true.

Descriptions of shows and tours bring out many noteworthy items of interest in special varieties, and the lateness of the season, as exemplified by Mr. Gerald Pinckney's article on Camellia flowering, demonstrates the fact that though the shows normally occur around the same dates each year, Nature, with its varying seasons, provides for a wide range of flowering dates to be exhibited over the course of years. Quite a few plants shown at the Rhododendron Show of April 28 were usually staged at the Competition some six weeks earlier.

It is a pity that, due to economic reasons, this is probably the last of the series of annual year books, and it is hoped that some means will be evolved for keeping enthusiasts of both genera in touch, and for the exchange of information in the future.

SIR GILES LODER,
Chairman, Rhododendron and Camellia Committee.

THE CLASSIFICATION OF RHODODENDRON

By MELVA N. and W. R. PHILIPSON

THE number of wild species of *Rhododendron* lies somewhere between eight hundred and a thousand. In spite of having many features in common, these species vary tremendously. The task of recognising group relationships within this rich disorder has advanced steadily in the two hundred years since Linnaeus first published the generic name.

Problems of classification became acute when the wealth of species in south-western China and the eastern Himalayas was discovered. Growers needed a chart to help them steer their way among the many new forms they were raising. This was provided when The Rhododendron Society published *The Species of Rhododendron* in 1930. In this work the species were allocated to Series, of which forty-three were listed. Their usefulness is borne out by the fact that they still remain the readiest means of communicating ideas, and we shall largely use them in this article.

While these Series provide pigeon-holes for all the species, there are too many of them to be readily comprehended. As no key is provided, it is very difficult to allocate a species to its Series without previous knowledge of the genus. Some grouping together of the Series is needed, and in fact such a major classification already existed in botanical literature. A synthesis was required, and this was provided by Dr. H. Sleumer (1949). Since his system appeared in German and Latin in a journal not generally accessible to horticulturists it has had little impact on those interested in rhododendrons in Britain and America. A summary of his system is shown in the first two columns of the chart. His eight sub-genera are defined by different combinations of three sets of characters, namely (i) presence or absence of scales, (ii) relation of flower-buds to vegetative buds, and (iii) deciduous or evergreen foliage. These combinations are set out in Table 1. The different types of flower- and leaf-bud arrangements are indicated diagrammatically in the chart. These arrangements are sometimes difficult to observe in Pseudorhodorastrum and Rhodorastrum, and indeed may require further investigation.

The eight sub-genera are not of equal size or importance. Hymenanthes includes most of the evergreen elepidote cultivated forms. Rhododendron (sub-genus) includes the great majority of lepidote Series. Azaleas in cultivation come under sub-genera Pentanthera and Tsutsutsi. The equivalence of the other sub-genera can be seen in the chart.

Table I: Characters of Sub-genera as Defined by Sleumer

Sub-genera	*Approx. No. of Species*	*Scales*	*Flower- and Leaf-bud Position*	*Habit*
Hymenanthes	300	absent	flower-buds terminal (sometimes lateral accessories) with leaf-buds below	evergreen
Rhododendron	495	present	flower-buds terminal (sometimes lateral accessories) with leaf-buds below	evergreen
Pseudazalea	13	present	flower-buds terminal (sometimes lateral accessories) with leaf-buds below	± deciduous
Rhodorastrum	2	present	flower-buds lateral (sometimes simulating terminal) with leaf-buds below	± deciduous
Pseudo-rhodorastrum	8	present	flower-buds lateral with leaf-bud terminating the shoot	evergreen
Pentanthera	20	absent	flower-buds terminal (sometimes lateral accessories) with leaf-buds below	deciduous
Tsutsutsi	54	absent	flower-buds terminal with leaf-buds enclosed within them	evergreen and deciduous
Azaleastrum	25	absent	flower-buds lateral with leaf-buds terminating the shoot	evergreen and deciduous

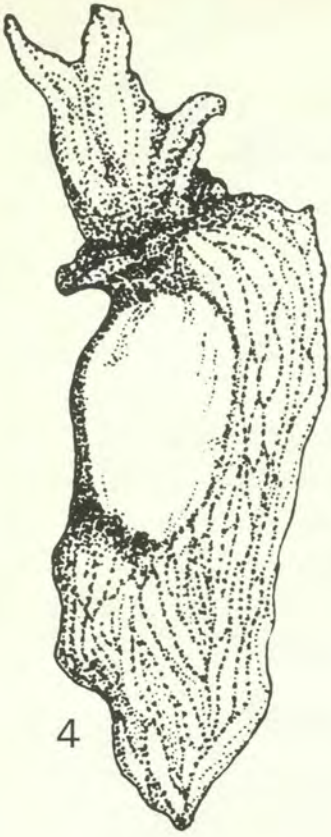
Series Camtschaticum is not considered in this article since Sleumer excluded it from the genus.

The quality of any classification is judged by the number of characters that conform to it. As time passes, more evidence accrues and either conforms to current ideas, when these become strengthened, or conflicts with them, when the classification must be modified. Let us see how Sleumer's system has stood this test.

At the time he put forward his views other features were known which supported the groupings he used and two of them may be mentioned. Firstly, in 1937 John Sinclair, working at the Royal Botanic Garden, Edinburgh, discovered a most interesting variation in the way the young foliage leaves are held within the winter buds. In most rhododendrons the leaves are rolled back (*revolute*, Fig. 2), as can be seen clearly when the leaves unfold in spring. In other species the young leaf blades lie flat (*convolute*, Fig. 3). Sinclair pointed out that all elepidote Series have revolute leaves whereas all those of lepidote Series, with one exception, are convolute (see chart). The exception is the Series Edgeworthii, whose leaves are rolled back in the bud as in the elepidote Series. The correspondence of this feature to the major groupings within the genus is therefore very close, but, strangely enough, not exact.

Secondly, Frank Kingdon-Ward published an article in *The Rhododendron Year Book 1947* in which he recorded ideas on classification

Figs. 2 and 3—Cross-section through vegetative buds showing revolute leaves of *R. albiflorum* (*above*) and convolute leaves of *R. trichostomum* (*below*), (see above).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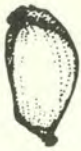
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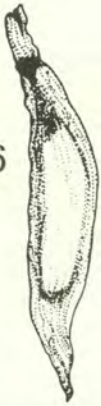
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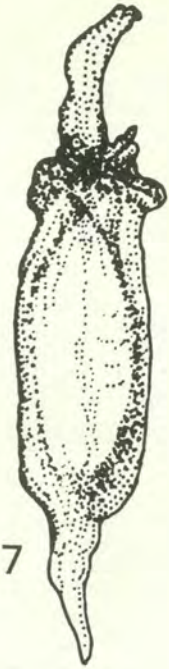
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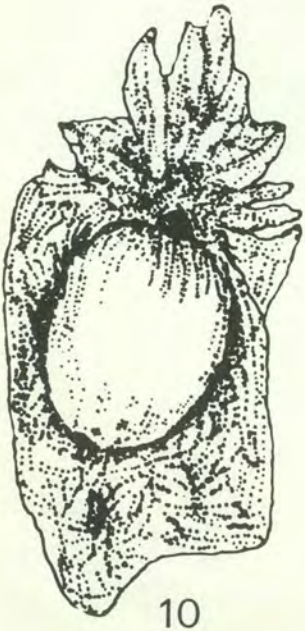
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arising from his long experience of species in the wild and in cultivation. He had noticed that the seeds he collected were of several types. More recently, Johannes Hedegaard (1968) has published drawings of seeds of many species. Whilst seed characters still need precise definition, they can be seen to fit into the main subdivisions of the genus, but again with fascinating exceptions. Broadly speaking, seeds of Hymenanthes are "frilled" at both ends (Fig. 4) whereas many of the lepidote Series have seeds which are unadorned (Fig. 5). Kingdon-Ward referred to this simple form as "alpine type" seed. His "epiphytic type" seed is more ornate although found in the lepidote Series Edgeworthii (Fig. 6) and Maddenii (Fig. 7). The great group of species known as Section Vireya, which is centred in the Malay Archipelago, is another exception, having seeds bearing projections, often forming long tails, at each end (Fig. 8). Other exceptions among the lepidote Series are *R. virgatum* (Fig. 9) and *R. micranthum*, both alone in their own Series and both having seeds with short tails.

Seed characters in the azaleas are even more variable. The deciduous azaleas of North America have seeds which are decorated at each end much as in Hymenanthes. This is true also of the single European member, *R. luteum* (Fig. 10), but applies to only some of the far eastern deciduous azaleas, namely *R. japonicum* (with *R. molle*) and *R. nipponicum*. Those species grouped around *R. schlippenbachii* (we believe *R. pentaphyllum* and *R. albrechtii* also belong here) have plain seeds (Fig. 11) as do all the evergreen azaleas and *R. tashiroi* (Fig. 12). Of the Series grouped as Section Azaleastrum, Ovatum has plain seeds, whereas those of Stamineum and Albiflorum are ornamented. We have no record of the seed type of Semibarbatum.

Since Sleumer's system appeared, further morphological features have been studied. The German botanist Almut Seithe von Hoff (1960) extended the previous work on the types of hair found in the genus. Four categories of hair were recognised: the simple hair; the branched hair; the hair with a glandular tip; and the scale (which is also technically a hair). The distinction between these categories is clear, except for a very few examples of the first two, when microscopic details described in Seithe's paper are required. Using these hair types Seithe has been able to define three great divisions of the whole genus indicated on the chart by the double horizontal lines. Each possesses a different combination of two of the four hair types. Thus, species of the lepidote group have scales and simple hairs, Hymenanthes has branched and glandular hairs, and the remainder, forming her third group (Azalea in a broad sense), have simple and glandular hairs. The boundaries between these three groups never cut across the limits of Sleumer's sub-genera as can be seen from the chart.

A few years ago we began a series of studies in the morphology of *Rhododendron* by looking at the number of veins entering the stem from a leaf. In the Ericaceae (to which family *Rhododendron* belongs) no

Figs. 4–12—Seeds of Rhododendron species, all ×25. 4, *R. auriculatum*; 5, *R. tephropeplum*; 6, *R. edgeworthii*; 7, *R. maddenii*; 8, *R. invasorium*; 9, *R. virgatum*; 10, *R. luteum*; 11, *R. schlippenbachii*; 12, *R. tashiroi* (see p. 5).

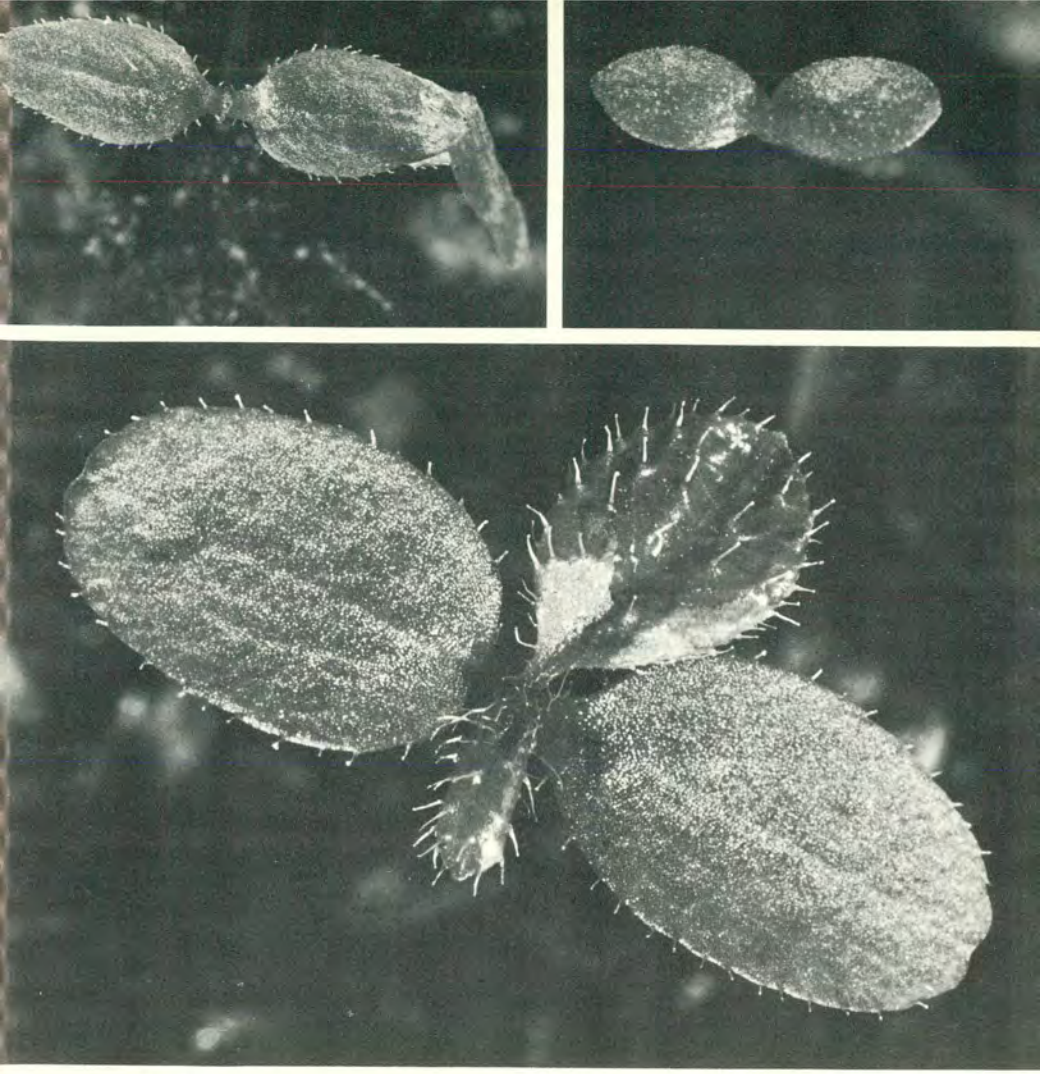
species was known with more than one vein departing from each leaf. We were therefore surprised to find a good deal of variation in *Rhododendron* but pleased to discover that the variation formed a pattern consistent with Sleumer's classification. Stated briefly, our results confirmed that Hymenanthes stands apart from all other Rhododendrons because its nodal anatomy is more complex—often surprisingly complex, especially in the Grande and Falconeri Series. All the subgenera except Hymenanthes have the simple node typical of the Ericaceae, though in Series Stamineum it may tend towards the condition in Hymenanthes.

Finally, we have found that features of the seed-leaves (cotyledons) show a consistent pattern of variation. In discussing this here we shall pay particular attention to the presence or absence of hairs and lateral veins, though other features (such as size of cotyledons and the nature of the hairs) have been found of value in classification.

The unexpectedly intricate situation can be summarised readily for Hymenanthes and the three lepidote sub-genera. In the former, with quite negligible exceptions, all the cotyledons bear hairs on their margins (Fig. 13) and also have lateral veins on each side of their midrib (see chart). In the latter, the opposite occurs, for the cotyledons lack both hairs and lateral veins (Fig. 14). In this case the exceptions are not negligible and are not without interest. Lateral veins are not at all unusual in the Triflorum Series and they also appear occasionally in Series Trichocladum and Series Edgeworthii and also in some of the lepidote groups with unusual flower arrangements, namely Series Scabrifolium and Series Dauricum. The only lepidote Series in which cotyledons occasionally bear a few hairs is Series Scabrifolium and this only in a small proportion of the seedlings. These findings suggest that if a species is exceptional in one respect it may well be so in another.

But when we come to Seithe's third group (Azalea) a summation is not so easy. Most have seedlings with lateral veins, and of these Series Semibarbatum, Ovatum and Schlippenbachii have cotyledons with marginal hairs, whereas the evergreen and deciduous azaleas, as usually understood, are without them (*R. japonicum* is an occasional exception). Within the azalea group (in the sense of Seithe) only the two very isolated groups Sub-series Nipponicum and Series Albiflorum, each with only one species, combine the features of no hairs and no lateral veins.

The value of characters of this kind in problems of classification is illustrated by *R. pentaphyllum* and *R. albrechtii*, both Japanese species of the otherwise North American Sub-series Canadense. The seedling characters of *R. pentaphyllum* (Fig. 15) are so unlike those of the New World species of its Series and so similar to those of *R. schlippenbachii* that we have proposed its removal to that Series. Several other characters support this move, though we realize it conflicts with the character of flower to leaf-bud relationship so important in Sleumer's classifica-



Figs. 13–15—Cotyledons of Rhododendron species. 13, *R. auriculatum* (sub-genus Hymenanthes); 14, *R. radicans* (sub-genus Rhododendron); 15, *R. pentaphyllum* (sub-genus Tsutsutsi), first true leaves appearing between the cotyledons, (see p. 6).

tion. Nevertheless, we feel that in this case the evidence of a number of features should outweigh strict adherence to a single key character. In any event, we feel that a closer understanding of these bud relationships is needed, and eventually the apparent conflict may be resolved. *R. albrechtii* exhibits similar features, but not to such a marked degree. In addition the study of cotyledons brought out a distinction within the Schlippenbachii Series itself. *R. schlippenbachii*, *R. quinquefolium* and

R. pentaphyllum have prominent glandular hairs on the margins of the cotyledons (Fig. 15). Cotyledons of *R. albrechtii* only occasionally bear marginal hairs, but when these are present, they are of a similar glandular type. The remaining species bear hairs of quite a different form which lie closely appressed to the margin. This hair-type is found elsewhere only in *R. tashiroi*, a species placed in a sub-series of its own mainly because of its evergreen habit. It would appear that this second part of the Sub-series Schlippenbachii might well be merged within Sub-series Tashiroi.

The relationships of all these lines of evidence are set out in the chart. When all these variables are considered together, what bearing do they have on the classification? One conclusion at least is inescapable. Hymenanthes is a clearly defined natural group: not a single feature that we have considered varies within this group and yet they all differ from those found in one or both of the other two main subdivisions of Seithe. The same can almost be said for the three lepidote sub-genera that form Seithe's second major group. Nevertheless, we have seen how within it the small Series Edgeworthii deviates in the folding of its leaves and in its seed and seedling characteristics; also a few other Series have lateral flowers and aberrant seedlings. A case could be made for separating Series Edgeworthii as a distinct sub-genus which would be as good as, or even better than, that for Series Trichocladum, which has been given this status. All the same, it is probably better to emphasize the similarities, especially the possession of scales, which gives this whole group a unity well expressed by Seithe's arrangement.

Everything points to the first two groups proposed by Seithe, namely Hymenanthes and Rhododendron, being meaningful concepts, but the third is more problematical. At present it can be said that sub-genus Pentanthera would be more homogeneous if Sub-series Nipponicum were removed from it. The Series Canadense and Luteum appear well placed together and share several points of difference from *R. nipponicum*. For that matter most of the Sections, especially those under Azaleastrum, appear to be isolated from one another. In no two cases is the spectrum of characters recorded against them in the chart identical (Tashiroi excepted—but we doubt if this group should be retained). The Azalea group is certainly less homogeneous than the other two. It is a roof under which waifs and strays have been allowed to take shelter, and the full understanding of their relationships has yet to be worked out. The azaleas present a greater challenge to classification than the rest of the genus and it is one we hope to take up.

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We take pleasure in acknowledging the photographic assistance of Mr. F. McGregor.

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EXPLANATION OF CHART

The columns summarise the facts presented in the text.

The symbols used are not intended as exact portrayals of the features, but as generalized diagrams.

In the symbols representing flower- and leaf-buds, floral buds are in solid black, vegetative buds in outline.

* Denotes that deviations are referred to in the text.

CHART OF CLASSIFICATION OF RHODODENDRON AND DISTRIBUTION OF CHARACTERS

CLASSIFICATION OF SLEUMER						
SERIES & SUB-SERIES IN BRACKETS	SUB-GENERA	SECTIONS	FLOWER AND LEAF BUDS	LEAF FOLDING	SEED	HAIR TYPES: SCALES OR GLANDS	HAIR TYPES: SIMPLE OR BRANCHED	NODE	COTYLEDON
HYMENANTHES		(MANY ELEPIDOTE)							
RHODODENDRON	RHODODENDRON	(MOST LEPIDOTE)		*	*				*
	POGONANTHUM	(ANTHOPOGON)							
	VIREYA								
PSEUDAZALEA		(TRICHOCLADUM)							
RHODORASTRUM		(DAURICUM)							
PSEUDO-RHODORASTRUM	TRACHYRHODION	(SCABRIFOLIUM)							*
	RHODOBOTRYS	RACEMOSUM)							
	RHABDORHODION	(VIRGATUM)							
PENTANTHERA	RHODORA	(CANADENSE)							
	PENTANTHERA	(LUTEUM)							*
	VISCIDULA	(NIPPONICUM)							
TSUTSUTSI	TSUTSUTSI	(OBTUSUM)							*
	BRACHYCALYX	(SCHLIPPENBACHII)	*						
	TSUSIOPSIS	(TASHIROI)							
AZALEASTRUM	CANDIDASTRUM	(ALBIFLORUM)							
	MUMEAZALEA	(SEMIBARBATUM)							
	CHONIASTRUM	(STAMINEUM)						*	
	EUAZALEASTRUM	(OVATUM)							

COLLECTING AND GROWING SABAH RHODODENDRONS

By E. F. ALLEN

MT. KINABALU, 13,455 feet, is a plant collector's paradise in Sabah*, with its core of granite rising steeply from around 4,500 feet to a rocky plateau above 12,500 feet. For the reasonably active it is quite possible to do the climb to the summit in a day and a half following the south route and this was our schedule when my wife and I paid our first visit to the mountain in February 1958, shortly before my retirement from the Malayan Government Service. So fascinated were we by the montane plants that we revisited the area in January and February 1966, when we were permitted to do some selective plant collecting with a view to subsequent cultivation.

Dr. W. Meijer (1963), after Miss L. S. Gibbs (1914), has listed the following climatic zones and vegetational types from Mt. Kinabalu:

1. The hill zone, up to 3,000 feet.
2. The lower montane zone, 3,000–6,000 feet.
3. The upper montane zone, 6,000–10,000 feet.
4. The summit zone, 10,000–13,455 feet (Fig. 16).

Rhododendrons are inconspicuous and quite local in the hill zone, home of many important timber and fruit trees, and this vegetation type was already familiar to us from life in Malaya. However, the lower montane zone became of immediate interest from the frequent occurrence on the forest floor of the bright poppy-red fallen corollas of the epiphytic form of *R. brookeanum*. In the mixed forests of oaks, chestnuts, figs, *Eugenia* and gymnosperms (*Agathis* and *Podocarpus*) this species seems to favour a tree crutch about 50–70 feet above ground. On Kinabalu, at least, the flower colour is usually poppy red (40D) or slightly paler. However, one particularly fine plant which we found growing on a huge granite boulder in the bed of a torrential tributary of the Mesilau East River had larger flowers of a deeper shade (40C), and we have named this F.C.C. clone 'Mandarin' (Allen, 1970). When we found this plant its single umbel carried 15 flowers: in cultivation it produced 13 flowers in December 1968 and 18 flowers in October–November 1969. In no case did we ever see a wild plant with more than the one large flower head, but one clone has carried two in cultivation, the flower colour of this being a very pale vermilion. A third clone has also flowered with us, while a fourth, with somewhat atypical foliage,

* Sabah, formerly known as North Borneo, now forms part of Malaysia.

Photo: E. F. Allen

Fig. 16—On the summit plateau, above 12,500 feet, *Leptospermum recurvum* is the dominant bush, but both *R. ericoides* and *R. buxifolium robustum* occur with it.

Photo: E. F. Allen

Fig. 17—*Rhododendron brookeanum gracile*, 7,000 feet.

is healthy but has still to flower. It is intriguing to note that when this same species was first shown to the Society in 1869—a century earlier—it was also awarded an F.C.C., to a form with somewhat smaller and fewer flowers of a beautiful yellow, tinged with pink, which was well illustrated in the *Botanical Magazine* (1856, t.4935).

R. brookeanum has a remarkably wide altitudinal range, having once been found in Singapore at sea level, whereas on Kinabalu we found it conspicuous between 4,000 and 5,000 feet. At one time a plant was in cultivation in the Botanic Gardens, Singapore (Holttum, 1939).

The upper montane zone, which may start as low as 5,300 feet on some ridges, is characterised by the so-called moss or elfin forest, where branches of trees and shrubs are thickly clothed with epiphytic mosses, liverworts, club-mosses, ferns, orchids and even algae. Filmy ferns are very common and pitcher plants (*Nepenthes*) frequent, so it is not unexpected that this is also the cloud zone, where mists and dripping rain are of almost daily occurrence. It was here that we found *R. brookeanum gracile* in conspicuous groups—a small upright shrub, commonly 5–8 feet tall, growing in the shade of taller trees with, in the forest, only 3 to 5 golden-yellow, waxy-textured flowers with a delicious but fleeting lemon scent (Fig. 17). On Kinabalu these two varieties are so very distinct that I feel sure we are not the first field botanists to have

taken them for different species. I am grateful to Dr. H. Sleumer for naming our cultivated plants.

Our single plant of var. *gracile* is less vigorous than the epiphyte but it has now flowered twice—in April 1969 (10 flowers) and April 1970 (7 flowers), the second umbel being on a weak side shoot. The different flowering seasons of the two varieties in cultivation are puzzling.

The very distinct *R. stenophyllum* was quite common on ridges in the same zone. Its orange-red flowers, from one to three per head, are somewhat too small to be of garden value but the narrow leaves, 3 in. long and $\frac{1}{6}$ in. or less across, are guaranteed to puzzle the non-botanist. Only one of our two plants has survived: the second, although well established, failed its first hardiness test when plunged outside. It seems to flower regularly and, if propagation proves to be easy, it should become popular in botanic gardens.

In the same zone, but somewhat more locally, we found *R. fallacinum* in full flower in February 1958 but none was seen or collected in 1966. This species has beautiful coppery orange flowers and broadly ovate, sessile leaves shining golden from the thickly clustered scales which are persistent on the lower surfaces. Our very limited observations suggest that it may not be very free flowering in the forest.

At least on Kinabalu *R. orbiculatum* seemed to us to be even more local and we found it in flower at only one site. It was here growing semi-epiphytically, close to the crest of a precipitous ridge in shady moss forest on the east side of the deep ravine formed by the Mesilau East River. The root zone consisted of reddish-brown peat and the stems grew out horizontally, with very long internodes, until the growing tips found more light, the internodes shortened and a single terminal umbel was produced with 20 or more pure white, tubular flowers, strongly jasmine scented and with remarkable pink stems. We later discovered (Sleumer) that this was close to the upper limit of its altitudinal range as it occurs elsewhere down to 2,700 feet. In Sarawak and Brunei Sleumer has described it as being generally terrestrial on bare sandstone rocks in low scrub so it is clearly a very adaptable species and this accounts for our finding it amenable in cultivation. In good light it grows quite compactly and it has proved to be free flowering. Our best clone, 'Painted Snipe' (A.M.) (Fig. 18), first flowered in May 1968, again in May 1969 and—as I write—has produced ten flowering heads in two flushes during May 1970. The flowers last about three weeks, during which time both pedicels and styles elongate and the scent becomes less strong.

We have three other seedlings of *R. orbiculatum* in cultivation but one of these, which is at least as vigorous as 'Painted Snipe', has always suffered from severe foliage chlorosis. Furthermore a rooted cutting from this clone suffers equally from chlorosis and we have not yet found a remedy for this complaint. Of the other two clones one has

flowered while the second is healthy but slow growing.

A single seedling of *R. crassifolium*, collected from about 6,000 feet, has grown steadily and flowered first in July–August, 1969. The small head of orange flowers made a poor show against its bold *javanicum*-type foliage and we think that it has little horticultural value.

We collected many seedlings of the small leaved *R. quadrasianum* alongside the main ridge path to the summit. Its tiny reddish flowers are in proportion to the small plant size so we were disappointed when none survived our treatment. However, one other small leaved seedling, with deeply impressed veins and a glossy upper leaf surface, has always looked healthy. After the last re-potting it has grown away strongly, the leaves are now much larger, and Dr. Sleumer has been able to identify it with certainty as *R. maxwellii*. He has described it as rather rare and we look forward to its first flowering. From the description it sounds a most ornamental species.

A very exciting small epiphyte, of which we found only the one specimen, was *R. polyanthemum*. This was covered with small coppery orange, funnel-shaped, strongly fragrant flowers. It would make an

Photo: Ernest Crowson

Fig. 18—*Rhododendron orbiculatum* 'Painted Snipe', A.M., May 18, 1970, when shown by Mr. and Mrs. E. F. Allen (see pp. 12, 184).

ideal plant for a hanging basket. This species was quite new to us so we took only sufficient material for two herbarium specimens. To our great regret we were unable to find any seedlings and, not knowing how rare it might be, I was naturally reluctant to collect the entire plant. Had I known at the time how easily these *Vireya* rhododendrons root from small cuttings we would probably have been able to establish it by such means.

R. malayanum was found, in flower, in the same tree as *R. polyanthemum*. We were familiar with this species at Cameron Highlands, Malaya, in the same altitudinal range of 5,000–6,000 feet. It is the type species of Sleumer's sub-section *Malayovireya*, in which the leaves are very densely scaly, the scales of two sizes and the scale centres markedly darker than the margins. Flower colour is very variable in *R. malayanum* but the flower size is probably a little too small to be of horticultural value.

At about 10,000 feet two very fine species are conspicuous. The smaller plant, *R. acuminatum* (Fig. 19), has small elliptic-ovate leaves, very stiff in texture and bullate (deeply puckered). They are dark with

Photo: E. F. Allen

Fig. 19—*Rhododendron acuminatum*, 10,000 feet, leaves eaten by beetles.

rusty brown dense scales of the *Malayovireya* type. The downy young shoots are silver grey at first, soon becoming brown and very attractive. One plant photographed in 1958 carried four flower trusses when only 20 in. tall but it grows more leggy in shade. The deep pink tubular flowers hang downwards like those of *R. cinnabarinum*. This species has proved easy to cultivate but has not yet flowered. Perhaps our minimum glasshouse temperature of 10° C (50° F) is a little too high for flower initiation.

The other very remarkable species at this altitude is *R. lowii*, a most striking plant. We found it common only from 9,600 to 10,000 feet, where it occurs as a massive, thick-stemmed epiphyte with very short internodes. Local observers seem to have confused it with the yellow-flowered *R. brookeanum gracile* but *R. lowii* has much broader and flatter leaves which are less acutely pointed. Its tree hosts are dwarfed and often leaning at this altitude so it is easy to observe and sometimes grows almost at ground level. The very large flower heads, each with 15–17 waxy, funnel-shaped flowers are orange yellow, flushed apricot and very strongly scented. We collected only very small seedlings and these proved difficult to manage and painfully slow growing. However, three healthy plants have survived and these are at last growing well. During periods of active growth it seems important to keep day temperatures down and humidity high in order to prevent the bud scales from sticking to the expanding leaves and thus causing distorted growth. None of these three plants has flowered yet nor has material been sufficient to take cuttings. In this region night temperatures can certainly fall as low as 5° C (41° F) so this species might well succeed outdoors in humid gardens where tree ferns thrive.

From about 11,300 feet almost to the summit there occurs a massive tree species, although much dwarfed at the highest altitudes. This is *R. buxifolium robustum*, apparently always terrestrial and frequently growing amongst huge granite boulders. Some flat-topped specimens seen in rain from a distance appeared to be 20–25 feet tall and as much or more across. However, this species will flower in full exposure when only 6–8 feet high. These large trees make a wonderful sight when in full flower as a single specimen can carry hundreds of heads of bright crimson, scentless flowers. The small ovate leaves, little more than one inch across, are clustered terminally and very densely on thick shoots. All herbarium specimens collected in 1966 had the older and leafless branches densely covered with a black growth of the epiphytic alga *Trentepohlia*, identified by Mr. H. M. Burkill. We have found this rhododendron to be very difficult in cultivation: all our seedlings have died and none of our seed collections has germinated.

Another species of the high rocky peaks which must be very conspicuous during its main flowering period is *R. ericoides*—well named as both its tiny foliage and small scarlet flowers are heath like. This is a fascinating plant to a botanist and, although clearly of less interest to

the gardener, we regretted not having collected it and no ripe seed was found.

Rainfall on Mt. Kinabalu is so heavy and frequent and dry spells so unpredictable that fresh seed of rhododendrons is difficult to collect. This seed is also very small and remains viable for only a few weeks. Our usual practice, having identified a flowering specimen, was to search for small seedlings 2 to 4 in. tall and to dig these up with a fern trowel and place them at once in a labelled polythene bag which was then sealed with plenty of air inside. Some of these collections survived in the bags for over a month in spite of three days of tropical heat in Singapore and a very wintry February on our return flight to London.

SOILS AND CULTIVATION

Corner (1965) has succinctly described Mt. Kinabalu as a granite intrusion into Eocene shale and older ultrabasic rock. The entire core and summit plateau consists of granite and allied acidic rocks while the so-called ultrabasic rocks—peridotite, dunite and serpentine (Collenette, 1955) outcrop on the south side of the mountain, roughly between 7,000 and 9,000 feet and also on the lesser known north-west. At lower levels the hills are made up of older sandstones.

The rock type, slope and altitude—affecting both precipitation and temperature—all seem to have some influence on soil type. Thus on the main ascent route to the south one meets moss forest more or less where the ultrabasic rocks first appear. The overlying soil is extremely acid and often shallow and there is a surface accumulation of peat. This surface layer of peat, roots, moss and other vegetation is sometimes so thick that it is often difficult to examine the mineral soil below. Higher up, just before reaching the well-known Paka Cave (9,800 feet), the granite is reached, slopes become less steep and the soil type changes to a deeper "mull", still very acid indeed but with plenty of large earthworms and a somewhat more varied tree flora. The term "mull" means to an ecologist what "mould" means to a gardener: there is no surface accumulation of leaf litter as this is incorporated into the soil by earthworm activity.

Very similar soils to these have been reported on in some detail (Askew, 1964) after the 1961 Royal Society Expedition to the east ridge of the mountain. This paper is perhaps too technical for the gardener but it is worth noting that the top 25 cm. (about 10 in.) of a ridge crest soil at 5,300 feet had a pH of 2·0–2·4 and that the base saturation of the mineral soil just below was only 1 per cent. However, a mull type soil at 10,000 feet, overlying granite, had a pH of 3·4–3·6 and a base saturation of 4–8 per cent. Even by most rhododendron garden standards these soils are both exceedingly infertile and very acid indeed.

Before our second expedition I had taken the precaution of gaining

experience with pot cultivation of rhododendrons using the Maddenii hybrid 'Lady Alice Fitzwilliam'. This cultivar thrived in a potting compost of equal parts of sphagnum moss peat, perlite and oak leaf mould, with or without the presence of pelleted bone meal. However, seedling loss and severe leaf chlorosis, particularly with *R. orbiculatum* and *R. lowii*, soon indicated that neither perlite nor bone meal were beneficial. In fact bone meal was lethal to very small seedlings. We now use a mixture of moss peat, chopped bracken fronds (collected in October) and oak leaf mould and this has given good results with no fertiliser addition at all. That there is still room for improvement is shown by the severe chlorosis associated with one clone of *R. orbiculatum*. The leaf pattern suggests iron deficiency but the most dilute solutions of iron sequestrene were markedly harmful and often lethal. It may possibly be caused by phosphate toxicity arising from initial applications of bone meal. Suffice to note that Kinabalu rhododendrons thrive in the forest either on an exceedingly infertile soil or as rock or tree epiphytes.

PROPAGATION

Cuttings from four clones of *R. orbiculatum*, one of *R. brookeanum* and one of *R. acuminatum* have all given 100 per cent take (Fig. 20).

Fig. 20—Rooted cuttings, nine months from taking the cuttings, of (*left to right*) *R. acuminatum* in a 5-inch plastic pot; *R. orbiculatum* 'Painted Snipe'; and *R. brookeanum* 'Mandarin'.

These were all 'internodal', the cut being made just above the second pseudowhorl of leaves. In all cases rooting hormone (A.N.A. + I.B.A.) was applied and the rooting medium was made up of equal parts of sharp sand and moss peat. The small clay pots were then plunged into a sand bed with bottom heat of about 18° C (65° F) and this bed was watered twice a day using rain water. Cuttings taken from August to November have rooted promptly; those taken in May developed a black rot at the base of the stems but, when this was cut away, they finally rooted in late summer or autumn.

Fresh seed of *R. brookeanum*, *R. brookeanum gracile* and *R. orbiculatum* has been distributed to a number of botanic gardens and private individuals over the last two years. On the assumption that no news of success indicates failure it would seem that only private gardeners have succeeded with this quite difficult material. My own experience indicates that fresh seed germinates readily with bottom heat and high humidity. However, casualties are high during the first winter when very free drainage is important. At this stage either impatience or liquid feed is lethal.

When small plants of *R. orbiculatum* and *R. acuminatum* reach an established size they seem to thrive better in plastic than in clay pots. However, all young plants and also the pure epiphytes seem to like old clay pots although clearly this is influenced by type of compost and watering regime. Although I have not yet conducted replicated tests it seems as if the addition of a pinch of compost from an established pot plant benefits the early growth of small cuttings. This suggests that the presence of root mycorrhiza may be of particular benefit to young rhododendrons and particularly to epiphytes. Indeed it is notable that the last worker to study this difficult subject on *Rhododendron* (Gordon, 1937) confined his attention to seven terrestrial species and to a few hybrids. A recent masterly survey of the whole subject (Harley, 1969) suggests to me that a re-examination of rhododendron mycorrhiza with particular reference to the epiphytic species, would make a valuable study and the results might prove of equal value to the rhododendron gardener as comparable research has already been to the orchid grower.

SUMMARY

Fourteen *Rhododendron* spp. from Mt. Kinabalu, Sabah, are described briefly. We have eight of these in cultivation of which five have flowered. Two species have been shown to the Society and have received awards.

In an earlier account (Allen, 1969) I have quoted Meijer (1963) in saying that there are 58 species of rhododendron recorded from Mt. Kinabalu. This I now find to be an error since Sleumer lists only 34 species from the whole of Borneo, all lepidote, of which some 27 appear to have been recorded from the mountain.

Of the species seen but not collected we think that *R. fallacinum*, *R. polyanthemum* and perhaps also *R. ericoides* would be of horticultural interest.

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Mr. E. J. H. Berwick, formerly Director of Agriculture, Sabah, was kind enough to make the arrangements for our two trips and accompanied us on both for part of the time. We greatly appreciated his local knowledge and enjoyed his good company and hospitality.

To Mr. H. M. Burkill, Director of Botanic Gardens, Singapore, we are indebted not only for hospitality but also for permission to study in the Herbarium where Mr. J. Sinclair so kindly gave us his expert guidance.

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TAIWAN RHODODENDRON

A Preliminary Report

By J. J. RAVENSCROFT PATRICK and CHIEN CHANG HSU

AFTER two preliminary trips to Taiwan by Patrick in November and December 1968 the need to investigate thoroughly and delineate the rhododendron population made itself evident. At this point, a meeting with Dr. Chien Chang Hsu (Taxonomist at the Taiwan National University) was arranged to enlist his aid in furthering this work. In order to carry on successfully, it was decided to form a group of interested parties in the form of subscribers, for financial assistance and a general pool of information. Thus was formed "Taiwan Venture" with Dr. Hsu in charge in Taiwan and Patrick to handle liaison on a world-wide basis. During 1970 it was decided to change the name to "Rhododendron Venture" owing to the necessity for expanding into the Philippines, the Ryukyu's and possibly Korea to support theories concerning evolution of endemic and non-endemic species. But for the problems connected with further investigations on the Chinese mainland, China would also be included. For correlation with Chinese mainland species we will have to content ourselves, temporarily it is assumed, with herbarium specimens where available, and with the existing literature.

It was agreed that all expense connected with travelling to investigate plant populations, collecting plants, seed, and herbarium material and any other necessary work would be borne by "Taiwan Venture", now "Rhododendron Venture". The actual field work would be carried out by Dr. Hsu under the auspices of the Botany Department of Taiwan National University; Dr. Hsu being in charge would assign and accompany various students on field trips. Occasional trips, as time and opportunity permitted, would be arranged by Patrick in order to make interim progress reports. To that end, this article is submitted.

To date, numerous populations have been visited. Small wild plants have been collected and shipped back to California along with cuttings and seed for distribution to subscribers. During the course of collecting, it became obvious that something would have to be done concerning identification. Although various books and articles concerning the Taiwan taxa are available including Wilson, Kanehira, Hayata, Konishi, Kawakami, Mori, Ohwi, Li, Creech and others, there exists a certain amount of confusion owing in part to earlier difficulties in transport and botanical communication.

It is hoped by the authors that more thorough investigations and definitions can be carried out now that the aforementioned difficulties

do not pose such problems as previously. Accordingly, it was decided to use Wilson's work taken from *The Rhododendron Society Notes*: "The Rhododendrons of the Bonin and Liuku Islands and of Formosa", as a starting point.

For the purpose of this article, perhaps it would be best to list species investigated to date and some of their occurrences in alphabetical order.

At a hopefully early date, a complete study of Taiwan Rhododendron concerning the more than twenty species will be published in book form with all pertinent taxonomical data being supplied by Hsu. This brief article, being of interest basically to horticulturists and enthusiasts, makes no attempt at completeness nor taxonomical accuracy.

Rhododendron ellipticum: Not previously in general cultivation. Introduced as seed distributed by The American Rhododendron Society Seed Exchange from the Creech Expedition under a Plant Introduction Station Number P.I. 325024; and in the same seed exchange list under Patrick & Hsu Number 68/1108 from a cultivated plant; a short-internode form found in the Temple Garden at Alishan. Another seed lot from a plant at Chi-tou Experimental Station was distributed in 1969/70 under Patrick & Hsu Number S69219. A pinker form has been found at Hsao-ko-tou, at about 400 m., and seed will be forthcoming for 1970/71.

Until recently, this species was known by its non-valid synonym, *R. tanakai*. *R. tanakai* was described by Hayata, apparently without the knowledge of an earlier description of the same plant by Maximowicz from material supplied by Oldham.

Live plants were collected by Hsu at Tsu-chung, Chai-yi, at about 2,300 m. in September 1969 under the auspices of "Taiwan Venture" and successfully imported under Patrick acquisition Number A69106 for distribution to subscribers.

R. ellipticum closely resembles *R. leiopodum* from which it differs in its glabrous winter buds and smaller flower. Further, *R. leiopodum* has a glabrous stalk while *R. ellipticum* is quite hairy, retaining the hairs through to the next season.

Rhododendron formosanum: Not previously in general cultivation. Introduced 1969/70 as seed distributed under Patrick & Hsu Number S69215 from a population near Chi-tou, Nantou, about 1600 m. Leaves are silvery tomentose and the flowers are white to pink in globose trusses of 15–17 florets per truss. Possibly the finest medium-size rhododendron found in Taiwan.

Rhododendron hyperythrum: Two populations in Taiwan have been visited; Mt. Seven Star and Chin-kua-shih, Kee-lung-shih. Seed was distributed 1969/70 under Patrick & Hsu Number S69218 from the

population on Mt. Seven Star, about 900 m. Additionally, a private acquisition of about two dozen wild plants from Chin-kua-shih, Kee-lung-shih was successfully imported into California under Patrick acquisition Number A70102 in February 1970. Both white and pink forms are found intimate within the population at Chin-kua-shih.

No evidence has been found to date of the red pustules mentioned by Wilson and these should not be considered definitive. Quite possibly, the red pustules were the orange-red stage of a *Crypsomixa* sp., not identified at the time of Konishi's description.

Leaves of *R. hyperythrum* tend to become somewhat revolute in winter, but not persistently revolute in all seasons as is observed in England. That this species is quite hardy in English lends credibility to the theory that Taiwan rhododendrons are mostly relic populations from mainland Asia; and is borne out by its being an endemic lowland species and never being subjected to frost.

Its tolerance to high summer heat and humidity should make it a good parent where difficult summers are a problem.

For some unknown reason, *R. hyperythrum* has been inadvertently switched with *R. nankotaisanense*. Properly, *R. hyperythrum* belongs in the Barbatum Series, Sub-series Maculiferum.

Rhododendron kanehirai: Not previously in general cultivation. Introduced as seed distributed through "Taiwan Venture" under Patrick & Hsu Number S69217 from a population at Kan-kou, Taipei-shih, about 250 m. This delightful small-leafed Azalea with its red to scarlet flowers is quite heat tolerant.

Rhododendron kawakamii: Possibly the only Malesian found in Taiwan and certainly the most northerly yet reported. Not previously in general cultivation but should make a good hybrid parent for those interested in trying to develop more hardy Malesian hybrids. It occurs in the temperate mountains where it is subjected to frost for a couple of months each year.

A white-flowered form was introduced in 1968/69 and distributed under Patrick & Hsu Number 68/1107 from a population at Alishan, about 2100 m. A yellow form was introduced 1969/70 and distributed under Patrick & Hsu Numbers S69200 (selfed) and S69203 (C.W.). Additionally, a private acquisition of several C.W. plants of the white form from Alishan were successfully imported into California under Patrick acquisition Number A69002 in January 1969 and again in May 1969 under acquisition Number A69064. To date, none of the white form have flowered. The yellow form was located at Erhwanping by Hsu according to a description by Liu and successfully imported into California by Patrick under acquisition Number A69099 in late July 1969 and again under acquisition Number A69108 in late October 1969. Both lots being distributed through "Taiwan Venture".

In June 1970 a supposed white form, previously described, flowered a lovely yellow! The flower colour is quite intense as is expected of Malesians and the substance is quite good, with five to seven florets per truss. As far as is known, this is the first report of *R. kawakamii* flowering in cultivation. A pink form also is known and will be investigated in the summer of 1970. Wild hybrids have also been made in the yellow population and seed was distributed to "Taiwan Venture" subscribers.

Rhododendron lasiostylum: Not in general cultivation. A population at Sun-Moon Lake will be investigated in 1970. At the time of writing, the population has been visited once, photographed and herbarium material collected. Later in the season, seed and live material will be collected.

Rhododendron leiopodum: Not in general cultivation. Distinguished from *R. ellipticum* as stated above. One plant, which has not flowered to date, was successfully imported into California in December 1969 under Patrick acquisition Number A69036 having been acquired from Enomoto of Japan and said to have come from Tai-tung, Taiwan.

Rhododendron mariesii: A population was located in flower on Mt. Seven Star, Taipei-shih in the spring of 1969. Photographs were taken as was pollen and herbarium material. Attempts to re-locate this small population later in the season were unsuccessful owing to the heavy growth of companion flora, the original find being made while the plants were in flower and easily located by the flower colour. Thus, no seed or cuttings were taken. This population has again been located and is now properly marked. Another population previously investigated in Nanto Prefecture (Jap.) by Kawakami and Mori will be investigated. Hopefully, seed, and live material will be collected for distribution during 1970/71 by "Rhododendron Venture".

Rhododendron morii: Although previously in cultivation, the following new material has been distributed as seed and C.W. plants: 1968/69; Patrick & Hsu 68/1109 (small leaf form), about 3300 m.; 68/1110 about 3100 m.; and 68/1111, about 3000 m.; as seed lots from Yu Shan (Mt. Morrison). Additionally, a private acquisition of several wild plants was successfully imported into California by Patrick in May 1969 under acquisition Number A69067. A further collection of wild seedlings was made by Hsu in September 1969 at Tai-tun, again through "Taiwan Venture", imported into California under Patrick acquisition Number A69106, and distributed to subscribers.

The leaves of *R. morii* tend to decrease in size as higher altitude is reached. Seedlings from Patrick & Hsu Number 68/1109, at approximately eighteen months, are not yet mature enough to indicate whether

Photo: Ernest Crowson

Fig. 21—*Rhododendron nakaharai* 'Mariko', A.M., July 14, 1970, by Hydon Nurseries (see p. 184).

or not this phenomenon will carry through in plants cultivated from seed in an element quite foreign to its native habitat.

Rhododendron nakaharai: Scarce in cultivation. Distributed privately as seed from two elevations on Mt. Seven Star, Taipei-Shih under Patrick Numbers 68/1114 (about 800 m.) and 68/1115 (about 700 m.). Two private acquisitions were successfully imported into California in February 1970 under Patrick Numbers A70101 and A70104. Many of these plants were received bearing flower buds and those that were not pruned to induce new growth have flowered.

In its native habitat, *R. nakaharai* is prostrate and stoloniferous where it grows on unprotected storm-wracked ridges. Where it has some protection from the elements by surrounding flora or rocks, it grows more upright. Flowers are in clusters of two to three, of bright, brick red. The portion of Mt. Seven Star where one finds *R. nakaharai* contains many sulphur fumaroles issuing from the surrounding andesite rock. The soil is fine and rich and highly acid. Indeed, this is the richest soil yet found supporting rhododendron in Taiwan.

Rhododendron nankotaisanense: Not in general cultivation. One plant labelled *R. nankotaisanense*, shown to Patrick in England turned out to be a small-leafed form of *R. morii.*

R. nankotaisanense occurs in Central Taiwan on Mt. Nanhuta-Shan (Nankotaisan Jap.). In this particular population it grows intimately with *R. pseudochrysanthum* although blooming much earlier. *R. nankotaisanense* has been inadvertently switched with *R. hyperythrum*; (see under *R. hyperythrum* earlier in this article). Properly, *R. nankotaisanense* belongs in the Ponticum Series, Sub-series Caucasicum.

R. nankotaisanense carries a rusty brown indumentum, the only species in Taiwan to do so. It is easily distinguished from *R. morii* and *R. pseudochrysanthum* by this distinct feature. The population at Nanhuta-Shan was visited in 1969 but no return trip was possible to collect seed. Hopefully, this omission will be corrected in 1970.

Rhododendron oldhamii. This scarlet-flowered Azalea is quite common at varying altitudes in Northern Taiwan. Privately distributed 1968/69 under Patrick & Hsu Number 68/1120 from Mt. Ta-tun, Taipei-shih (about 850 m.). Cuttings were also taken from a population on Mt. Seven Star, Taipei-shih (about 600 m.), and struck in December 1968 in California under Patrick Number P69010.

R. oldhamii is particularly fine as a foliage plant on the storm-swept slopes of Northern Taiwan.

Rhododendron ovatum: At the time of writing, one population at Chih-liang (about 1700 m.) has been photographed and pollen and herbarium specimens taken. Seed and live material will be collected later in 1970.

Rhododendron pseudochrysanthum: A curious note creeps in here. According to Wilson, he sent back seed from the dwarf population at the summit of Yu-Shan (Mt. Morrison). Several plants in England are quite large, whilst an exceptionally fine plant at Wisley is approximately eighteen inches high at about thirty years. Patrick imported into California some plants collected from this summit population that subsequently died. Trunk sections of twelve-inch high plants turned out to be about thirty-five years old. In protected valleys a few hundred feet below the summit, *R. pseudochrysanthum* attains a maximum height of some three metres, and forms dense thickets at lower elevations.

Several wild plant importations have been made by Patrick with varying degrees of success. Losses are substantial, especially with older plants; reaching 100 per cent in very old plants. New growth on survivors exhibit the same characteristics as mature growth. Some plants from the dwarf population exhibit striking red underleaves while others do not. Estimated ages of imported plants range from five to ten years. To date, no survivors have developed flower buds. The plant habit of

the dwarf form is quite compact. With its very short internodes and fine set to the leaves, plus the woolly tomentose upper leaf, *R. pseudochrysanthum* vies with the best of dwarf rhododendrons, if not surpassing anything in its size range. Colour slides of dwarf *R. pseudochrysanthum* in flower, exhibit all the delights of this magnificent species; in fact, it seems more magnificent than its larger relatives.

Seed of *R. pseudochrysanthum* dwarf form was distributed privately under Patrick & Hsu Number 68/1106 during 1968/69 and also through the ARS Seed Exchange. Additional seed has been distributed to "Taiwan Venture" subscribers in 1969/70 under Patrick & Hsu Number S69216; both the foregoing being from Yu-Shan (Mt. Morrison) about 3960 m. Additional live plants have been acquired privately, imported and re-rooted in California under Patrick acquisition Numbers as follows: A69006, January 1969; A69063, May 1969; A70103, February 1970; A70106, February 1970 and A70107, March 1970.

Crosses have also been made in the wild although seed lots have been too small for distribution. All seed lots have germinated and now the interminable waiting begins. As usual, high hopes and a certain amount of anticipation will be enjoyed for several years.

Rhododendron rubropilosum: This lovely and quite common high-altitude species occurs in various shades of pink through purplish pink. Commonly seen at altitudes over 2500 m. in the Central Mountain Massif, it never fails to please, both in and out of flower.

Two seed lots were distributed in 1968/69; both privately and through the ARS Seed Exchange, Patrick & Hsu Numbers 68/1112, Yu-Shan (Mt. Morrison) about 3300 m., and 68/1113, Yu-Shan, about 2800 m. An additional seed lot, selfed by Hsu in 1969 from a population above Tung-pu, Yu-Shan (about 2900 m.) was distributed to "Taiwan Venture" subscribers under Patrick & Hsu Number S69212.

Rhododendron sikayotaisanense: This small-flowered pink Azalea, although not in general cultivation will soon be available. It was found in the Central High Mountains of Taiwan; it has been photographed and herbarium material collected. Plans are proceeding apace to collect seed and live material.

Rhododendron taiwan-alpinum: A neglected taxon previously described by Ohwi is not in cultivation. This lovely dwarf Azalea somewhat resembles *R. rubropilosum* but differs in having thicker and more densely hairy leaves marginally revolute. Found on mountain slopes above 3000 m. This species is also being investigated in 1970.

Rhododendron sp. Azalea Series: A recently discovered new species. Although photographs have been taken as well as herbarium material,

there is not enough information yet to give an accurate botanical description. This work will be completed by Hsu in late 1970.

To date, all indications point to the fact that most Rhododendron in Taiwan are a relic population from a much earlier eastward migration. Various bits of evidence allow one to draw this conclusion; not the least of which is Kingdon-Ward's description of *Taiwania cryptomerioides* in Northern Burma. Additionally, the Continental Drift Theory would seem to be borne out through geological evidence concerning the western third of Taiwan which is primarily sedimentary, shelving down to the Taiwan Straights, which are very shallow, and on across to the Chinese mainland.

The one exception noted to the Relic Population Theory is *R. kawakamii*. This, the only recorded Malesian to date in Taiwan possibly migrated northwards through seed borne on typhoon winds. The typhoon season occurs quite conveniently during the fruit ripening season in the fall. Additional investigation in Northern Luzon should shed some light here.

Further information concerning progress of "Rhododendron Venture" in Taiwan and the Western Pacific will appear from time to time. Specific inquiries and more detailed information can be had by writing co-author Patrick.

NOTES ON THE "KEISKEI" COMPLEX IN THE TRIFLORUM SERIES OF RHODODENDRON SPECIES

By COLLINGWOOD INGRAM

OVER the years I have obtained from Japan, either directly or indirectly, under the name of *Rhododendron keiskei* no fewer than three very distinct species—so distinct that one cannot help marvelling why somebody has not already taken the trouble to separate them. Possibly this may be because recent descriptions of *R. keiskei* have been so ambiguous and comprehensive that they might equally well be applied to half a dozen different species. To be told that *R. keiskei* can be either a bush up to 9 feet in height or a procumbent shrub of only a few inches; that it can have either elliptic, oval, oblong or lanceolate leaves ranging from 1½ to 3 inches in length and that its petioles can be either bristly or not bristly is, to say the least, not very helpful when one is trying to identify a species.

Let us begin by first considering the main distinctive features of the typical plant as they were described by F. Miquel in 1866 from an example collected in the mountains of the Owari Province, Central Japan (*Annales Musei Botanici Lugduno Batavi: 2.163*). Although the author says his new species is a shrub of only 2 or 3 feet, there is every reason to suppose that had his specimen been given the chance it would have grown to a much larger size (Rehder, in his *Manual of Cultivated Trees and Shrubs* gives the height of *R. keiskei* as up to 9 feet). Miquel goes on to tell us that the leaves of his plant are lanceolate in shape and measure up to 3 inches (7·6 cm.) in length, and up to 0·8 of an inch (2 cm.) in breadth—in other words that they are of a long and narrow shape. But unquestionably its most distinctive character is to be found in the petiole of its leaves: in typical examples those organs in the juvenile state are furnished with long whitish bristles. The calyx, as is also the case in the plant I am describing as *R. laticostum*, is rudimentary, with barely perceptible, undulate, lobes.

From herbarium material and the relevant literature on the subject it seems that the range of *R. keiskei* with its geographical forms extends from the province of Shimotsuke in Central Honshu south-westwards to the island of Shikoku.

The first of the plants labelled *Rhododendron keiskei* to reach me from Japan arrived more than thirty years ago. It is still alive and in good health. As it agrees (save only in its larger size) in almost every respect

Fig. 22—Herbarium material of: *left, R. keiskei*; *right, R. laticostum.*

with Miquel's detailed description of his new species that plant may be safely regarded as a typical example of the species.

The true form would seem to be very rare in cultivation—at any rate I cannot recollect having seen an undoubted specimen in any other collection. The shrub commonly sold in England as *R. keiskei* is a much smaller plant with entirely different foliage, its leaves being unlike those of the type not only in their colour and texture but likewise in their size and shape. This is the rhododendron figured in the *Botanical Magazine* (t.8300), and described therein by W. B. Hemsley. That Hemsley was well aware that the subject of his article was not a typical example of Miquel's species is evinced by his drawing attention to the several ways in which it differed from one of the two wild-collected specimens preserved in the Kew Herbarium. One of these came from the Tosa Province in Shikoku Island. Since it has the same lanceolate shaped leaves with similar bristly petioles, this Tosa specimen may be regarded as belonging to the typical race.

The second wild specimen referred to by Hemsley was collected by Maximowicz on the volcanic mountain of Unzen Dake (mis-spelled Wunzen on the collector's sheet). This differs from Miquel's plant by having a calyx with slightly larger lobes fringed with longish lax hairs. This feature in a living plant in my possession is conspicuously more pronounced and in consequence is one which alone suffices to distinguish it

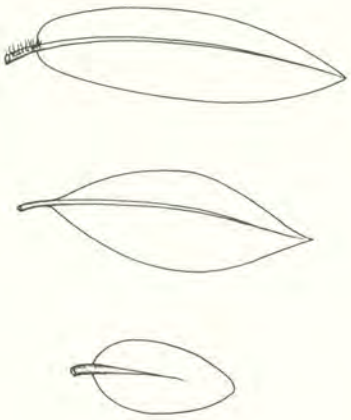


Fig. 23—Tracings of the current year's leaves of the three undermentioned species made on June 23, 1970. (*top*) *R. keiskei*. A bush from 6 to 9 feet in height. (*centre*) *R. trichocalyx*. A bush probably attaining a similar height. (*bottom*) *R. laticostum*. A compact shrublet up to about 2 feet.

at a glance from the type. But it also differs markedly from the type in a number of other important respects, thereby indicating beyond any doubt that it is a distinct species. These distinctive characters will be discussed more fully later.

The *Botanical Magazine* plant, of which I have a number of specimens, is also strikingly unlike Miquel's *Rhododendron keiskei*. I therefore have no hesitation in likewise according it specific rank. The name I have decided to give it is *Rhododendron laticostum*.

It differs mainly from the type in the following respects:

A. Instead of attaining a height of 2 to 3 m. it normally remains a small compact shrub of only about 50 cm. or 60 cm.

B. Its leaves, instead of being lanceolate are much shorter and broader, being broadly oblong or ovate with a stout pale-coloured midrib which widens notably towards its base. Typically the leaves measure only about 4 cm. in length instead of about 7·5 cm. Its foliage is also of a paler green colour and of a rather smoother and softer texture.

C. In its petiole being very short and thick and at all times glabrous instead of bearing initially two rows of long lax bristles.

Rhododendrum laticostum Ingram sp. nov.
Frutex parvus, compactus, 45–60 cm. altus. *Rami* primum sparse lepidoti. *Folia* oblonga vel ovata cum costa lata, 3–4·7 cm. longa; 1·7–2 cm. lata; subtus densiuscule sed obscure lepidota squamis pallide ochraceis, supra obscurius et remotius lepidota, basi cuneata vel rotundata, apice mucronata, modice acuta. *Petiolus* brevissimus et crassus, glaber, sparse lepidotus, 6 mm. longus. *Flores* pallide lutei, immaculati, in

fasciculis terminalibus 3–4 (–5) floris dispositi. *Calyx* minimus. *Corolla* late infundibularis. *Stamina* 10, late patentia, nasi hirsuta. *Ovarium* 5-loculare, sicut calyx dense lepidotum. *Stylus* glaber, distincte curvatus, stigmate minimo.

Habitat—Japan (? Yakushima).

Its native habitat is not properly known but for reasons which will be given later I am fairly confident that it comes from Yakushima and is probably endemic there.

The type specimen of my *R. laticostum* was culled from a plant in my collection. This specimen is now preserved in the Kew Herbarium.

Five years ago Mr. Wada kindly presented me with a small piece of what appeared to be a very prostrate rhododendron of uncertain affinity. He said it had come from near the summit of Mount Kuromi on the island of Yakushima where, according to him, it grew only on the top of rocks and was exceedingly rare—so rare in fact that it was on the verge of extinction. It was certainly an exciting looking little plant with very distinctive small, broadly oblong, almost round foliage, unlike any I had seen before. Unfortunately the fragment he gave me had hardly any roots and, try as I would, I failed to keep it alive. Luckily Mr. B. Starling had also received plants of the same diminutive rhododendron from Mr. Wada and I am indebted to him for very generously replacing the fragment I had lost.

Although Mr. Wada informed us that the plant was only to be found on Mount Kuromi it probably occurs on other mountain peaks in Yakushima. At any rate, Dr. Serbin met with a plant "growing among numerous tiny flowering shrubs" on the slopes of Mount Hanano-Ezo at a height of about 4,650 feet above sea level which he was able to identify as a form of *Rhododendron keiskei*. In the same interesting article, published in the *Rhododendron and Camellia Year Book 1961*, Dr. Serbin informs us that the rainfall on Mount Hanano-Ezo amounts to something like 370 inches per annum. He also tells us that Yakushima lies in the path of the typhoons which not infrequently occur in the China Sea during the summer months.

Those two meteorological facts are illuminating: they go far to explain some of the rather puzzling peculiarities of the little plant from Mount Kuromi. The fairly frequent incidence of typhoons in Yakushima—Dr. Serbin says there are from 20 to 25 every year—no doubt explains why it had when I first obtained it such a very prostrate habit of growth and such small, broadly oblong leaves with unusually thick midribs that widened into very short, equally thick petioles—all of which features being evidently adaptations evolved to withstand the advent of those devastating storms.

Of the phenomenal violence of those storms I can speak from personal experience. While passing through the China Sea my ship was overtaken by a typhoon. Paradoxically the velocity of its wind was so great that it

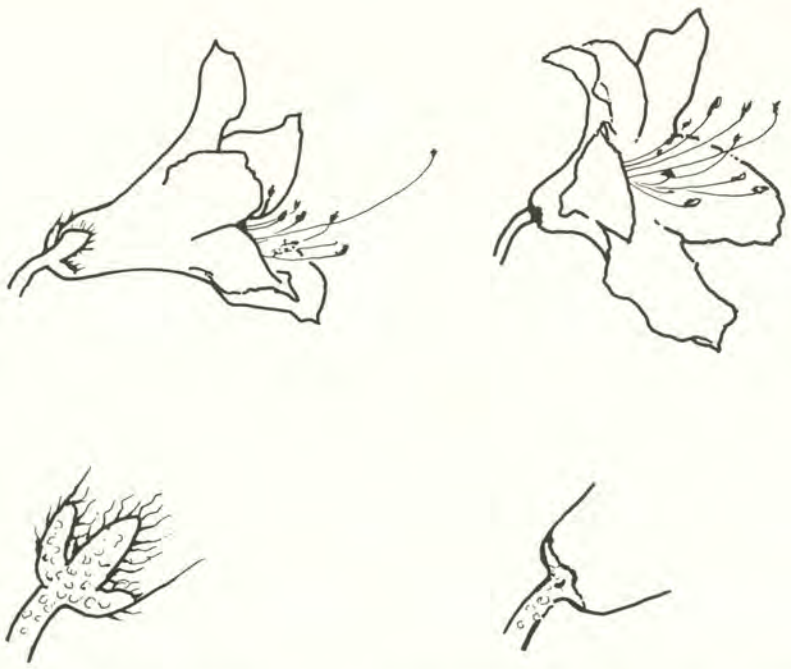


Fig. 24 (*left*)—*R. trichocalyx*. Calyx much enlarged. (*right*)—*R. laticostum*. Calyx much enlarged.

prevented the formation of any sizeable waves; instead it converted the surface layer of the sea into spindrift—into a moving mass of water that had a momentum of sufficient strength to strip the paint off the hull of a ship that happened to be travelling only a few miles ahead of us. When she left Hong Kong the hull of that ship, the Japanese liner *Kumana Maru*, was black: when she reached Nagasaki it was red.

If the frequent occurrence of typhoons in Yakushima explains why the little Mount Kuromi rhododendron had such a prostrate habit of growth and such small tough foliage, the reason why it perches upon the top of rocks may almost certainly be attributed to the island's exceptionally heavy rainfall. Presumably it is only in such sites that it can obtain a sufficiently sharp drainage.

But five years spent in an entirely different environment has now completely changed that little plant's appearance. No longer has it a conspicuously prostrate habit: no longer are its leaves very small and bluntly oblong in shape—every year they have become more and more like those of *R. laticostum*, both in size and form. Indeed they are now

so like those of that species that there is no longer any doubt in my mind that the Kuromi plant is in fact nothing more than an alpine variety of *R. laticostum*. I knew, of course, that when an alpine plant is brought down to a lower elevation and has been grown for some time in more congenial conditions, it is very liable to lose much of its original montane charm, but I hardly expected the remarkable metamorphosis which has taken place with that small rhododendron. Its strong family resemblance after its transformation to my *R. laticostum* has convinced me that the latter (whose precise native habitat I have so far been unable to ascertain) is almost certainly also a native of Yakushima—though coming, of course, from a lower elevation.

Hiroshi Hara (in the *Rhododendron and Camellia Year Book 1948*), writing of *R. keiskei* (under which name he undoubtedly includes my *R. laticostum*), says it "grows on rocks and rarely on trees". That any member of this series of rhododendrons should occasionally be epiphytic is interesting.

My second new species I am calling *Rhododendron trichocalyx*. As its most striking characteristic, namely its well-developed hairy calyx, is present, though not so conspicuously, in the specimen collected by Maximowicz on Unzen Dake in Kyushu more than a hundred years ago, I am presuming that my plant also comes from that island. In both *R. keiskei* and in my *R. laticostum* the calyx is rudimentary and glabrous with barely perceptible, undulate lobes. In my *R. trichocalyx* the calyx lobes are not only fully developed but are distinctly fringed with silky hairs. It also differs from the two other Japanese species (A) in the deeper, richer yellow colour of its flowers; (B) in the stems of its new shoots being red instead of green, and (C) in its immature leaves being very conspicuously lepidote on both surfaces, and in their being then of a reddish bronze colour instead of green. Lastly, some of the leaves, when very young, not infrequently have a few caducous ciliate hairs adhering to their margins.

Rhododendron trichocalyx Ingram sp. nov.
Frutex 1 m. fortasse 2 m. altus. *Rami* juniores et folia crebi et distincte lepidoti. *Folia* subcoriacea oblonga vel elliptica, fere 6 cm. longa, 2·75 cm. lata, basi cuneata, apicis acuta: subtus crebre lepidota cum fulvis squamis. *Petioli* glabri 9 mm. longi. *Flores* flavi 3·5 cm. diametro in fasciculis terminalibus 3–5 (semper fere 4) florum dispositi. *Calycis* lobi modice longa in margine conspicue ciliati. *Corolla* in fundibuliformis. *Stamina* 10, filamentis infra puberulis. *Stylus* longus.

Habitat—Japan. Fortasse in montana insula Kyushu.*

The type specimen of *R. trichocalyx* was culled from a plant in my garden. It is now preserved in the Kew Herbarium.

* The mature foliage of a specimen collected by E. H. Wilson on Unzen Dake Kyushu in February 1914 exactly matches that of my *Rhododendron trichocalyx*.

AN ADVENTURE WITH RHODODENDRONS PART II

By ALAN HARDY

IN writing Part II it falls to my lot to describe some of the plants we have found and identified at Nymans. This presents a rather difficult problem because so many of the plants from these collections have been growing now for some 45 years, and are very well known. However I hope some of the observations we have made may perhaps help someone to think of a new number being rediscovered in their collections.

Nymans is an ideal home for rhododendrons, having a good aspect and also the lovely top cover that most of the good Sussex gardens seem to possess. A fairly heavy soil with good moisture retaining qualities is another important factor in their well being, but the heaviness of the soil does mean that where they are touching the ground the plants do not seem to layer very easily, which means that other means of propagation are necessary to perpetuate the plants.

On my first visit to Nymans there were many thoughts going through my mind as to what I should see. John Clarke had told me briefly the years in which the plants had been collected and what had already been found; and so I thought that perhaps it would be fairly easy to guess what would be there. Perhaps the biggest surprise I got therefore was seeing a good selection of the Maddenii Series growing very happily, when some members of the Thomsonii Series like *myiagrum* were missing and so were perfectly ordinary plants from other Series. But it was the grandeur and stature of many of the plants which impressed me most and made what to me has been a fascinating and absorbing pastime as junior member of the team and its work which John has so well described in Part I.

Let us now turn to the plants themselves. Most of those I shall mention will be of the Forrest, Kingdon-Ward, and Rock collections 1924–1928 but there are a few outstanding plants of the other collections which must also be mentioned. Taking it Series by Series I start with Arboreum. Nymans contains some magnificent specimens of *R. arboreum* mainly forma *roseum* and forma *alba*. The former is a fine plant and is nearly always among the prizewinners when shown. It has a large truss and when lit up by the sun its slightly white centre makes a magnificent contrast. Another earlier member which is also well represented is *floribundum*, a plant which in its best colour forms is worth growing in any garden. Among members of the later collections there

should be plants of *arboreum* KW 6403 but we have not found any nor have I seen any in other gardens; perhaps it has a story of its own! Another good member of this Series is *lanigerum* KW 6258. This is a most interesting plant as it has gained three Awards of Merit, for three clones differing in flower shape and colour. However although well represented here none of the colour forms are outstanding. It is a pity *delavayi* is such a difficult species to grow in the south. One sees the magnificent sprays, both of quality and colour of those shown to us from Brodick on the Isle of Arran, and knows it is a plant to treasure. Thus it was an exciting chapter in our book when we found a plant of *delavayi* under Forrest 27118. It is perhaps not as brilliant as some but nevertheless a great achievement to be doing so well in the south. *R. coryanum* is another plant we should have on our books but so far it has eluded us; a plant as yet unflowered is causing us a certain amount of argument and interest but I fear it is going to be a "missing person".

The next Series is Anthopogon. Here are most attractive plants but very difficult to place under their numbers. *R. anthopogon* itself, KW 7023, is a nice plant and seems a long laster in flower. In one spot at Nymans we found a very attractive group of obvious Anthopogons. I suppose their nearest ally was *cephalanthum* but nothing fitted into the puzzle, especially when material was sent for verification: it was identified as *hypenanthum*. On checking the lists no record appears for this at Nymans and so we were at a loss where to turn next. However, when practising my slender knowledge in a nearby garden I was delighted to find a similar plant, luckily with a label beside it. This was KW 5849 *cephalanthum*. I hope our problem is now solved, but we must wait to see if next time we try it, we are right—I sincerely hope we are—as I shall be to blame and ridiculed if it is wrong. *R. cephalanthum* proper is unfortunately on our missing list and again it is a plant well worthy of any garden. *R. trichostomum* is another pretty plant in all its forms and R 59196 is no exception. But from this series perhaps our biggest hidden treasure lay in finding *kongboense* KW 6020/6021. What is the difference? Only minute details to be found with an eye glass and in collectors field notes will tell you and even then it is a problem.

The Barbatum Series is also well represented and obviously has long lived, strong members. The *crinigerum*'s in particular are good forms (Fig. 25). Luckily, if anyone studies Mr. Rock's 1924 collection they will see why, we are not too bogged down with all his different numbers. Our best seems to come from KW 7123. Another imposing member which fascinates me is *exasperatum*. This in its best form under KW 6855 is a truly magnificent plant, having not only wonderful foliage, especially the new growth, but also a compact, very neat truss of brick red flowers. For me one of the best, *glischrum* KW 6256, is another winner and makes a particularly well shaped bush. *R. glischroides* in our collections has two Forrest numbers F 26428 and F 26448 and there

Fig. 25—*Rhododendron crinigerum* at Nymans (see p. 35).

seems little to determine their differences. However, another fine member of the Series is *habrotrichum* F 26632, a very deep coloured form, rather late in flowering and making a large bush. We have also found what may be called the "aberrant" member of the Series, as it shows strong leanings to the Thomsonii Series, in *hirtipes* KW 6223 and KW 5669, with its small neat open truss. Another good but sadly missing species is *rude* which is without doubt one of the most attractive of the Series.

For the Boothii Series one is bound to be limited, but the plant of *leucaspis* KW 7171 is enormous and does its best to cover itself with flower if only frost will allow it. The *tephropeplum*'s are interesting as it seems Forrest went for small flowered forms and Kingdon-Ward large ones. Without doubt the best of all is KW 6303. This is a large flowered form of a good deep pink and also highly scented, making it another high rating plant. Forrest's F 26457 is also a good one with a particularly good truss although small flowered. These are our only members of the Series, *xanthostephanum*, *auritum* and *megeratum* all unfortunately absentees!

Campanulatums do not really feature and the next Series of importance is Cinnabarinum. Here the KW *cinnabarinum* does not seem as

Fig. 26—*Rhododendron concatenans* KW 5874: the F.C.C. form.

good as some earlier collections but a plant of interest is *keysii* var. *unicolor* KW 6257. This I think is a more interesting plant than true *keysii*. The most noteworthy is without doubt *concatenans* KW 5874. The plant from here received its FCC in 1935 and very worthy it is. Again it is a dual purpose plant, in flower showing its large deep apricot bells, and later its superb bluish young growth. The photograph (Fig. 26) does justice to its flowering capabilities although not showing the intensity of the colour. *R. xanthocodon* KW 6026 is another very useful member of this Series with yellow funnel-shaped flowers. The Edgeworthii Series has provided us with some lovely plants and flowers in KW 6304 and KW 7137, the latter seeming the more vigorous and hardier form.

Perhaps it will be easier to take the big leaved series together and here we have some of the finest bushes of any to be seen at Nymans. Unfortunately as far as tracing and renumbering these have proved the most difficult of any to do, but *arizelum* is very well represented, in form and colour ranging from pale pink–yellow–cream. There are also fine specimens of *basilicum*, *mollyanum*, collected as *sinogrande* KW 6261, and of the very large leafed form of *sinogrande* KW 6782. However pride of place over everything must be taken by *macabeanum*. These are really vast plants some 30 to 35 feet high, very attractive with their silvery foliage and unforgettable when in full flower. It is interesting to note that in his collector's field notes KW stated "a forest tree 40–45 feet high with handsome foliage". These plants so different from the well known one at Trewithen, which seems much more of a bush, must be the nearest approach to those in the wild. It was unfortunate this

year, when the Rhododendron Group visited Nymans on such an awful day, there were no flowers on the main plants to brighten our dampened spirits.

In the Glaucophyllum Series, both KW 7038 and KW 7046 *brachyanthum* var. *hypolepidotum* are well represented, but without doubt the collection of *tsangpoense* is the best. I could write at length and in detail of all the variations of KW 5843, 5844 and 5844a and in addition of KW 6924 and KW 7188. Suffice to say study the field notes and your plants and your problem will be answered. The Heliolepis Series has a few plants for us but here again we have not got on very well in renumbering.

Next the Irroratums have interesting members. Most notable is without doubt *elliottii* KW 7725 but it is a tender plant and a difficult customer to propagate. *R. anthosphaerum* and *eritimum* are here in plenty but each is difficult to separate in their numbers. *R. venator* KW 6285 is another good plant; its bright red truss amply makes up for its rather straggly habit. *R. laxiflorum*, another good plant found by Forrest and with white flowers, is a good foil for another good red *tanastylum* R 59200, but *lukiangense* seems a rather poor member of the Series. *R. facetum* F 27105 is also a good plant and it is interesting to find many plants of the Parishii Subseries so flourishing. The Lacteum Series is one full of good plants but very difficult to describe, so all I shall say is we have found a very good true *lacteum*, good *dryophyllum* and *traillianum* F 25740, also *phaeochrysum*. One plant that flowered this year from this Series is as yet undetermined. Have we found a new species? Time will tell.

From the Lapponicums *luridum* KW 6960 is unfortunately again missing. I wonder if anyone can produce this plant? Lepidotums have all disappeared but surprisingly this cannot be said of the Maddeniis. Perhaps the most charming is the pink *brachysiphon* KW 6276, but this is closely followed by *manipurense* KW 7723 and by *polyandrum* too under KW 6276. These are all very flourishing plants and it is interesting to note their hardiness ratings.

Neriiflorums are well featured, one of the best being R 59174 *chamaethomsonii*, originally *forrestii* var. *tumescens* A.M. This makes a very well-shaped bush and is one of the most free flowering of its kind. *R. beanianum* gives I think some of the best of the Series. All are well represented including the striped flowered form, but the most attractive to my mind is KW 8254 var. *compactum*; this too is a first rate dual purpose plant, being in itself a much neater bush and a lovely deep crimson in colour. Pride of place however must go to Kingdon-Ward's *pocophorum* KW 8289, which is one of the best reds there is, and one wonders why it has not been used more in breeding as only one child Ibex A.M. has been registered. Among *sperabile* we have some fine forms; in fact all the numbers are represented and all are good. *R. coelicum* is a plant which for a long time caused us trouble but has now

Fig. 27—*Rhododendron campylogynum.*

been numbered. Another trouble maker was *sanguineum*. May I refer to a lecture given by Kingdon-Ward in 1927? He states "KW 6955 is the finest Sanguineum I have ever seen". We found a plant labelled under this number but it was turned down as *sanguineum* by Edinburgh although identified as a Sanguineum. This upset us and we tried several alternatives before we found that the Herbarium specimen under this number was *chaetomallum*! Life can be difficult it seems and perhaps made easier if Part I of the *Handbook* had told us this. *R. parmulatum* KW 5875 is another good plant, not unlike *cerasinum* "Cherry Brandy" in appearance but with a mauve rim and not a red one. I shall not delve into the realms of *aperantum*, *herpesticum* and *scyphocalyx* as it would be too dangerous; suffice to say we have plants of all colours, some of which have their numbers, some are very pretty, some ugly and some plain dull.

The Saluenense Series has various members at Nymans. *R. calostrotum* KW 8229, A.M. 1935 is now a very large bush, as are all these types of plants which we found to our cost when we looked at the "Alpine Bed"; all nearly six feet tall! In the Taliense Series we found

some interesting plants, the best being in the Roxieanum Subseries, *recurvoides* KW 7184 being the best individual species; lovely foliage, a very compact plant and a lovely pink and white flower, perhaps Rose Bengal HCC25/3 sounds more glamorous. *R. roxieanum* var. *oreonastes* is at any time an exciting plant and a group of three some 6 feet tall with their dainty white trusses is another sight for sore eyes. It seems that few Rock plants have been mentioned here but now two come into their own, *roxieanum* R 59195, and *bureavii* R 59248, both good foliage plants if nothing else. *R. clementinae* F 25705 is another plant of interest, mainly for its lovely blue young growth.

The Thomsonii Series again has given us its problems. I refer again to KW's lecture "Most of the Thomsonii I collected may have been hybrids". From our experience several were, but there were also several other good things too. *R. callimorphum* is one of the best and the Forrest F 27389 form is outstanding. *R. caloxanthum* we have now numbered F 27125 and *campylocarpum* KW 8256, but *myiagrum* has eluded us. *R. telopeum* has also been difficult. All these plants vary considerably and have needed a lot of sorting out. Worse is still to come over *stewartianum*. At their best they are some of the most attractive, but what a colour range and how they vary even under one number. *R. hookeri* under KW 8238 is not a good form to grow. *R. hylaeum* KW 6401 and KW 6833 are tender in bud and growth but make up for it by their distinctive bark. *R. eclecteum* is another very variable plant and so difficult to determine. Then there was *cyanocarpum*, which we were lucky to find, had a plain GF number extra to the list as have many others here at Nymans. This left us with *meddianum*, which is a fine plant, and the form *atrokermesinum* F 26495 even better. Again it is one of the outstanding Nymans plants. *R. cerasinum* we have managed fairly well, with "Cherry Brandy" A.M. quite outstanding. The Selense Subseries has also been difficult; especially to number, the one exception being *martinianum* KW 6975, a distinctive and without doubt the most attractive member of this Series. The Subseries Souliei was easier as we had mainly *wardii* to number, but this whole Series has given us many problems, some of which we have solved and some still remain unsolved.

The Trichocladum Series is another difficult one to determine and one would wish for a revision from Edinburgh. We have found in *trichocladum* proper at Nymans a good form under F 27117 which is a really deep buttercup yellow. KW 8606 has a larger flower but is a very pale colour. *R. melinanthum* and *viridescens* are our other members.

The Triflorum Series contains few members for us and another outstanding plant here is *triflorum* var. *mahogani*, KW 5687–5681. This again is a very variable plant in cultivation and it is interesting to see why. I refer again to the KW lecture on 6 May 1925—"The flowers vary enormously but on the whole they are yellowish, not the pure yellow of *lutescens* but rather a browny, sometimes salmon-pink yellow. Some-

times we got bright salmon-pink flowers with a mahogany splash at the base, sometimes more yellow sometimes more brown. I got seed from many different localities and they were all mixed". This clearly shows why there is such variation. However the good salmon pink form is here and a very striking plant it is. *R. bauhiniiflorum* KW 7731 is another good plant, being a really clear rich yellow. Rock's *rigidum* R 59207 is an equally good clear white. *R. zaleucum* F 27603 is also charming with its pink flowers, which have an added attraction in a very pleasant scent.

Finally mention must be made of *pemakoense* KW 6301 in the Uniflorum Series, a first class colour, very floriferous and a good increaser by the nature of its stoloniferous habit, but it is unfortunately somewhat bud tender.

Having completed a run through of the Series I am sure I have left out some good plants but these are still headaches to us. May I give one example; we have wonderful plants of Rock's *pocophorum*, or is it *hemidartum*, or are there some of both? Indumentum seems to vary year by year, therefore so do our numbers! These have not yet been confirmed, so life still has its problems for us and I am sure we shall discover many more.

One further collection of Kingdon-Ward also warrants just a few words, that of 1937 as there are a few outstanding plants here. Among them are *succothii* KW 13666, *smithii* KW 13362 and a magnificent *hookeri* KW 13650; another good plant is the *sidereum* KW 13649. These seem the most outstanding plants that have flowered regularly.

I hope some readers will take heart from this series of articles and realise that by a lot of hard work, some luck, a good deal of argument and back chat, a tremendous amount can be achieved when tackling a big project like this. For my part I can only repeat what John Clarke said in his final paragraph of Part I and say how greatly indebted we are for being allowed to handle all these superb plants, for all the help we have had from Edinburgh and to thank Lady Rosse, Mr. Nice and the National Trust for being made to feel part of Nymans by our work. Finally if any one has not been to see this wonderful garden I strongly recommend a visit, not only to see magnificent rhododendrons, I hope correctly labelled, but also a wonderful collection of other rare and interesting plants for all seasons of the year.

AN ADVENTURE WITH RHODODENDRONS

Part III

By JOHN CLARKE, M.B.E.

BY the time the *1971 Year Book* is published some three and a half years will have elapsed since Nice and I, later joined by Hardy, originally started work at Nymans cataloguing and labelling the collection of species. Having had occasion to think a good deal about the problem of time, we are convinced that the most that can be readily spared in a large garden, open to the public, is half a day a week. In that sense I am referring to the time that is spent out of doors. Any head gardener who can spare more time will probably be overlooking the ordinary maintenance work and the general improvement of the gardens, all of which must go on concurrently with such a task as we have had. However, one should also anticipate that quite a lot of evening leisure time will be occupied with the preparation of lists, the checking of numbers and the solving of the odd problem that arises with "wrong numbers" or conflicting labels. To anyone contemplating a similar task I would say that the two essentials are complete accuracy of records and a set routine as to when and how the outside work is to be done.

So far as records are concerned, I did mention in Part I some of the things that we had learned. However, I did not mention as part of our standard equipment Part One of the *Rhododendron Handbook*, which at times we found to be invaluable. At other times it drove us mad! In fact we used my old copy of the *1963 Handbook* for outside work because it didn't matter if it got dirty or not. For inside work we used the 1967 edition, which of course one treated rather more carefully but which we required because it has additional information in it.

Sometimes, particularly when we knew what series a plant was in, the *Handbook* was of the greatest assistance. On other occasions when we were uncertain of where to start we found that at least one out of every two descriptions seemed to cover the plant we were looking at. If one knew what the plant was, then of course the description fitted the plant. However, on many occasions we felt that where the bark or the trunk was distinctly coloured it would be of the greatest assistance to have some note of this in the general description of the List of Rhododendron Species. The fact that the wood is coloured mauve on *hylaeum* and reddish-brown on *eclecteum* would be an extra part of the description which would help. I have no doubt that we should also have made better use of the List of Rhododendrons in their series, but we never

seemed to have the time to spare to see whether the calyx was 5–6 mm. long rather than 1–2 mm. and I felt that such matters were best left to those experts at Edinburgh. Of course we could have taken another specimen to be dismembered later, but it took us all our time to get the specimens collected, indexed, packed and sent the following morning in a box by letter post to Edinburgh. We are, of course, still sending specimens up for identification and to avoid the type of confusion that can easily arise every specimen is now labelled with a NY number and the plant has a tag with the same number. The point of this being that one may have three plants under one collectors' number within a hundred yards of one another. They may not all flower at the same time or more importantly in the same year. Thus when compiling detailed lists of the plants some time later, one does not necessarily actually recall which particular plant the specimen came from. At the time of course one always thinks one will.

It was, I think, Captain Ingram who once remarked to me how much easier it was to identify plants in one's own garden, because of course one knew where and what they were. By chance it transpired that Mr. Davidian was able to come to Nymans directly after the rhododendron show and we were able to gallop him round the gardens tackling virtually every rhododendron species. As we went Hardy dashed off a temporary label which Nice stuck on the plant and later replaced with a temporary aluminium label. I kept a list going on my millboard and scribbled pages of names as dictated so that we should have some record of what the great man had said. Unfortunately when we were half way round the gardens one of the heaviest thunderstorms imaginable broke overhead and the party had to take temporary shelter. Lightning struck within two hundred yards and our celebrated guest at last lost a little of his sangfroid and on our resuming suddenly gave us a *parmulatum* instead of *eudoxum*. It was refreshing to find that he was only human after all. I know that not everyone agrees with Davidian's views, but it was a magnificent experience to listen to him telling us what everything was—in somebody else's garden at that!

This brings me to another essential part of one's weekly voyage of discovery and that is that one should always walk round the garden following the same route. If you are only tackling one part of the garden, then do it in the same order as one normally does. The reason is of course that later on, when you are studying different lists, you can always pick up where you are in the garden from the order of the different plant numbers. Again when you come to prepare what you think are your final lists setting out your plants and their names and collectors' numbers, have a separate list for each section of the garden. Type it on at least double spacing because you will find, as we did, that it is unlikely to be the final list and will suffer many an amendment. Having now typed at least two final lists each running to some forty pages of foolscap I mention this with some feeling. Having looked at

one area countless times you may suddenly realise that what you thought was one plant of *caloxanthum* is in fact two plants growing out of the same spot and that one of them is *telopeum*.

One of the most interesting and at the same time smaller parts of the garden was the area known as The Prospect or alternatively The Bandstand. This was crammed to the limit with a large number of small or medium sized plants and was due for a general overhaul and replanting. Comparatively early on I had made a summary of all the plants which, by collectors' numbers, were shown by Comber's lists to be in that area. He had divided this into three beds as can be seen on the left-hand side of the page; one page is reproduced on p. 46. On the opposite side of each page I put all the plants that we thought that we had found. This was based on the labels found and at that particular time we did not always know whether they were correct or not because we had not then sent any specimens up to Edinburgh. Coupled with which we learnt a good deal more in the second and third years. The division of the old beds could still be seen and so I put our finds down by reference to the same beds. Finally I also noted what the *Handbook* said the plants numbers should be. Having done that it was easy to make a separate list of those that we had not been able to find and also to make a note of one or two extra plants that had turned up in the area. These plants that were missing we hoped to find at a later date and by reference to the collectors' notes and other sources. I thought it advisable at the same time to put down a description of the colour of the flowers.

As we were then on our first general survey of the gardens we had to move on and deal with other areas. Like everything else this took much longer than we expected and before we were ready to come back to the Prospect for a further detailed survey the time had arrived for Nice's restoration work. Apart from replanting this area it meant that surplus plants were moved to two other areas namely to the Pinetum and the Long Walk. It was here that we were able to appreciate, if that is the correct term, the wisdom of having the original lists done on at least double spacing. At the conclusion of this general post we were able to prepare a second final list for each of these areas without much difficulty. At the same time in this general rearrangement some further labels had come to light and so the value of the reconstruction was not entirely on the debit side. It meant however that there were no longer three separate beds on the Prospect and we treated it as a whole. During flowering time in 1968, 1969 and 1970 we had been able to send up quite a number of specimens to Edinburgh and these had for the most part confirmed the labels we had found although we did not escape one or two stated to be natural hybrids and one or two "material insufficient for determination". Of course Comber must have moved one or two plants about after he had made his original list and, apart from the last general post, Nice luckily remembered where several plants had been taken out and more happily where they had been re-

planted. Not unnaturally we would like to have found all the missing numbers but I think that would have been just too good an answer. We also made due allowance for some that had departed this life. There was one glorious moment when we were left with two unidentified but similar plants with red flowers. By a process of elimination I had in the spring of 1969 come to the conclusion that the only two plants I had left in the list to put against them were *horaeum* and *coelicum*. Because of the indumentum *coelicum* was the obvious answer but unfortunately that did not appeal to Edinburgh who after giving us "material insufficient etc." in one year gave us *chaetomallum* in the next. We altered the list of collectors' numbers in Part 2 of the *Handbook* accordingly.

It would be easy for us, but intensely boring for others if we reproduced pages and pages of our lists of species. After all many of the plants are of interest only to those who class themselves as specialists. However, some of the plants are of importance because they may represent the best of all the collected forms and it is these which should be noted by those anxious to build up a species collection. It is fitting to mention here that the second final list has now become the draft third final list. One page is set out on page 46 and is representative of the general collection. To assist in understanding the list I would like to explain what the abbreviations mean, although it does not appear on the page shown below.

D = plant inspected by Davidian and passed as such.
E = plant passed as such by Edinburgh after inspection of flowering specimen. Where herbarium material was available there this was also compared.
NY = the Nymans number where a number was used for the specimen.

A number such as 6 indicates the number of plants in that spot. Sometimes if there are a number of plants they may be shown as "group".

Other notes refer to colour if thought important and the place in the garden where the plant originated from.

Where the identification of a plant is different to that shown in the *Handbook* a comment is usually added to that effect.

NIB = this means "not in book".

Summary of KW and R numbers
Bandstand and Oak Tree

		Comber			Found			In book
		Lower	*Oak*	*Upper*	*Lower*	*Oak*	*Upper*	
KW	5829	1						viridescens
	5846		1					forrestii var. repens
	5853	1		1				campylocarpum
	5874			1		1		concatenans
	5875		1	11			1	parmulatum
	5879			1				eudoxum
	6283	1						vaccinioides
	6806	1						trichocladum
	6832	1					1	forrestii var. repens
	6868			1		11		telopeum
	6924	1			1			tsangpoense var. pruniflorum
	6926	1						
	6930			1	1			campylocarpum
	6955	1		111			111	sanguineum
	6991			1			1	horaeum
	7038			1	1			brachyanthum var. hypolepidotum
	7189	1						dasycladum
	8165	11	1			1		tephropeplum
	8259		1	1		1		trichocladum
R	59163			1				roxieanum s.s. 4′ white
	59199		1					rubiginosum
	59510		1				1	dryophyllum
KW	5736		None		1			wardii

Bandstand

F	26978	scyphocalyx	group	E	NY 185
F	27019	scyphocalyx			
F	26926	scyphocalyx	E	NY 186	aperantum in book
F	27116	scyphocalyx	herpesticum in book		
F	27359	scyphocalyx	apodectum in book		
F	26927	scyphocalyx	group		
KW	5736	wardii	E		
KW	5830	cerasinum group	E		
F	26924	scyphocalyx forma			
F	27075	aperantum group			
F	27011	scyphocalyx	4		
KW	6930	campylocarpum			
F	26924	scyphocalyx			
F	26931	hybrid	aperantum in book		
		roxieanum			
		recurvum	3		
R	59510	scyphocalyx	3	dryophyllum in book; brevistylum on label	
F	27081	aperantum			
F	26937	aperantum	E		
KW	7038	brachyanthum var. hypolepidotum			
KW	6924	tsangpoense var. pruniflorum	2		
F	27494	scyphocalyx	2	=F26966	
KW	6795	martinianum			
F	26963	herpesticum	E	NY 193	
F	26966	scyphocalyx	E	herpesticum in book	
F	27079	aperantum	2		
F	27134	scyphocalyx forma	group		
F	26931	aperantum			

Part IV

By C. G. NICE

Having started in these famous gardens some 46 years ago, when Mr. J. C. Comber (commonly known as J.C. by the staff) was head gardener, I have seen many of these fine *Rhododendron* species grow right from seed to maturity. During this time they have been moved from their original seed-beds to many parts of the gardens including the Rough and the Pinetum.

For some of the larger-leaved species J.C. used to mark the planting places with a cane with newspaper rolled around and tied with raffia so as to be seen more clearly. These canes were often to be found in the middle of brambles which I did not find was conducive to learning the names of the rhododendrons but rather to curse instead at having to dig holes in such positions.

Our task of indexing the collection has been helped by members of the staff remembering several of the plantings which were moved out of the nursery beds. Mitchell, of cheerful countenance, has continued to lead the transplanting team, whose latest efforts of moving and re-arranging plants at the Prospect has resulted in at least three times as much space being required to accommodate the plants from this area alone.

It is worth noting that all the present staff, with the exception of one, came to work at the gardens when young and have married and brought up their families here during their years of service. One pensioner, Willie Brown, is still attacking brambles in the wilder parts of the garden for a few hours each week at the age of 81.

Having now accomplished the task, in spite of all our other commitments, I realise that this survey would never have been possible without the kind help and enthusiasm of Mr. John Clarke and Mr. Alan Hardy with whom many happy hours have been spent and I personally am very grateful to them.

(*Concluded*)

SHADE TREES FOR RHODODENDRONS

By JOHN BOND

HAVING taken stock of this large and variable genus, to say that all rhododendrons need shade would be a far too sweeping statement. In my opinion, however, the majority of rhododendrons in cultivation flourish in the cool conditions so ably provided by the smaller-leaved deciduous trees. Obvious exceptions are the species of Anthopogon, Azalea, Lapponicum and Saluenensis Series, although I have seen many successful plantings of these in light shade. On the other hand the large-leaved species of the Falconeri and Grande Series require a considerable amount of shade. In fact, the size of the leaf gives a reliable indication as to the amount of shade that is required.

What are the benefits of growing rhododendrons in shade? I am going to place good foliage in first place. Very few rhododendrons when well grown in cool shady conditions have unattractive leaves, and most provide us with twelve months of first-class evergreen foliage. Some species have outstanding young growth that almost rivals their flowers. Frost and wind can also cause considerable harm to both flowers and leaves. Whilst overhead shade trees can give some protection, it is usually necessary to plant strong evergreens of a bushy habit to provide shelter.

There is no doubt that finer flowers are produced on rhododendrons in light shade; often fewer in number, the flowers when set amidst good foliage are far superior to those on an over-flowered shrub in full exposure. Flowers will also last considerably longer, and many, particularly those of strong red, orange or pink colours, bleach very rapidly in strong sunshine.

The hardy hybrid rhododendrons and the deciduous and evergreen azaleas are frequently planted in full sun, often I must admit with some success. In my opinion, however, they are of far greater value when planted in cool shady conditions; not only are the flowers of finer quality, and have a longer life, as already stated, but their whole appearance, with more attractive open growth, is superior to those grown in full exposure.

I have outlined the advantages of shade for rhododendrons somewhat briefly. A note of warning is necessary at this point. If they are planted in heavy shade, leggy weak growth and poor foliage will be produced, and a complete absence of flowers will be noted. Obviously a happy medium is called for, with the emphasis, as previously stated, on light dappled moving shade.

If a garden is to be developed in an existing area of woodland careful thought concerning thinning must be given; the area should be studied

Photo: Dennis Woodland

Fig. 28—Two common oaks, with *Nothofagus obliqua* at the left.

in detail at all seasons and observations made of prevailing climatic conditions. Dangerous trees and those with undesirable features should be marked clearly for felling before any sound trees are considered. It should be noted that thinning is comparatively easy when an area is in a rough state and free of choice plants, also that trees when thinned usually grow exceptionally fast into their newly acquired space and light. The lower branches of the trees that are left must be removed to a height well clear of the plants beneath. Branches left on the tree very rapidly drop into the space vacated by those that have been removed, therefore both this operation and the thinning should be carried out extremely thoroughly. Existing tall trees or buildings can provide valuable shade from a distance. A careful study of such features should be made. If new trees for shade are being planted very careful thought is again necessary concerning their placing and eventual height and spread. What makes the ideal shade tree? It should be small leaved, and deciduous with an open branching habit; it should also be deep rooted and, if possible, have an attractive appearance.

Leaf size is extremely important. Small leaves allow sun and light to filter through; they also rot quickly on falling and usually provide excellent leaf mould. Large leaves produce a dense canopy and often rot down slowly.

A deep root system is of prime importance; a surface rooting tree will rob its neighbours of plant food and moisture. I fear, however, that most trees will send their feeding roots into a recently cultivated piece of land.

So much for the ideal. I now intend to write about a much wider range of trees, beginning with those natives or common introductions that may well be encountered in an area of acid woodland.

The sycamore, *Acer pseudoplatanus*, is very common on all soils. This greedy surface rooting tree with large useless leaves must be placed in the undesirable category; beware also of the multitude of children that a mature tree will produce.

The same criticisms must be made of *Aesculus hippocastanum*, the horse chestnut; it is definitely not suitable for shade above rhododendrons.

Alnus glutinosa, the common alder, is usually to be found in wet places; if its roots can obtain a reasonable amount of moisture it will also thrive and provide excellent shade on higher ground.

The leaves and the branching systems of our two native silver birch, *Betula pubescens* and *B. verrucosa*, provide perfect shade and are usually extremely attractive, but beware—their fibrous root systems will rob the soil of absolutely everything. By all means take advantage of their shade and beauty, but plant your rhododendrons well clear of their roots.

Castanea sativa, the sweet or Spanish chestnut, is a tolerable large leaved shade tree; its branching system is sparse, it has a deep

Photo: Dennis Woodland

Fig. 29—Rhododendrons growing beneath two *Quercus palustris*.

root system and its leaves rot rapidly. It has, however, two serious faults; mature trees tend to shed large branches without warning, and the prickly fruit cases are slow to rot.

The majestic beech is perhaps the most beautiful tree in our landscape but, as every gardener knows, nothing can compete with its vast surface root system and dense leaf canopy. We should leave some trees for their beauty and the shade they cast, but never plant beneath them. Beech leaf mould when collected on acid soils is first class.

A good specimen of holly, *Ilex aquifolium*, is an attractive evergreen tree, although it should be noted that its leaf canopy is dense and that the leaves when shed in summer can be a great nuisance.

Of the conifers that may be encountered only *Pinus sylvestris*, the Scots pine, is acceptable as a shade tree in the woodland garden; although the root system is deep, dry conditions are often prevalent beneath large trees, and irrigation of nearby plants is frequently necessary. The larch, Norway spruce and our native yew are all unsuitable mainly because of their hungry root systems, and the yew because of its dense dark foliage.

Prunus avium, our wild cherry, is a near perfect shade tree, with its deep root system, small leaves and attractive appearance.

The oaks, which are so typical of our landscape, associate so well with the many exotic shade-loving introductions from the temperate regions of the world. It really is difficult to fault the oak as a shade tree for our woodland gardens.

Sorbus aucuparia, the mountain ash, is a suitable small shade tree that is never as attractive in woodland as when grown in full exposure on our moors and higher ground.

I do not like limes as shade trees! I am suspicious of the effect of their leaves on the soil. They certainly produce a dense canopy, and in summer honeydew from the numerous aphids on the trees falls onto the plants beneath.

The above brief account of our native trees is one of mixed criticism and praise; nevertheless beggars can't be choosers, and the gardener must make the best of the trees he has inherited.

I will now suggest suitable trees to plant in an area that is wholly or partially lacking in shade trees. Two factors are likely to control our choice of trees for an initial planting—cost and speed of growth. A list of reasonable commoner trees would contain the most suitable of our native species and *Nothofagus obliqua* (Fig. 28), *Quercus borealis*, *Q. palustris* (Fig. 29) and various seed-raised *Sorbus* species. These should be plants of 2 or 3 feet or so, all are fairly fast growing. Young evergreen trees and shrubs may also be required for shelter if the site is particularly exposed.

The following list, which again is roughly in alphabetical order, is of rather more exotic trees that are not only good shade trees but will also add considerably to the interest and attraction of a woodland garden.

Photo: Ernest Crowson

Fig. 30—Prunus and Rhododendron flowering in the Savill Garden.

No other genus is more at home in the woodland garden than *Acer*. The choice should be limited to those of smaller ultimate dimensions, such large growing species as *A. negundo*, *platanoides* and *saccharinum* being particularly unsuitable.

The alders will thrive in most soils that are retentive of moisture. I particularly admire *Alnus glutinosa* 'Imperialis', *A. cordata*, *A. firma* and *A. nitida*, all of which are excellent shade trees.

Usually grown in large shrub form the amelanchiers make perfect single or multi-stemmed trees if pruned frequently when young. All the North American species are superb woodlanders. They usually flower well in spring and always provide fine autumn colour.

I am sorry about the birches, there are so many wonderful species which provide shade to perfection, unfortunately they have the hungriest of root systems. Plant some, enjoy their effect, use their shade but plant your rhododendrons well away from their roots.

Most of the hornbeams, *Carpinus* species, and the closely allied hop hornbeams, *Ostrya* species, are extremely pleasing trees for the woodland garden.

Cercidiphyllum japonicum has long been a great favourite of mine. Often seen in a bushy multi-stemmed form it would surely rate highly in

a short list of shade trees suitable for rhododendrons and their allies.

Conifers associate visually extremely well with those trees and shrubs that flourish in acid woodland conditions. Most of them unfortunately have voracious root systems and dense branch canopies which rules out very close association. The cypresses have numerous cultivars in great variety, and the smaller columnar forms have considerable architectural value when placed sparingly in the more open areas of the woodland. Some shade and protection will also be provided by such trees.

The Turkish hazel, *Corylus colurna*, would also be well placed in the short list mentioned above. It is a stately pyramidal tree with an ideal root system, and surely deserves to be planted more frequently.

Eucalyptus species have been planted in large numbers in the milder parts of the British Isles. In my opinion they are completely foreign to the acid woodland scene, and I am thankful that I live in an area that is climatically unsuitable for their cultivation.

The Styrax family contains a few trees that are not only quite beautiful in flower, but are first-rate small shade trees. *Halesia carolina*, *H. monticola* and its forms, *Pterostyrax hispida*, *Styrax hemsleyana* and *S. japonica* are the finest in the family.

The American *Liquidambar styraciflua* and the Asiatic *L. formosana* will thrive in a moisture retentive soil. They will add considerably to the autumn scene and provide good shade.

The association of magnolias and rhododendrons is very much part of the spring scene. All of the tree-forming magnolias, with the exception of *Magnolia salicifolia*, have very large leaves and consequently dense canopies. They also resent disturbance of the large areas covered by their root systems. Although ideal plants for large gardens the owners of smaller gardens should consider carefully the space they have available.

Having condemned the *Eucalyptus* from the southern hemisphere I now have nothing but praise for another genus from that half of the world—the deciduous species of *Nothofagus*; *N. antarctica*, *N. obliqua* (Fig. 28) and *N. procera* make first-rate shade trees in every sense. *Nothofagus betuloides*, *cliffortioides* and *dombeyi* are evergreen species and are almost as useful.

Nyssa sylvatica is a very suitable shade tree with fine autumn colour. It requires identical conditions to those for the liquidambars.

The many lovely *Prunus* species and hybrids when planted in association with rhododendrons are so typical of spring; this is another genus that is difficult to fault as a shade tree (Fig. 30). I prefer to plant the wild species such as *P. conradinae*, *P. sargentii*, *P. serrulata hupehensis*, *P. serrulata spontanea* and *P. yedoensis* in woodland. If the many lovely double forms are chosen avoid those with horizontal branches. These are fine landscape trees but are too low and dense as shade trees.

Most of the exotic oaks in common with our own natives are perfect

shade trees. The North American red oaks, *Quercus coccinea*, *Q. borealis* and *Q. palustris* are perhaps among the best of the genus.

The sorbus, particularly those of the mountain ash section of the genus are all valuable for planting in woodland areas.

Often little more than large shrubs the stewartias are remarkable for their spring foliage, flower, autumn leaf colour and attractive winter bark effect. They require similar conditions to the rhododendrons and provide the most perfect shade conditions; in fact a four star genus!

The reader will realise that this is an incomplete list of suitable shade trees for rhododendrons and I am sure other gardeners who have the good fortune to garden in an area of acid woodland will have many successes with other attractive trees.

Photo: T. H. Findlay

Fig. 31—*Rhododendron chrysanthum* at the Savill Garden.

RHODODENDRON SPECIES THAT, IF AVAILABLE, OUGHT TO BE MORE WIDELY KNOWN AND GROWN

By T. H. FINDLAY, M.V.O., V.M.H.
(KEEPER OF THE GARDENS WINDSOR GREAT PARK)

A RATHER difficult subject to write about I fear, but one no less attractive to anyone who dips into the lore of the wildling from overseas. One has to match climatic conditions, soil and even our wild life against success in seeing one's wishes become fruitful.

Again, source of supply is a great difficulty. No nurseryman these days grows an odd rhododendron species in the hope of selling one plant. For example, where can one buy a nice bushy plant of *R. lapponicum*, *R. shepherdii*, *R. chapmanii*, *R. anwheiense*, *R. sherriffii* or *R. chrysanthum*? Six species from six different series and, with perhaps the exception of *R. lapponicum*, all worth growing.

One is bound to be biased in selecting a number of different species—"there are so many that ought to be grown"—for time of flowering, hardiness and quality of foliage. These have a tremendous bearing on one's likes and dislikes, and again the impossible sometimes happens.

I have always wanted to bring up to the Rhododendron Committee a nice clump of *R. lapponicum*. It would give me great pleasure to see this plant in flower even. We have two nice youngsters here looking at the moment healthy, and making new growth. These were sent by a friend from the cold of north Canada, where eventually it grows up to 6 inches and flowers freely. Our two plants have been with us two years, but as yet in the south have not had the arctic conditions which they seem to like in Lapland.

From the Lapponicum Series to the Ponticum Series, my next species, which I like and I am sure can be grown successfully if given a little care, is the very dwarf yellow *R. chrysanthum* from the Subseries Caucasicum of the Ponticum Series. (Fig. 31) Here this prostrate shrub is now 3 feet across and 3 inches high after twenty years or more. A really remarkable plant, very slow growing but easily raised from seed. It comes from Manchuria and Japan; very hardy, but liking leaf soil and a few rocks thrown around it; a north face is best. It should be an interesting species to use for hybridisation.

One rhododendron which I am sure will become popular if given time is *R. sherriffii*, and "given time" means time for this plant to grow to 6 feet. Only then can one look through the crimson flowers in the same way as one does and so often admires with *R. cinnabarinum* var. *roylei*.

From the Campanulatum Series (perhaps), it is named after its distinguished collector, Major G. Sheriff, who found it in south Tibet. It has smallish flowers and leaves. It received an Award of Merit in 1966. One fault—it flowers rather early, mid-March, and sometimes its flowers get cut by frost.

I am very fond of a dwarf compact species from the Barbatum Series, namely, *R. anwheiense*. One always associates the Barbatum Series with blood-red flowers, as seen in *R. strigillosum*, the type plant *R. barbatum*, *R. smithii* and the pink and rosy reds of *R. glischrum* and *R. habrotrichum*, but the white, pink-spotted bells of *R. anwheiense*, the flowers spotted like some birds' eggs, are truly charming. A flower to be looked into rather than at. It comes from the Anwhei Province of China. I have crossed this plant with *R. roxieanum* and one delightful hybrid of the cross is an A.M. plant called 'Blewbury'.

From the same Series and Subseries comes *R. morii*. Different in character, being a loose-limbed large shrub up to 20–30 feet but free flowering and with a truss that sits delicately poised on the bush. It is no good for show purposes but a fine garden plant. Coming from Formosa it should be tender but is not; in fact it never suffers from frost, given woodland conditions. The best forms, clear white with crimson blotch, should be sought as this species varies considerably.

Two from the Arboreum Series always attract attention when grown in the garden, and again when shown in competitive classes at the early and late Rhododendron shows. These are *R. argyrophyllum* var. *nankingense* and the early flowering *R. lanigerum*, with its many awarded forms. The former has lovely shining leaves and deep rose flowers but *R. lanigerum*, a favourite of mine, comes like Jacob's coat in many colours. Only the A.M. and F.C.C. forms should be planted. These come from the famous garden at Trengwainton (nice pink), from Tower Court under the KW number 6258 (scarlet), from Windsor two forms 'Chapel Wood' (rose) and 'Round Wood' (crimson), from Logan, 'Silvia' (pale crimson), and 'Stonehurst' (cherry) from Sussex. An impressive record for a species of rhododendron from the Arboreum Series and so little known. It makes a small tree from 20 to 30 feet, has quite nice leaves from 9 to 12 inches long, and is from south-east Tibet.

Those fortunate enough to have a cool greenhouse or one that just keeps out the frost ought to dabble with rhododendrons of the Stamineum Series; a little known series but well worth while, the most common in cultivation being *R. stamineum*, *R. wilsonae*, *R. championae* and *R. stenaulum*. The last named and *R. wilsonae* are the best; besides being lovely in flower they are all delightfully scented. *R. wilsonae* is near hardy and has been grown outside for years at Wakehurst. They strike easily from cuttings.

These then are a few of the many uncommon or little seen rhododendron species which I would like to see in the many gardens I both visit and enjoy.

SOME DWARF RHODODENDRON HYBRIDS RAISED AT WINDSOR

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

(KEEPER OF THE GARDENS WINDSOR GREAT PARK)

OF the many hybrids I have bred at Windsor none have given me greater pleasure than some of the dwarf types, ideal for the small garden or for the shaded parts of a rock garden. One of the first to be recognised of these is a dwarf yellow, named 'Chink'—a pale yellow bred from the deciduous *R. trichocladum* and the semi-evergreen *R. keiskii*. This cross has given a nice compact bush, deciduous, very floriferous and flowering just before 'Blue Tit' and 'Blue Diamond' at the end of March (Fig. 32). The cross was made in 1947 and an A.M. given to a selected clone in 1961. The rate of growth has been slow. Most plants of this cross are only 2 to 3 feet high now and about as wide.

Many crosses were made using *forrestii* as one parent, such as *forrestii* × 'Choremia', *forrestii* × *beanianum*, and with *beanium compactum*, 'Barclayi' and *barbatum* as other mates.

Some of these crosses had, of course, been made by other hybridisers and most have made good dwarf hybrids, all dark red in colour. Our most successful cross in this group is *forrestii* crossed with *barbatum*. Made in 1949, a clone named 'Appleford' received an A.M. in March, 1966. This clone is a humpy bush some 2 feet high, and has taken on the habit of the sprawling *forrestii* with a nice-sized truss of glowing scarlet.

Again, *forrestii* has been crossed with *R. smithii*. All the progeny are growing with a dwarf habit but upright, taking more after *R. smithii* than *forrestii*. I wonder why this should happen, for *R. barbatum* and *R. smithii* only differ in habit very slightly.

Another very fine red raised here is the result of a curious set of parents. It is not yet named, but one day is sure to receive some award. It has been our policy not to name a new hybrid unless it has had an award of some sort either in London or after trial at Wisley. This new red is derived from a red rhododendron raised by the late Mr. Rose, who was then at Townhill Park. His red was the result of crossing *R.* 'Loderi' with *R.* 'Earl of Athlone'. Many may remember this red but it was never named. 'Elizabeth' from Bodnant was the other parent. Only one seedling of this cross was of any use, but it is a good dwarf, with large red flowers and a compact habit.

R. yakusimanum had, of course, to be used as one parent for keeping the dwarfing habit, and many fine seedlings have resulted. The best is probably the result of using it with *R. aberconwayi*. Every one of the

Photo: Ernest Crowson

Fig. 32—Rhododendron 'Chink' raised at the Savill Garden.

fifty seedlings were winners. One clone, *R.* 'Streatley', had an A.M. and the Cory Cup in 1964. Raised in 1956, plants today are still only 18 inches to 2 feet high.

A new *yakusimanum* hybrid flowered for the first time this year and looks like a winner; the result of using *R. insigne*, it has produced a fine foliage plant, good truss and nice pink flowers.

A hybrid of similar type is *R.* 'Blewbury', A.M. 1968. This is *roxieanum* × *anwheiense*. A compact bush with white heavily spotted small flowers, *R. anwheiense* is a small growing shrub from the Barbatum Series and, crossed with *R. aberconwayi*, again proved successful, producing *R.* 'Enborne', A.M. 1966.

Recent hybrids are just coming to flowering size, and these might prove to be interesting. The crosses were mostly made between *R. carolinianum album* as the seed parent, and *R. leucaspis*, *R.* 'Seta', *R. moupinense*, *R.* 'Silkcap' and *R. sulphureum*.

DWARF RHODODENDRONS AT BARNHOURIE AND ROUGHHILLS, KIRKCUDBRIGHTSHIRE

By M. RICHMOND PATON, B.Sc., Ph.D.

THESE two gardens on the Solway coast 18 miles west of Dumfries are within half a mile of each other, but they are in two very dissimilar sites. Barnhourie is in the valley of the Fairgirth burn, sheltered from the worst of the winds but suffering from frosts, especially in spring, whereas Roughhills sits up on the hillside facing south and west and where any frost quickly rolls off the slopes. The difference in the air temperature on a cold night can be as much as 10°. On a May morning when Barnhourie is registering 6° of frost and flowers are browned and drooping, Roughhills will be quite unscathed.

The collections of dwarf rhododendrons now at these gardens was started at Barnbarroch House in the same district about twenty years ago and subsequently moved to Barnhourie and Roughhills twelve years later. Therefore, although Barnhourie is a new garden only eight years old, it has benefited by the transference of this mature collection forming the foundation for the peat walls. While this work at Barnhourie was going on, Roughhills constructed its first peat banks using some of these mature plants from Barnbarroch as a nucleus for its present collection (Fig. 33).

Plants are being propagated at both places, particularly at Barnhourie, so that every year new plants are added to both gardens. Thus the collections are now quite large and include many species. It is with the more unusual species that this article is concerned.

It is tempting to describe rhododendrons in order of flowering: March, April, May etc. but with May there are too many out together and one is lost in a jumble of names. So it will be simpler to keep the species within the framework of the Series.

The Anthopogon Series do well in both gardens and flower exceptionally well in the full sun at Roughhills where there are plants of *R. trichostomum* var. *radinum*, *R. sargentianum* and a deep rose *R. anthopogon* with grey foliage which is really lovely. At Barnhourie, besides these, *R. cephalanthum* var. *nmaiense* with bronzy foliage and cream flowers, when it deigns to show them, is of special beauty. There is also a fine *R. anthopogon*, salmon-pink in the bud opening to ivory, which happily is very free flowering.

There are two species worth mentioning in the Azalea Series; *R.*

Photo: John M. Butterworth

Fig. 33—Peat beds at Roughhills successfully combining the informal with the formal; dwarf rhododendrons happy in a southern exposure.

indicum var. *crispiflorum* which flowers so late in the season that the flowers are never damaged even in a bad spring, the other a nice form of *R. kiusianum*. This one has a good clear pink corolla, small leaves and small flowers making a dainty plant.

The Boothii Series is represented by *R. leucaspis* and *R. megeratum* and as would be expected, these do better at Roughhills. The last flowers at a young age and keeps a compact habit.

There are some beautiful plants among the Glaucophyllum Series. At Roughhills there is a really large plant of *R. tsangpoense* var. *curvistylum* which in flower hangs with dusky pink thimbles. This plant does not seem so robust as *R. tsangpoense* itself which is growing at Barnhourie. The pale creamy pink of *R. shweliense* makes a nice contrast with the dusky claret of *R. tsangpoense* and the form var. *pruniflorum*, all growing together at Barnhourie. In these gardens most of the Glaucophyllum species and their varieties are represented.

The Lapponicums are truly the basis of any dwarf collection and because of their hardiness, hardly ever fail to put on a good show year after year. It does seem a pity some of the loveliest are the more difficult of propagation, but it must be the reason why that gem *R. intricatum* is so rarely seen. How different the flower is from the typical Lapponicums with an almost tubular corolla flaring at the apex, strongly resembling the Anthopogons. In colour it is good lavender blue and the flowers can survive 3 or 4° of frost, which is unusual and fortunate as they open in the beginning of April. Even in winter it is not a plant to be

Photo: John M. Butterworth

Fig. 34—Barnhourie; mown paths leading to the woodland area.

passed by without notice as the resting buds shine like varnished mahogany among the grey foliage. There is a good plant at Barnhourie.

Another untypical Lapponicum is *R. dasypetalum* with flowers larger than most, of a good rose with only a hint of blue; the leaves are a shining bronzy green. It is well known that *R. russatum* is variable and in some forms it is just another mauve; however there is a form at Barnhourie which really excels. Its flowers are a dark violet-blue and the foliage bronzy because the golden scales cover the leaves densely not only below but on the upper surface as well. It appears to be a unique seedling.

Yellow Lapponicums are not easy rooters but some clones do seem to root more easily than others. In these gardens there are a number of yellows growing under the name of *R. chryseum* but which are certainly not all the same. There is one with chartreuse yellow flowers and very small leaves. Another, acquired as *R. chamaezelum*, is also small leaved but with clear yellow petals. The most showy is a grey leaved form with up to five flowers in the truss, compact and free flowering: luckily this last roots reasonably well from cuttings and both places include some nice established clumps.

These are just a few of the more interesting among some 25 species in this series grown in the gardens.

Photo: John M. Butterworth

Fig. 35—
A view at Roughhills showing the shelter belt to the north.

The small Maddeniis do best at Roughhills. At Barnhourie *R. valentinianum* is scorched by frost in most winters and has a struggle to survive but *R. fletcherianum* withstands hard frosts. These two are fine yellows.

Both the pink and white forms of *R. moupinense* are grown. Plants at Roughhills with very large white flowers generally give a good account of themselves while the pink form is most attractive in young growth with its shining rosy leaves.

Apart from the blue leaved *R. lepidostylum* there are other members of the Trichocladum Series in the gardens. The specific differences in this series are not always appreciated and one hears the different species described as looking all alike. However, *R. viridescens* is certainly worthy of a place for its late flowering which is always welcome, while *R. melinanthum* has unusual violet-stained foliage.

It is intended in this article to draw attention to the diversity of form and colour in the species and to refute the much repeated assertion that "mauve" is the predominant colour among the dwarfs.

If in the reading it has also stimulated enthusiasm to grow more species (in preference to more hybrids) this will be a step taken to ensure their survival in cultivation.

A RHODODENDRON COLLECTION IN A SMALL GARDEN

By GEOFFREY H. TAYLOR

WHATEVER derogatory remarks may be aimed at the old-fashioned hybrid rhododendrons, these familiar masses of bloom are frequently the impetus for yet another gardener to seek enjoyment among the modern hybrids and lesser known species of the genus.

Clouded by the mists of time, a childhood memory of rhododendrons lingers; producing a vision of towering scarlet sentinels in a Victorian-style garden. The variety was, and still is, unknown, but it was almost certainly a hybrid from the 19th century. More than twenty years were to elapse between that juvenile study and the personal acquisition of a suitably acid soil where, in 1965, rhododendron culture was commenced.

At an elevation of nearly 500 feet, this two-acre garden straddles a hill overlooking the vast Severn valley. Exposure to frost-laden winds is a natural hazard, shallow soil is a problem in places and desiccation of the sandy medium can produce almost desert conditions during periods of drought. However, we soldier on, neglecting only the large-leaved exposure-prone species, and the present collection numbers well over a hundred different varieties and species.

Commencing with the hybrids of yesteryear, collecting has gradually turned from those colourful large trusses to the true species, embracing characters in foliage and delicacy of bloom. But whatever the current trends, these old-style hybrids are well loved residents, reliably flowering each year. As the years pass, growers amend their selections and some of our hybrids are already absent from many lists. 'Lady Clementine Mitford' may be slightly shy in flowering, but her beauty is breath-taking, while the heavily contrasting dark blotch of 'Sappho' is a point of interest so often lacking in those of modern breeding.

During our initial venture into rhododendrons, many of these older hybrids were planted in dense shade, often of holly, and consequently trusses may be rather more sparse than would have been the case in a more open situation. However, the protection value of those massive holly bushes far outweighs any reduction of bloom, because come rain or sun these flowers remain in perfect condition for a considerable time. Periodically the holly is thinned to produce a little more light, but the pruning saw is used very selectively, lest a disastrous wind tunnel is produced. As far as possible this area of the garden is left in a semi-wild state and, completely unwittingly, we have achieved a

remarkable colour contrast where 'Purple Splendour' was planted in the lee of an ordinary hawthorn. The sight of those dark purple trusses against a background of white May blossom is quite astounding.

From the older hybrids, attention was focused upon the dwarfs, species or otherwise. Perhaps the initial choice was more concerned with encompassing varied flowering times rather than selection on merit, but nevertheless that first planting contained some gems which are still held in esteem today. The curiosity of *R. radicans* never fails to impress the uninitiated visitor, while the ease with which *R. campylogynum* spreads its purple bells impresses us and *R. impeditum* laughs at the most searing of winds. In three years *R. campylogynum* has been successfully layered several times, but alas, *R. radicans* has not yet lived up to its translated meaning of "rooting" and we must be content with our original plant.

By removing turf from a bank and landscaping with local hard sandstone, a suitable home was created for the first dwarf rhododendrons. Although the position is generally well sheltered by hedges and evergreens, one corner does receive a certain amount of north winds. Unfortunately, this was the spot selected for *R.* 'Hinomayo', which has thanked us in no uncertain way by shrinking in stature as each year passes, and obviously a more sheltered site must be found, before this specimen vanishes into oblivion. Needless to say, floral tributes have been absent from this plant, but this is one of our very few failures since commencing the planting of rhododendrons some five years ago.

Although richly endowed with peat, both at planting times and subsequently, this rock-supported bank presented our first cultural problems with the genus. A few days without rain, with possibly a mole creating additional drainage, and dusty conditions prevailed, with drooping foliage that sent us scurrying for the watering can. But watering dust is a frustrating pastime and besides the moisture angle there was a little matter of nutrition to consider. In such dry conditions, with the obviously over-efficient drainage, I doubted the effectiveness of any liquid preparation.

Now in this garden most appetites are well satisfied with an annual liberal dressing of rotted stable manure, and despite warnings from the pundits concerning dangers of ammonia fumes, I commenced including rhododendrons in the annual mulching programme. I half-expected to see leaf scorching or at least soft growth, but neither occurred, and today a rhododendron is treated as just another shrub where feeding is concerned. All of the manure in use is at least a year old with no trace of smell, and when allowed to dry resembles coal in appearance. The pH of this material is around 6·0 and therefore it is not so acid as peat, but despite the frequent watering during the dry conditions of 1969 summer, when only hard tap-water (pH 7·4) was available, no evidence of chlorosis was observed. For the more scientifically minded, I would

suggest that the rotted stable manure possesses a marked buffering power, sufficient to reduce effectively the pH of hard water.

As our cultural routines progressed, so the collection increased and more sophisticated specimens began to appear. Firstly, *R. impeditum* was joined by its superior form known as 'Moerheim's Variety', which I find a particularly attractive plant. Then, 'Humming Bird', 'Blue Tit' and 'Carmen' were added for hybrid representation, while 'Scarlet Wonder' and *R. forrestii* were awarded pride of place in the planting arrangements. At first the bank plantings included complementary shrubby inmates from other genera, but with the exception of a lithospermum which happens to thrive in this position, all foreigners have now been removed to other venues, mainly due to overcrowding being apparent. With the dwarf rhododendrons annual growth is hardly noticeable, but a quick comparison with photographs taken at planting times presents a different picture. Doubtless in time these rhododendrons will intermingle with one another, but such intimate mixing can often contribute towards the overall floral effect and leaf contrasts may be quite pleasing to the eye.

Our appetites stimulated by the few species among the bank population, we turned away from the hybrids, although I must confess that each season sees us with just one or two more in the garden catalogue—such is the lure of the F.C.C. In the world of species, tree types are always considered undesirable in this garden on the grounds of exposure, but a sheltered spot was found for *R. auriculatum*, if only for its late-flowering properties and while frost regularly turns the bush into something resembling a grotesque candelabra, at least those shrunken leaves collect no appreciable weight of snow. The last-mentioned is a fault of many smaller-leaved species, and removing snow from shrubs is not the most pleasant of garden operations.

Foliage was an important consideration with one selection, that of *R. thomsonii*, where the glaucous leaves are ample compensation for the lack of flowers on our young plant. This subject was installed adjacent to a glaucous form of *Chamaecyparis*, and in time to come I visualise a harmony of blues at this point in the garden.

R. wardii was next to follow, and here a sheltered spot was selected, mainly for flower-protection purposes, but however good the aspect, soil conditions left much to be desired. Here was one of those areas where the underlying rock strata nearly surfaced and the few inches of soil was insufficient even for the surface-rooting properties of the genus. Attempts were made to find a different site, but after several perambulations around the garden, my wife and I returned to the original spot. Pocket planting was the only answer, and a pickaxe was applied to the sandstone. Fortunately the rock was fairly soft and in a short time we had a hole of ample proportions. Good soil was an obvious requirement, but firstly, there was the sponge-like texture of the rock to be considered. Without a fairly impervious lining, the sandstone would act as a wick,

drawing moisture from the soil. A solution was found in fresh cow-dung, pats of which were collected from a friend's grazing land. Mixed with a little water in a bucket, fresh droppings have a cement-like consistency, but with that invaluable acid reaction. This rather obnoxious mixture was smeared on the rock surfaces and planting was concluded in the normal manner. Suffice it to state that during the dry spell of 1969 summer, this plant was not watered, there was no sign of distress and flowers appeared in 1970. Since this experience, we have adopted pocket planting as a standard routine for all rhododendrons and thoughts are now revolving around creating an artificial cow-dung for the purpose!

Interest in the species continued to accelerate until a determined study was commended. Facts were culled from the written experiences of Hooker and others, the *Rhododendron Handbook* became a well-thumbed volume and finally a list of desirables was compiled, with flowering times and ultimate heights as important criteria. Being an exposed garden, the site is hardly suited to very early flowerers and there is a natural restriction upon space if we are to house a fair-sized collection.

Of course, despite any ideas about restrictive practices, there are some species that just cannot escape attention. *R. decorum* and *R. fortunei* may reach ample proportions in time, but the sight of these subjects in bloom elsewhere convinced me of the necessity for making sufficient room. In such cases the plantings are so arranged that adjacent material is of rather low horticultural value and consequently may be pruned in the fullness of time.

Some species have necessitated the provision of special conditions and *R. hippophaeoides* has been settled in a damp situation at the base of a bank. The placing of *R. beanianum* entailed consideration for the foliage, where the leaf undersides present a warm chestnut colour, which will look quite attractive when the plant acquires some stature, that is, providing it is not shielded from view by other plants.

After much thought we decided to separate evergreen and deciduous rhododendrons, the latter being installed in what has become the azalea corner. This is a rather open situation, where the plants appear to thrive quite well, apart from the attentions of rabbits, who appear to fancy an occasional nibble at the growing points. In fact, I have yet to see the beautiful *R. roseum* in flower, such has been the voracity of rabbits' appetites regarding the flower-buds on this particular azalea. While on the subject of deciduous rhododendrons, mention may be made of the late-flowering *R. arborescens*, which although diminutive of flower, perfumes the air at a late time of year. For springtime perfume, *R. luteum* is undoubtedly high on the list and we have introduced several specimens into the garden, siting them usually in close proximity to seats, so that the scent may be enjoyed at leisure.

Like many collections, this one suffers from a few important

omissions, although names do become reality in due course. For some years *R. imperator* was an elusive plant, but finally it arrived and a rather tiny specimen now shoulders the burden of a standard-size label. With *R. ludlowii*, that delightful yellow of the Uniflorum Series, our quest has not been so successful and enquiries are still under way. That too-often-seen tag of "Not Available" at the foot of an order acceptance was really responsible for the excursion into raising rhododendrons from seed, as I found that in some instances seed was readily available.

A thick veil will be resolutely drawn over the first sowing attempt, when no specialised methods were utilised, but the next year produced results and there is now quite a crop of seedlings growing-on. For successful germination, I rate the time of sowing and provision of bottom heat as the most important criteria. Between mid-January and mid-February constitutes my ideal time and the open propagating case is set at 70° F, the temperature being assessed within the peat filling. Seeds are sown on the surface of well-moistened sieved peat in clay pots and the resultant seedlings allowed to grow undisturbed until sufficiently large to handle with forceps, before being planted individually into square-section peat pots.

For potting compost I am currently using one part J.I. calcium-free mix and one part chopped rotted bracken, but equal growth results have been obtained with a mixture of fine sand and the bracken (1 : 1). In these days when leafmould is a scarce commodity, bracken would seem to offer a satisfactory alternative. Landowners are often only too happy to allow someone to cut bracken and I have a satisfactory arrangement whereby the cut material is left stacked until rotted, when I collect it in easily handled parcels. Moisture retention power of this material would appear to equal that of peat and the pH is around 4·0. For the reassurance of readers I must state that I have yet to encounter a young bracken plant among my pots!

Naturally not all seedlings will be true to type, much of the seed being obtained from plants that were not isolated at pollination time. However, differences appear to be marginal at this stage, being confined mainly to *R. spiciferum*, where the plants present varied degrees of pubescence, and one specimen of *R. carolinianum*, which possesses leaves of a very pronounced reddish hue. As the plants mature, variations may tend to disappear, but I rather hope not, such differences only adding to the interest of growing from seed.

Apart from young rhododendrons, the greenhouse also contains seedlings of the *Sorbus* genus (Mountain Ash Section), which I consider to be excellent trees for the production of dappled shade. Among several suitable species, *S. scalaris* and *S. vilmorinii* may be mentioned as good subjects for the smaller garden.

Remembering earlier words about two acres, some readers may question my conception of the small garden in this age of shrinking plots, but much of my ground is in paddock state for ease of maintenance and

consequently the area under cultivation is considerably less. In fact, space is running out fast and the day will soon come along when we must either cull or say, "Enough". Hybridisation beckons, but any aspirations aimed at producing that perfect dwarf yellow must be tempered by the knowledge that the process might well involve the growing of many plants to flowering size.

When commencing these notes, I was tempted by the idea of a descriptive walk around the plantings, but impressions would have been clouded by all the other features that go to make a general-purpose garden. Instead, I have taken a very rough chronological order as my guide, spanning about five years, during which time I can honestly state that the rhododendron has given far greater joy and satisfaction than any other plant.

Photo: Ernest Crowson

Fig. 36—*Rhododendron racemosum* 'Rock Rose', A.M., April 28, 1970 when shown by Hydon Nurseries (see p. 184).

NOTES ON RHODODENDRONS IN WESTMORLAND

By MICHAEL BLACK

IT is remarkable that rhododendrons are not grown in greater specific variety in that part of Westmorland which contributes to the Lake District proper. Farrer, in his *Alpines and Bog Plants* describes the climate at the north end of Windermere as being "Misty, steaming, and Himalaya-like", while Kingdon-Ward in his *Rhododendrons for Everyone* includes the Lake District with the Western Highlands, North Wales, and Cornwall, as an area in which they would probably thrive best. Both were certainly correct, though these days Windermere has less steam and more petrol fumes. I recall vividly, peering beneath the dripping brim of my hat across a valley swirling with mist and rain in Eastern Asia, and feeling very much at home. The influence of the Gulf Stream in the Central Lake District is slight, but nevertheless perceptible, and it is possible to flower such hybrids as 'Princess Alice' (the Muncaster form appears to be the hardiest) and 'Lady Alice Fitzwilliam', outdoors, three years out of five. Most gardens have a peaty loam overlying gravel and rock giving optimum drainage, and with a rainfall around the 100 inch mark it is possible to grow rhododendrons in isolated holes without the necessity of making large beds.

Among the earliest rhododendrons planted in the county are those at High Close, a National Trust property lying between Grasmere and Langdale. Here may be seen a fair selection of the earlier hybrids of *R. arboreum*, and a number of the currently fashionable "blotched" hardy hybrids. The main plantings were made prior to 1914. Among these are several varieties of *R. arboreum* over 30 feet high, grown from R.H.S. seed sown in 1911. Until seven years ago there was a fine deep-yellow, late flowering *R. falconeri* grown from the same source, but it suddenly collapsed and died, one suspects from honey fungus which is rampant in the district. Two other *falconeri*'s—planted less than two yards apart—form an impressive 40-foot mass of foliage in the woods at Under-Helm, Grasmere, and these were almost certainly a gift from Mr. Jones-Balme of High Close. He planted several plants of *R. fulgens* at High Close, but like many other things these are somewhat inevitably becoming overgrown. One of them toppled over when it reached six feet, and I have found with small plants in my garden that the species tends to be unstable at the root. While few of the High Close plants are in any sense individually spectacular, the enormous conifers and the largest *Pieris formosa* I know contribute to make the place worth a visit.

At Skelwith Fold, outside Ambleside on the Hawkshead road, and now perverted into a caravan site, other rhododendrons and interesting trees were planted at the turn of the century, many of which survive. There is an interesting, obviously high altitude variety of *R. arboreum* which came from Tremough, along with *R. cinnabarinum* in 1901. When the garden was still kept, its layout and plants showed strongly the influence of Cornish gardens and gardeners.

Little else was planted until the thirties, when Mrs. Hedley made the garden at Briary Close above Windermere. Here, in a superb setting, rhododendrons were planted with greater regard to their future space requirements than in any other garden I know. Among the first plants one meets along the rhododendron walk is an impressive *R. falconeri*, 24 feet high and clothed to the ground with a 30-foot spread. Its foliage is superb, but its flower colour rather pallid. Higher up the wood is a group of three *R. arizelum*, and it seems a pity that more large leaved species were not planted as they thrive so well in the area. Twelve years ago I began planting a selection of the Falconeri and Grande Series in Grasmere, and in a further twelve they promise to be the best things in the garden. With our climate it should be possible to make the place look and feel like Upper Burma. Perhaps the finest plant at Briary Close is one of Kingdon-Ward's *fictolacteum*'s 40 feet high with 14–16 flowered trusses of purest white boldly blotched and spotted. A Wilson *fictolacteum* higher up the wood has not nearly the quality, though still in itself an attractive enough foliage plant. It has been planted adjacent to a 15-foot *R. fulvum* which detracts from its more obvious charms. Attractive foliage-wise is a small grove of *R. flavorufum*—the indumentum is worth looking at—each plant about 12 feet tall. One often feels that foliage quality in gardens leaves something to be desired, but at Briary Close it is excellent.

There are perhaps not so many species in the garden as one would expect, but the following are represented by good varieties: *R. thompsonii*, *R. wardii*, *R. campylocarpum* var. *elatum*, *R. caloxanthum*, *R. cinnabarinum*, *R. didymum*, and *R. auriculatum*. The latter appears to be peculiarly at home in the area, and although the plants have not been "dead-headed" for many a year they continue to flower well. The hybrids 'Aladdin' and 'Angelo' perform equally satisfactorily. Hybrids are more extensively planted. Some of the older ones are represented by such as 'Edmondi' and 'Luscombe's Scarlet' 35 feet high. The Azaleodendron 'Glory of Littleworth' flowers well here, yet not ten miles distant I have been unable to persuade it to flower at all. *R.* 'Loderi King George' is represented by a plant 30 feet high with a 40-foot spread, with the variety 'Venus' only slightly less. 'Cornish Cross' is 30 feet high. An interesting floriferous hybrid with good foliage is 'Cheronia', an offspring of *R. orbiculare*. There are a couple of Knaphill hybrids labelled G.465 and G.14 which flower in cerise shades every couple of years or so, though I have yet to see them flowering profusely

enough to be outstanding. The best yellow hybrid is 'Damaris', a hardy hybrid type plant worthy of growing more widely in colder areas. One would imagine that at the other end of the temperature scale it would give a good account of itself in the Dandenongs near Melbourne.

At White Craggs outside Ambleside there are several interesting rhododendrons. The splendid setting of this fine rock garden is all the more interesting on account of its close associations with Farrer. Although it could not yet be described as a garden for the rhododendron enthusiast, those plants there are, are good, not the least among them the best variety of *R. litiense* I know. Also near Ambleside is the Stagshaw garden. In very few years its well planned layout will show to great advantage.

In Grasmere, species from Malaya, Java, New Guinea, Borneo and *R. subsessile* from the Philippines are thriving under cool greenhouse conditions. *R. malayanum* has flowered and produced ripe seed in three months. Some seedlings of *R. jasmini-florum* appear particularly vigorous, as do those of *R. pauciflorum* which has flowered sparsely here and at Sandling Park and Sunte House. *R. javanicum* var. *teysmannii* from the Cameron Highlands in Malaya does not grow so vigorously as the var. *javanicum* I collected in Java from Gedeh. There appears also to be a much greater foliage variation among seedlings of the latter. *Primula imperialis* with its 3–4-foot candelabroid orange flower spikes grows well among these cool-house rhododendrons, and there appears no reason why an even more colourful race of hybrids should not be bred from it which would probably be hardy. We have had *R. macgregoriae* in flower now for the past eighteen months, and fertile seed is produced as a result of fertilisation by bees. The tallest plants are now 7–8 feet high, but the species stands pruning well and can be cut back almost to ground level—a drastic cosmetic operation which is invariably successful in improving the habit. Some pretty varieties of *R. gracilentum* have flowered from the palest pink to blood-red. I have crossed this with the old Veitch hybrid 'Taylori' in the hope of obtaining a dwarf plant with drooping white tubular flowers with pink corolla lobes. *R. beyerinckianum* has been in flower under one or another number for the last twelve months, but this species is very much an acquired taste as far as its somewhat muddy yellow-pink flowers are concerned. Its foliage is however tremendously attractive on the bush, and holds the cinnamon indumentum of its young growth for at least a year. It is desirable, one feels, to introduce into cultivation species such as this which give variety to collections such as some of those in Australia and the U.S.A. which are largely based upon the Veitchian hybrids, *R. javanicum*, *R. macgregoriae*, and *R. lochae*—all of orthodox foliage character. *R. superbum* from the Fatima River has also atypical foliage, and I have high hopes that in addition plants from this collection will produce outstanding flowers.

THE GROUPING OF RHODODENDRONS*

for small and medium-sized gardens

Part III

By DAVID WRIGHT, M.A.

Stronger Pinks, including 'Old Rose', Pinks with undertones of Purple or Mauve, 'Plum Shades' and Purples

WITH the possible exception of the reds and apricots, this will be the smallest planting to be considered in a brief survey of rhododendron combinations for small to medium-sized gardens which are not specially favoured climatically; on the other hand, many rhododendrons come into these colour categories.

Used to excess, this range of colours can be just as jarring on the eye and as inappropriate to the English scene as the hot oranges and scarlets. The group would be built up on the same principles as the other colour groups, namely with one or two large or tree-like rhododendrons (say 10–15 feet high) with fairly substantial leaves, a slightly larger number (say 6–9 plants) of medium sized, smaller-leafed shrubs of the dimensions and texture to be found in the useful Triflorum Series, and finally, in a foreground position, a still larger group (12–18 plants) of dwarf or semi-dwarf shrublets.

If the group were only to be seen from one angle, the large plants would be sited at the back; if, on the other hand, the group were an island to be walked round, they would be at or near the centre. (This remark applies of course to all such plantations.)

Two of the hardiest of all the large or tree-like species come into the present colour category, namely *R. campanulatum* and *R. fulvum*. *R. campanulatum* is a large spreading bush with glossy dark-green oval leaves, undercovered by a thin fawn or brown indumentum. The flowers, in loose trusses, are funnel-shaped and vary from paler to deeper rose-pink, and from pale lilac to lilac-purple. They are usually spotted darker in the throat. *R. campanulatum* var. *aeruginosum* has wonderful metallic blue-green foliage in the younger stages.

R. fulvum is usually more erect and tree-like and probably even more hardy than *R. campanulatum*, at least as regards wind. It has tough leathery drooping dark green leaves with a thick woolly cinnamon indumentum beneath, in which respect the foliage is among the

* Being the third part of a paper of which the first two parts appeared in the *Rhododendron and Camellia Year Books*—1964 and 1965.

most striking of all rhododendrons. Moreover, *R. fulvum* can give the average lime-free garden, *not* especially sheltered from wind or frost, something of the substance and dignity that the really large-leafed species (e.g. *auriculatum, calophytum, falconeri, ficto-lacteum* and above all *macabeanum* and *sinogrande*) lend to very sheltered and nearly frost-free woodland sites.

The substance of this plantation, however, would be the light and airy Triflorum type of rhododendron, such as *R. davidsonianum*, one of the hardiest of all medium-sized species (a plant I once had, exposed to many weeks of north-east and north-west winds every year, never lost a flower-bud) with small bright olive-green leaves and mauve-pink or clear pink flowers, usually spotted with red; and *R. oreotrephes*, a much more attractive but also less completely hardy plant with sage-coloured waxy-textured leaves, very glaucous in the early stages and warm lilac-coloured flowers, often with an undertone of pink. *R. exquisitum* is a very close relative and very like *R. oreotrephes*, but its flowers are invariably an uncommon and subtle greyish mauve.

In one of my former gardens, the neighbouring of *R. oreotrephes* (a plant that is far from easy to blend with the great majority of the rhododendrons) by a group of the Tree-heath *Erica mediterranea superba*, proved extremely satisfying. *Camellia* 'Donation' which has flowers of a difficult, if not positively harsh, colour were near-by and looked quite pleasing in this context.

Another member of the Triflorum Series, *R. pseudoyanthinum*, has been rightly commended for its iron-hardiness, but personally I would never want that hot beetroot-magneta in my garden, even if I could have no other rhododendron!

A half-shady spot, well sheltered from north winds and early morning sun would call for a plant or two of the beautiful *R.* (*azalea*) *albrechtii*, one of the most striking of all deciduous shrubs that flower on the naked wood. It is like a smaller version of *R.* (*azalea*) *schlippenbachii*, but with flowers of deep rose or rose-madder, followed by lovely pale moss-green leaves. These would make a striking contrast to the greyish-green foliage of *R. exquisitum* and *R. oreotrephes*, the olive-green leaves of *R. davidsonianum* and the black-green of *R. campanulatum* and *R. fulvum*. *R. albrechtii* flowers at the end of April and would blend with *R. exquisitum* or *R. oreotrephes* (thus taking the place of the less interesting camellias), although it would probably be fading when the latter were at their best. This could be partly overcome by planting *R. albrechtii* in a fair degree of shade to prolong its flowering, and the other two more in the sun to forward their season.

In the neighbourhood of *R. exquisitum* and *R. oreotrephes* and of *Erica mediterranea*, and preferably on their sunny side, there could be a group or groups of alpine rhododendrons, ranging in colour from "old rose" through purplish-pink and plum-shades to deep purple.

I would place near together *R. glaucophyllum*, with intensely aro-

matic leaves, grey-white beneath, and very waxy little bells of rose-pink or pinkish purple, and its near relative, *R. tsangpoense* with flowers of slatey-plum-purple and an appropriate waxy bloom on the petals. In my Surrey garden, I had an excellent hybrid, *R.* 'Arden Belle'* (*R. glaucophyllum* × *R.* 'Rosy Bell'), which has the hardiness of the former and the more bell-shaped larger flowers of the latter. It also has lovely smooth mahogany stems inherited from *R. ciliatum*, which is one parent of 'Rosy Bell'. Its leaves are much more substantial and shapely than those of *R. glaucophyllum*.

One is tempted to include *R. calostrotum* here on account of its striking silver-grey leaves, but in all its forms, the pansy-like flowers tend to run too much to magenta for my liking.†

A few feet away from *R. glaucophyllum*, *tsangpoense* and 'Arden Belle', and also in a foreground position, there could be a group of lapponicums with purple, as distinct from lavender-blue or violet-blue, flowers. The first choice for this kind would undoubtedly be the 3–4 feet *R. russatum* (syn. *cantabile*), at least in one of its true purple or reddish-purple forms (it *can* approach *R. scintillans* in colour). It flowers at the end of April, at the same time as *R. impeditum* (again this can be rosy-purple at one extreme, or light blue-violet at the other, and the latter forms should be avoided for this particular scheme) which makes the neatest hummocks of *all* alpine rhododendrons, with the possible exception of *R. microleucum* and *R. sargentianum*. The tiny thyme-like leaves are steely-blue-grey-green and aromatic. They make a lovely foil for the purple flowers, and an interesting contrast to the larger rusty-olive coloured leaves of *R. russatum*. Nearer to the latter in leaf, but much dwarfer (1–2 feet high), and not flowering until May, is *R. rupicola*, a much neglected but excellent alpine rhododendron. The rusty green leaves go beautifully with the plum-crimson flowers.

Last, but by no means least, every plantation of rhododendrons in this colour section should find a place for one or more of *R. campylogynum*—perhaps the most interesting and attractive of all the very dwarf rhododendrons. Its flowers, ranging from an almost salmon-pink through crushed-strawberry, through purple with a bluish bloom to an almost black purple (to quote Cox and Cox in *Modern Rhododendrons*), are unique among rhododendron flowers. They resemble tiny thimbles, nodding in threes and from thread-like pedicels and are waxy in texture, coated with a misty bloom. (The form sold by Messrs. Hillier as 'Pink Form' is perhaps the loveliest.) *R. campylogynum* makes a spreading mass of tiny polished dark green leaves. It should certainly be

* *R.* 'Arden Belle' was raised by Mr. T. Thacker, Nurseryman of Knowle, Warwickshire.

† For the same reason, I prefer to omit *R. dauricum* and *R. mucronulatum*, also *R.* × *praecox* (*R. ciliatum* × *R. dauricum*), quite apart from the fact that flowering, as they do, between January and March, their flowers are cut by frost four years out of five.

grouped where space permits, raised if possible a foot or two above ground-level to facilitate close inspection of its subtle beauties and nestling perhaps against the west side of sandstone outcrops.

One or Two Shrubs, Herbaceous Plants and Bulbs that could associate with Pink, Mauve and Purple Rhododendrons

A single bush of *Magnolia soulangeana*, 'Lennei' with its strikingly large glossy leaves and great globular rosy-purple flowers, would make a wonderful foil or background for such rhododendrons as *davidsonianum exquisitum* and *oreotrephes*. It would also look good behind groups of *Erica mediterranea*.

The much dwarfer and shrubbier *M. liliflora* 'Nigra' could perform a similar function in a smaller garden with the added advantage that it continues to flower on and off during the summer; or both could be used.

The ideal deciduous shrub, however, to associate with this group of rhododendrons would be the exquisite but rarely planted *Menziesia ciliicalyx lasiophylla* which belongs to the same natural order, Ericaceae. Its pendulous pitcher-shaped flowers recall a larger Daboecia (Irish heath), but are slatey-purple or purple-pink, greenish at the base, carrying a misty bloom. The pale green hairy leaves are formed in whorls at the end of the branches, and the habit of growth resembles the deciduous azaleas, clethras and enkianthus. *Menziesia purpurea* flowers a little later, at the end of May and into June, and has reddish-purple flowers. Both species grow between two and three feet high and so would be suitable for placing between a medium-sized rhododendron like *oreotrephes* and a dwarf one like *glaucophyllum*.

The vinous colour forms of the Lenten Hellebores (hybrids of very mixed origin involving several species besides *H. orientalis*, although they are frequently referred to as orientalis hybrids) could be grouped at the base of the early flowering (March to April) *R. fulvum* and I have seen this effectively done at Dartington Hall in Devon.

Flowering at the same time, there could be drifts of the lavender-pink form of *Primula vulgaris** among rhododendrons *davidsonianum*, *exquisitum* and *oreotrephes*. A wine-crimson primrose, *P. x pruhoniciana* 'Betty Green', could nestle in the shade of *R. russatum* or *tsangpoense*. The petiolarid primula, *P. gracilipes* (much the easiest to grow of its section, in the experience of several people gardening in the south of England) is, however, far more refined than either of the forementioned primulas. It will grow quite easily on the flat or a slight slope, either in the shade of a large shrub or at the base of a tree-bole, as at the Savill Garden. Its flowers are a soft lilac-pink with a greeny-yellow eye, and the toothed moss-green leaves are farinose as they unfurl.

Intermingled with these primulas, one could plant *Viola labradorica*,

* *P. vulgaris* subsp. *sibthorpii*.

used effectively in the Peat Garden at Savill Garden. Its mauve-purple flowers are admirably complemented by its leaden-purple foliage.

When the primulas, hellebores and violas have gone over, they could be followed in May by a plant or two of *Paeonia woodwardii veitchii*, with carmine or purplish-pink cup-shaped flowers the size of Lenten hellebores and finely cut bronze-green foliage.

In a foreground position, to punctuate groups of dwarf rhododendrons, one might plant clumps of the lime-hating North American irises—*I. douglasiana* and *I. tenax*, pale lavender to lavender-purple (the latter can also be pale yellow or white, so the colour must be checked before planting). These two irises form tufts of stiff, grassy-looking foliage, and so would make interesting foils to the mounds of dwarf rhododendrons.

As for bulbs, there should be generous drifts and scatterings of the common dog's tooth violet, *Erythronium dens-canis*, with its rose-pink or purplish-pink bells and marbled leaves, followed by the various forms of our native snakeshead, *Fritillaria meleagris*. The dusky checkered flowers of the latter, especially varieties 'Artemis' (greyish-purple), 'Charon' (very dark purple) and 'Saturnus' (pinkish purple) would tone admirably with such rhododendrons as *glaucophyllum* and *tsangpoense*, *oreotrephes* and *exquisitum*, *russatum* and *rupicola*.

Finally, to extend the floral season of this plantation into June or even later, drift a few common martagon lilies among the taller rhododendrons. Their pinkish-mauve or pinkish-purple flowers are by no means despicable, even if modest by comparison with those of many other lilies, and are in any case elegant in shape and arrangement. *Lilium martagon* vars. *cattaniae* and *dalmaticum* are blackish-maroon purple and could be added sparingly for contrast with the type plant.

KENRON PARK, AN INTERESTING GARDEN AT FERNY CREEK, MT. DANDENONG, AUSTRALIA

By A. W. HEADLAM

MR. and Mrs. Charles Carlsson have created a garden of considerable beauty in which *Rhododendron* species and hybrids and azaleas are grown in the shade of eucalypts, blackwoods (*Acacia melanoxylon*) and a very comprehensive collection of deciduous trees from many different parts of the world.

The entrance, from the rather narrow Breen's Terrace, is through a pair of wrought-iron gates, and the even narrower curving drive, planted on both sides with silver birches interspersed with camellias and rhododendrons, leads down to the house.

The garden, which could be aptly described as a woodland garden, covers an area of three acres on a rather steep spur of the Dandenong Ranges; in fact, the slopes are so steep that the garden in many places has been terraced, and on walking along the winding narrow paths new vistas are continually unfolding.

The altitude of 1,500 feet and the rich acid volcanic soil, more friable than in most other parts of the Dandenongs, improved each year by a thick carpet of leaves from the many deciduous trees, combined with a rainfall of 50 inches, make it particularly suitable for the growing of rhododendrons and their allied species.

Frosts and an occasional fall of snow are not severe enough to cause any appreciable damage; summer is the most trying time, when rising temperatures and drying winds can become a problem; however, these difficulties have been alleviated by shade provided by the eucalypts and many deciduous trees planted throughout the garden, and during times of prolonged heat additional assistance is provided by water pumped from a small stream in a fern gully lower down the valley.

From a glassed-in sun room adjoining the house there are some very fine views of the garden, and on a clear day the city of Melbourne may be seen in the distance; it makes an intriguing sight in the evening as the myriads of lights appear.

A door leads out to a sun deck, the railings of which are covered by a *Lapageria rosea*; it is growing beside the house amongst a bed of hydrangeas which completely protect its roots from the sun, and as a reward for its siting in such ideal conditions, it produces a profusion of tubular wax-like rose pink flowers each year, and growing alongside it, is the rarely seen white form, *Lapageria* var. *alba*, whose glistening

white tubular flowers stand out against the dark green foliage. It is generally considered that the white form is not as vigorous as the pink, but there appears little difference between them at Kenron Park.

Leading from the drive, a path winds sharply downwards beneath the spreading branches of a linden tree, and here are a group of rhododendrons, 'Mrs. R. Gill' and 'J. H. Gill' with trusses of pleasing shades of pink, 'President Roosevelt' with its attractive variegated foliage and striking white flowers, boldly margined red, and reaching high above both, 'Gill's Triumph', with its rather long narrow leaves and large loose trusses of strawberry red, which later fade to a deep pink.

The path then follows the southern boundary, winding rather steeply down the hill. In this area have been planted a large number of rhododendrons, mainly in the white, lemon and yellow tonings, and many in groups of three, *R. nuttallii* looking particularly attractive with its large bullate leaves and trumpet shaped creamy white fragrant flowers, borne in trusses of five, six and occasionally seven; then the *R. campylocarpum* hybrids, 'Letty Edwards' and Mrs. W. C. Slocock', followed by 'Idealist' and *R. leucaspis*, and a fine specimen of *R. grande*, with large leaves and trusses of creamy white flowers, showing some red at the base, all appreciating the shelter they receive from the north winds by a line of Nothofagus trees.

Other rhododendrons in this area are 'Mrs. Betty Robertson', 'China' and 'Day Dream', followed by 'Elsae', *R. macabeanum*, *R. johnstoneanum*, 'Biskra', 'Eldorado' and 'Yellow Hammer' (Fig. 37).

Photo: A. W. Headlam

Fig. 37—Rhododendron 'Yellow Hammer' at Kenron Park.

All have been interplanted with lemon and yellow mollis azaleas, and on the opposite side of the path under the Nothofagus are groups of *R. williamsianum* and its hybrids 'Temple Belle' and 'Bow Bells'. Throughout this area are groups of plantings of 'Blue Diamond', which make a pleasing colour combination with the creams and yellows, as does a large plant of 'Blue Peter' at the end of the line.

As a contrast, there are under a blackwood tree nearby, several plants of 'Britannia' and *R. eriogynum*, whose flowers flash brilliantly as the afternoon sun shines through the branches.

The path again turns, and one stands entranced by a group of species, *R. sinogrande*, *fictolacteum*, *hodgsonii*, *rex* and *eximium*, the latter with its beautiful large leaves covered below with a cinnamon coloured indumentum, while the bronze young shoots and foliage of this species are attractively covered with a rust coloured tomentum, and shaded by the surrounding trees, the colour persists well into the winter.

In 1966 *R. sinogrande* flowered, probably the first time for this species in Australia. The parent plant, imported by Bert Chandler & Son, from Hillier and Sons, Winchester, in 1955, has not yet flowered.

Mr. Carlsson's plant is one raised from a cutting, and the seven trusses with some fourteen florets each, were clear yellow with a crimson blotch inside the corolla.

In this area is a large plant of 'Loderi King George' which makes a fine display in mid-season, particularly when the enormous trusses of blush white flowers are complemented by the many large erect buds with unopened florets of a pleasing shade of pink.

Nearby is a well clothed plant of 'Loderi Pink Diamond', but to date it has been somewhat shy in flowering, and 'Coronation Day' ('Loderi' × 'Pink Shell') with its enormous trusses of soft pink, is quite sensitive to sun and wind, but ideally sited at Kenron Park, usually manages to provide a perfect truss for The Australian Rhododendron Society's Annual Show, and is greatly admired by visitors.

'Gill's Gloriosa' is another rhododendron which produces very large trusses of delicate shade of pink, and like 'Coronation Day', care must be given to its siting to protect it from the elements.

Many dwarf and smaller growing rhododendrons have been grouped in various parts of the garden, in corners and along rock walls, and as a border in front of larger growing rhododendrons, 'Humming Bird', 'Bric-à-Brac', 'Racil', 'Cilpinense', and *R. russatum*, *trichostomum* var. *ledoides*, *pemakoense*, *tephropeplum*, *planetum* and *glaucophyllum* to mention a few, and along the rock walls, *Lithospermum* 'Heavenly Blue' trails gracefully over the edges, and *Daphne cneorum*, *Aethionema* 'Warley Rose' and many rock plants may be seen; a careful search along the rock walls and borders reveals crocus, colchicum, *Veronica prostrata*, gentians, miniature iris and many other interesting plants.

As the peak of the flowering season is reached in October, it becomes increasingly difficult to know which rhododendrons to comment on;

producing a catalogue would solve many problems, however, a few which cannot be passed by are 'Carita', 'Kew Pearl' and an attractive group of 'Margaret Dunn'.

Another pleasing corner, well sheltered by several blackwoods has been planted with *R. ciliicalyx*, *veitchianum* and *bullatum*, the latter with attractive bullate dark green leaves and trusses of white funnel shaped flowers with attractive pink markings, and in much brighter vein near the house is a very large plant of 'Goldsworth Crimson', which is a most prolific flowerer, and glows in the sunlight in vivid contrast to a group of 'White Pearl' nearby.

Some other outstanding reds are 'Elizabeth', 'Barclayi Robert Fox' and 'Earl of Athlone'.

Having completed a full circle, we are now back at the house, and a path leads under the spreading branches of a tulip tree (*Liriodendron tulipifera*). Here have been planted a group of rhododendrons in the lavender shadings, 'Anica Bricogne', 'Blue Peter' and 'Commandeur', the colours harmonising pleasantly against a background made by a fine specimen of *Abies pinsapo glauca*, some 50 feet high, under the branches of which a crop of seedlings spring up in the ground each year.

The frontage to Breen's Terrace, some 400 feet in length, has been planted at intervals with maples, *Acer palmatum*, *A. japonicum*, *A. saccharum*, *A. palmatum* 'Dissectum', *A. davidii* and *A. palmatum* 'Osakasuki', and a walk along the terrace on a crisp autumn morning with the sun glinting on the brilliantly coloured foliage is a sight not easily forgotten.

Between the maples and the house are silver birches, *Disanthus cercidifolius*, *Hydrangea quercifolia* and more rhododendrons and mollis azaleas; these are separated from the house by a flagged path which leads under the branches of a pin oak (*Q. palustris*) to another area of the garden which contains many deciduous trees, golden ash, (*Fraxinus excelsior* 'Aurea'), and a number of the Cornus family, *Cornus florida rubra*, *C. kousa*, *capitata*, and *nuttallii*, which produce some fine colouring, and 'Crimson King' maple, whose large purple-crimson leaves are seen to advantage against a blue sky.

Along another path, one catches a glimpse of *Nyssa sylvatica*, pyramidal in shape and brilliant in colour before leaf fall. It stands in the centre of a circular bed around the perimeter of which has been planted kurume azaleas. The smoke tree (*Cotinus coggygria*) is attractive for its flowers in summer, and later for its rich autumn colour, and Pistacia, a small deciduous tree from the Levant is another valuable asset; it belongs to the same family as *Rhus*, but its colouring cannot quite match that of *Rhus succedanea*, which does so well in the Dandenongs. Finally, *Enkianthus campanulatus*, a shrub of Japanese origin, attractive for its bell-shaped flowers which hang in clusters from

the ends of twigs, and in the autumn the finely toothed leaves turn a brilliant red.

It is difficult to try and choose a best from such a profusion of colour—*Nyssa sylvatica* is near the top of the list, but one is drawn to *Oxydendrum arboreum*, a small tree of American origin, whose brilliant scarlet leaves are set off to advantage by racemes of white flowers. The point which tip the scales in favour is the way in which leaves persist well into the autumn.

Two attractive shrubs which are particularly valuable for floral decoration are *Corylus* 'Contorta', with its curiously twisted branches and lemon yellow catkins, and *Garrya elliptica*, which grows well in the Dandenongs, and in winter also produces masses of pendulous catkins, soft grey in colour, and often up to twelve inches in length.

Prunus serrulata provide some good autumn colour, but the flowers are rarely seen at their best in the Dandenongs owing to the depredations of the numerous brightly coloured parrots, which congregate in the trees and eat the flowers as soon as they show colour, and later, with the help of Currawongs and other hungry birds, play havoc with the fruits and berries of other trees and shrubs, which are devoured as soon as, and sometimes before they have an opportunity to ripen.

Bell birds (*Manorina melanophrys*), which belong to the honey eater family, live in colonies, sometimes in hundreds, and their cry, a bell like "tink" is repeated every few seconds. They are rarely seen as their yellow-green plumage blends with the foliage of the eucalypts amongst which they usually feed; they show a preference for a locality near creeks and streams, and it is rare to visit the Dandenongs without hearing their attractive call.

These, with another small and energetic bird, the silver eye (*Zosterops halmaturina*), with olive green plumage and a conspicuous ring of white feathers around each eye, are very useful for the destruction of small insects; the silver eye, however, has no objection to being seen, and its somewhat plaintive cry may be heard as it energetically devours aphids and other insects in the garden.

There are many other small birds, rufous fantails and red and yellow breasted robins, to mention a few, which are useful for the destruction of insects and other pests. In the camellia flowering season, honeyeaters appear as soon as the flowers begin to open, and some flowers are damaged in their search for nectar; however, the damage they do is probably far more than outweighed by the insects they destroy.

A small glasshouse with a heated bench and horticultural fluorescent lamps is Mr. Carlsson's means of increasing his plants, and many of the species which he has raised from seed have been donated to the Australian Rhododendron Society for planting in their ever expanding garden at Olinda.

An area on the western slopes of the garden containing many species,

some up to six feet high and as much across, was unfortunately severely damaged by bushfires a few years ago.

Starting in the foothills, they swept up the mountain and through the species, fortunately not reaching the house or the main area of the garden.

Only a number of blackened and charred skeletons remained, and these were sawn off some six inches from the ground and left for an opportune time to dig out the stumps; fortunately this was delayed, and in the following spring many of these rhododendrons started to send out shoots from the base, and nearly all regenerated in this manner. Looking at the charred, defoliated and blackened skeletons after the fire, one would have thought that this was the end, but rhododendrons must have far greater powers of recovery than one would have anticipated.

Amongst those which recovered were *R. arboreum* subsp. *campbelliae* (Fig. 38), *houlstonii*, *fulvum*, *vernicosum*, *yunnanense* and *arboreum*, whilst *R. cinnabarinum* and *diaprepes* were amongst those which could just not get started again.

Many of the paths cut along the steep slopes which have been edged with rocks gathered from the garden, and along the edges have been planted with kurume azaleas, the colours graduating from white, pink and deep pink to red and scarlet; Kenron Park is one of the few gardens in the Dandenongs in which one may see the complete Wilson's fifty.

Mr. and Mrs. Carlsson, who are most enthusiastic gardeners, have in their twenty-seven years at Kenron Park, made it into one of the most

Photo: A. W. Headlam

Fig. 38—Regeneration of *Rhododendron arboreum* ssp. *campbelliae* after bush fires at Kenron Park.

interesting gardens in the Dandenongs—they always seem to find time, and derive a great deal of pleasure in accompanying friends around the garden, and on the many visits by my wife and I when making notes and taking photographs, seemed to have an uncanny habit of choosing a path leading back to the house in mid-afternoon, when Mrs. Carlsson would produce a delicious afternoon tea of home-made scones, strawberry jam and cream.

Thus refreshed, another walk around the garden would follow, this time in another direction leading to the lower slopes and a shade house, where young rhododendrons are hardened off before planting in the garden.

In a nearby area are plants of *R. arboreum* and *R. arboreum cinnamomeum*; the latter is a pleasing pyramidal shape, and as the wind rustles the leaves, the rusty brown indumentum is attractively displayed, and some of the *R. arboreum* hybrids 'Cornubia', 'Red Admiral', 'Pink Delight' and a locally raised cross 'Lamplighter' × *R. arboreum*, whilst further along a winding path is a fine specimen of 'Ernest Gill', which is quite outstanding, in fact, all of the Gill family are worthy of a place in any garden.

On one of the slopes is a specimen of 'Cornubia' worked as a standard, which by judicious pruning and careful selection of flowers for cutting, has been maintained in an attractive shape, and in the shelter of the eucalypts and blackwoods, a cross *R. grande* × 'Cornubia', which flowered for the first time this year, producing two trusses each carrying twenty-six florets, coloured deep rose-pink.

As the season progresses, some of the later flowering rhododendrons make their appearance, 'Betty Wormald', 'Annie Endtz', 'John Walter' and 'Alarm'. These are followed by 'Tally Ho', *R. griersonianum* and 'Rodeo' and in mid-December, *R. discolor* makes a fine display by showing its profusion of flowers attractively against the dark green foliage of the surrounding trees (Fig. 39); in fact, it is not unusual to see a few rhododendrons flowering on Christmas Day, which shows that with careful siting and the ideal climatic conditions of the Dandenongs, the rhododendron flowering season can be extended over six months of the year.

Every visit to Kenron Park brings to light something of interest, something not seen before, and there is hardly a month of the year in which flowers, foliage or fruits and berries do not provide a topic of conversation. Many varieties of lilies are grown, and these produce a wealth of flowers in the summer months, and as autumn approaches, brightly coloured fungi may be seen in the garden, particularly under the coniferous trees.

The question, which is your favourite rhododendron, often results in a number of rhododendrons being named, without coming to any definite conclusion, but when this question was put to Mr. and Mrs. Carlsson, without hesitation, and almost simultaneously, the answer

Photo: A. W. Headlam
Fig. 39—
Rhododendron discolor at
Kenron Park.

was *R. nuttallii*, and after having seen the numerous plants with their profusion of flowers this season, my wife and I are in complete accord with their choice.

It is generally accepted that gardening is a healthy and satisfying occupation, and that many gardeners live to a ripe old age. A visit to Kenron Park leaves one in no doubt, the magnificent garden, the terracing and rock walls, the flagged paths and the general layout, all the work of Mr. and Mrs. Carlsson who recently celebrated their golden wedding anniversary.

Many people at this stage would be content to rest on their laurels, but the Carlssons, never.

They are continually reorganising, replanting and planning for the future, still making crosses and raising rhododendrons from seed, and looking forward with keen anticipation to what the results will be, one way of ensuring, without doubt, that they will in due course, celebrate their diamond wedding anniversary.

MALESIAN RHODODENDRONS—RESISTANCE TO COLD IN MELBOURNE, AUSTRALIA

By A. W. HEADLAM

I WROTE in the *1969 Year Book* on the resistance of Malesian rhododendrons to heat in Australia, and in a general description of the genus in the *1968 Year Book* mentioned that Melbourne's climate was relatively mild, and winter temperatures rarely fell below 32° F, which has in the main proved to be a fair assessment of the situation. But as in most parts of the world, occasional extreme weather conditions can and do occur, often unexpectedly and sometimes with quite devastating results.

Good late autumn rains with mild weather prolonged the 1969 growing season, not only of the Malesians, which are inclined to produce growth for most of the year in any case, but of many other trees and shrubs, and in mid-June, our first month of winter, three very severe frosts occurred (severe, that is, for this part of the world), registering at the Bureau of Meteorology in the city of Melbourne, 30·5°, 31·3°, and 33·9° F, for the 16, 17 and 18 of June respectively, whilst temperatures in some suburban areas registered around 27/28° F. Many trees and shrubs not usually affected by frost were damaged to some degree.

Our Malesians, which are covered overhead only, suffered considerably. *Rhododendron laetum* and *R. christianae* had the new growth blackened and most of the leaves were burned and dropped within a few days.

The *R. macgregoriae* × *R. lochae* and *R. lochae* × *R. christianae* hybrids had the new growth burned but otherwise seemed unaffected, although in about two weeks' time they dropped almost all their leaves and nearly all flower buds dropped; whilst *R. commonae*, in probably the most exposed position, was quite unscathed. *R. javanicum* suffered no visible burn, but looked quite unhappy with limp drooping leaves. It was heavily pruned but did not respond, and eventually died. *R. lochae* in a container nearby had a few tender tips burned, but otherwise no damage, and certainly no defoliation took place; it produced in the summer its usual profusion of flowers, and it would appear that over the years of growing in Melbourne, *R. lochae* has, at least to some degree, become acclimatised to our winter conditions. Many plants have been raised from seed and it would be difficult to estimate just how many generations have been so produced.

Nearer the wall of the house, and growing in containers, *R. christi-*

anae × *R. jasminiflorum*, 'Triumphans' and some *R. laetum* × *R. macgregoriae* hybrids were quite unmarked, apparently the little extra shelter was sufficient to prevent any damage, and *R. inconspicuum* growing in a fairly sheltered position in a shade house had some top new growth nipped, but was otherwise undamaged.

After defoliation the Malesians looked rather a sorry lot, and my wife trimmed off the damaged growth which did help improve their appearance. There were no more frosts during the winter which was relatively mild, and with the exception of four occasions between 38° and 40° in July, and one 38·2° in August, the temperatures did not fall below 40° F for the rest of the winter.

In early spring most plants produced new growth, the hybrids containing *R. lochae* being the most vigorous, and by early summer looked little the worse for their experience. However, flowering which would have normally started in early spring was delayed for several months.

As the Malesians had by now outgrown the rather small bed in which they were planted, and to obviate any possibility of future frost damage, I decided to lift them and grow them in redwood containers in a fernery in a corner of the garden.

In the 1968 *Year Book* I described the planting medium, and how it was overlaying clay, providing a situation where if they so desired, any adventitious roots could find their way through the planting medium into the clay below, as they often do in New Guinea. Not one had any semblance of a tap root or radicle going into the clay—it would appear that this is only a means of survival in their native habitat when growing under extremely dry and harsh conditions; given an open and friable mixture, regular watering and occasional dressings of well-rotted cow manure, they are quite content to exist with a normal ball of fibrous roots.

The *R. macgregoriae* × *R. lochae* and *R. christianae* × *R. lochae* hybrids are again flowering quite prolifically, whilst *R. christianae* and *R. laetum* have not yet regained their previous healthy state. *R. christianae* has produced a number of flowers but there is no sign of a flower bud yet on *R. laetum*.

Mr. Brian Clancy, who lives only a short distance away, has been growing Malesian rhododendrons since he first obtained seed of *R. konori*, *laetum*, *inconspicuum*, *arfakianum*, *asperum* and *zoelleri* from Dr. Sleumer in 1962, and has since raised a number of other species as well as doing some hybridising, and as a consequence, his glasshouse could no longer contain the numerous plants, and many, still in containers, were moved out into his garden without any particular provision for protection from frost.

Until June 1969, these, like many Malesians growing in suburban gardens in Melbourne, did very well and flowered quite profusely; however, the frosts in June 1969 took their toll as the following notes disclose:

R. lochae. Six mature plants were severely burned and completely defoliated, and after heavy pruning all are making good new growth, but no flowers will be produced this summer.

R. laetum. Fifteen plants in various aspects in the garden had all flower buds and seed capsules burned as well as some bark splitting, and heavy defoliation occurred. One plant died and the remainder have responded to heavy pruning with good growth. Mr. Clancy, known for his success in shortening the flowering time of these species by striking cuttings from seedlings, could not bring himself to destroy the damaged prunings, and these were inserted as cuttings in sphagnum moss and placed in a heated bench in his glass house, the only ones which did not produce roots being those with excessive bark splitting.

R. aurigeranum. Ten plants, all about three feet high had the top 12 to 18 inches severely burned. They were heavily pruned, which these plants seemed to resent, and they made no attempt to produce new growth, but now in the summer all have commenced growing from the base.

Of seven plants of *R. zoelleri*, four succumbed almost immediately, and those which survived look far from happy; growth is extremely slow and it appears possible that they will not recover. Several plants of *R. javanicum* suffered bud damage and some leaf burn and appear to be recovering, but very slowly.

Plants of *R. arfakianum* were severely burned and defoliated, but after heavy pruning are now growing well.

Twenty plants of *R. konori*, ranging from one to four feet in height, had their new growth and flower buds severely damaged, as well as extensive bark splitting. Plants of this species seemed to have resented heavy pruning and generally looked quite an unhappy lot, with the exception of an odd one or two which have made good new growth and show possibilities of flowering this year, whilst two or three plants of *R. phaeopeplum* were severely burned and have so far made no sign of recovery.

R. commonae. A small plant in quite an exposed position was completely unaffected.

R. macgregoriae. Two three-foot plants were quite severely burned for the first ten or twelve inches and did not respond to pruning, they have, however, produced some new growth which is quite lacking in vigour; only time will tell if they recover.

Generally, the hybrids appeared to be less frost tender than the species, the hardiest being Mr. T. Lelliott's cross *R. christianae* × *R. jasminiflorum*, on which flower buds only were damaged, and these have since made quite good growth.

'Pink Delight', under cover of sarlon cloth, had all flower buds damaged as well as some leaf burn; its new growth lacks vigour and is very slow.

R. lochae × *R. christianae* and *R. macgregoriae* × *R. lochae* had the

top growth burned, but after pruning they have completely recovered and are growing with even more vigour than before.

These notes may be taken as a general indication of the reaction of Malesians to cold conditions in Melbourne; some in other gardens, and particularly those growing in the ground, or in a prepared mixture of fern fibre and leaf mould in the ground, appeared to stand the cold conditions somewhat better than Mr. Clancy's plants in containers; had these been planted in the ground, or even the containers sunk in the ground, the damage may have been less severe.

In the Dandenong Ranges, less than 25 miles from Melbourne, the prevailing winter temperatures are usually several degrees lower, consequently most Malesian rhododendrons in this area are grown under glass, although *R. lochae* can be grown in the open providing sufficient care is given to its siting; however, in the winter months the dark green glossy foliage usually turns to a mottled red colour, which disappears with the coming of the warmer weather.

Dr. R. M. Withers, whose garden is on the eastern slopes of Mt. Dandenong, grows *R. lochae* quite successfully as an epiphyte. A convenient fork in a blackwood tree (*Acacia melanoxylon*), in which some moss and leaf mould had accumulated, provided an ideal location for a plant of *R. lochae* which is growing well and flowers in the summer each year, producing up to six large scarlet florets per inflorescence.

It appears to be quite unaffected by the cold, apparently its siting some eight feet above the ground level is sufficient to enable it to miss the low grass temperatures and the effects of occasional snowfalls which occur in the Dandenongs each winter.

I hope that these notes will be of interest, and perhaps some assistance to those growing Malesians in other parts of the world, by giving some indication of the temperatures they can tolerate on the lower end of the scale, and would like to acknowledge and thank Mr. Brian Clancy for the valuable information he has made available.

THE AZALEA FESTIVAL AT KURUME

By LESLIE RIGGALL

ON my way to Japan I broke my journey in Hong Kong and also Taiwan, a lovely land which was named "Ilha Formosa" (Beautiful Island) by the Portuguese explorers who discovered it.

Here I was reminded of the importance of taking rare plant material on the spot if it is humanly possible, rather than relying upon agents to send it later. The late Mr. Ralph Peer, who devoted many years to an unsuccessful quest for a yellow camellia, visited Taiwan about twenty years ago and found there a remarkable camellia which he described as a complete double white with pink flecks and a canary-yellow centre.

There was only one plant, which belonged to an elderly Chinese gentleman who promised faithfully to send scions to Mr. Peer at the appropriate season. But the wily old man had no intention of sharing his unique plant with anybody, and Mr. Peer received spurious scions. This is a psychological problem which has given me some trouble in Kurume, as the very rare azaleas I have wanted usually belonged to very old men.

I found that the original owner of this camellia was deceased and the property now belonged to his son and daughter. They confirmed with some amusement that spurious scions had been sent quite deliberately, and although they showed me the plant they flatly refused to give me a scion.

I pointed out that the plant was obviously sick and likely to die, when it would be lost for ever, but they were quite unmoved. At this point my interpreter told me not to worry, as there was another source for me. I felt that it would be discreet not to enquire how this captive camellia had managed to escape from its confinement, and later I was able to send home some weak scions with soft new growth, but after nine days in the mail they were in a sorry state when they arrived. We can only hope that perhaps one graft may succeed.

Although I had visited Kurume twice before, I had not seen the "Tsutsuji Matsuri", the Kurume Azalea Festival. Happily my recent visit coincided with the festival, and I was able to visit the festival on each of the seven days I was there.

In a large enclosure open to the sky (and also the rain) was displayed a vast array of azaleas in the greatest possible variety, brought there by all the nurserymen of the Kurume district, which is one of the three important areas of Japan for nurseries. Naturally they specialise in Kurume azaleas here, but many other plants were shown also, and as is customary in Japan, some very large plants were included. There was a

competitive exhibition of Bonsai plants, mostly Kurume azaleas. These are ideal subjects for Bonsai treatment, because they are tolerant of pruning and have small leaves which result in a good proportion, especially if varieties are chosen which bear small flowers, such as 'Hana Asobi' or 'Suetsumu'. A wonderful huge rock Bonsai, representing mountain scenery with all vegetation in tiny scale, was the outstanding exhibit of the festival and was priced at 3,500,000 yen (about 10,000 U.S. dollars). It was a major work of art and was moderately priced at this figure.

There were also sub-tropical plants shown in a large plastic greenhouse, and everything in the festival was for sale at very low prices. Each plant bore a large ticket which gave the price and the number of the nurseryman. The visitors simply picked up the plants they wanted and took them to the packing station, and paid for them there. Thus there was no direct contact between buyer and seller. However, one cannot rely on the names of the azaleas written on the tickets. For example, in addition to the true variety I saw two spurious varieties all labelled 'Kumo-No-Uye', and I preferred those tickets which bore only the Japanese characters that mean 'Tsutsuji' (azalea) as these were at least accurate.

Each day the stocks of plants were replenished and very large numbers were sold. For example there must have been a thousand plants of the pink azalea 'Kirin' on offer at any given time. This was the most popular variety, presumably because it is so reliable and adaptable. As an example of this adaptability I remember a few years ago seeing this azalea, which is known as 'Coral Bells' in America, flowering quite well at Winterthur, Wilmington, Delaware, after a terrible winter which devastated such hardy plants as *Buxus sempervirens*. This latter plant, held in little esteem by horticulturists in its native Britain, is called English Boxwood in America and is highly prized. The late Mr. Henry Dupont was very distressed at the destruction of his fine specimens of English Boxwood at Winterthur, but there was consolation in the performance of 'Kirin' and also the plantings of *Rhododendron kaempferi* and *R. schlippenbachii*. These three azaleas are good value in a cold garden.

The next most popular azalea at Kurume appeared to be 'Waka Kayede'. It has large, shining, almost luminous crimson flowers and makes a dazzling display. Unfortunately this one is tender. Two plants which I imported a few years ago into England died in the first winter. Outside Japan I have only seen it in Australia, and it would be a valuable introduction to other warm countries, and worth re-introducing to America for cultivation in the south and Pacific coast areas. It is interesting to note that these two most popular varieties of today were included in the first collection made by Dr. E. H. Wilson when he discovered the Kurume azaleas and introduced them to the west.

Another popular variety which I had previously grown, but which

failed to survive inconsiderate treatment by Customs when I moved to Portugal, was 'Hinode-no-kumo'. This is erroneously stated to be synonymous with 'Hinodegiri' in the *International Rhododendron Register*. In fact there is no resemblance, because 'Hinode-no-kumo' has white flowers heavily margined and suffused with orange—a very striking effect.

In the blue range the loveliest flowers were those of the rather rare 'O-Osawa', which has very large hose-in-hose flowers of white suffused and margined with mallow-purple. I have grown this for a number of years and each year it seems more beautiful.

In addition to popular varieties one can find very rare plants at the Kurume Festival. I found just one plant of Kurume azalea 'Benifude' which had eluded me for years, after an unsuccessful attempt to collect it from Kurume in the form of rooted cuttings. These, together with other cuttings labelled 'Tancho', all turned out to be 'Suiyohi'. The mistake I made was in not taking a few cuttings on the spot. On this recent visit I took everything I wanted, regardless of the condition of the cuttings. Actually their condition could not have been worse, but this is better than receiving healthy cuttings at the right season, but of the wrong variety. With bottom heat one can usually root Kurume azalea cuttings at any time of the year.

A popular variety at the Festival was one which was usually labelled 'Tsuta Momiji'. It was quite different from Wilson's description and I told my guide and interpreter at Kurume, Mr. Masaaki Kunishige, that it resembled the American variety 'Salmon Beauty'. When I returned to Portugal I could not confirm this immediately as my plants of 'Salmon Beauty' had finished flowering. No doubt the riddle of 'Tsuta Momiji' will be solved in due course, but on past experience it may take some time.

RHODODENDRON NOTES

NOTES FROM GLENDOICK

White Forms of Rhododendrons

Over the years, more and more white forms of normally coloured rhododendron species have come to my notice. One interesting factor which has become apparent is that only pink, mauve and purplish shades usually have white forms. Red-flowered species seem to be consistently red with few exceptions, but certain species with a very wide distribution and variation have a large colour range, notably *arboreum* and *arizelum*. Others may have a really mixed colour population in a small area, giving a rainbow effect when in flower. Examples are *aperantum*, *eclecteum*, *sanguineum*, and *stewartianum*. There are a few whites among yellow species.

With common species such as *campanulatum*, pure white forms may occur rather like white heather on the Scottish hills. When at Sandak Phu above Darjeeling in India in 1965, I saw an odd white-flowered plant here and there amongst those of the usual colour. In other species, such as *ferrugineum* in Europe and *carolinianum*, *catawbiense* and *macrophyllum* in America, only a very occasional white has been discovered. F. Kingdon-Ward writes of sheets of different coloured lapponicums ranging from white, through yellow and pink to deep purple. Curiously, there are few white lapponicums in cultivation. *R. microleucum* came up as a chance seedling, while there is a near-white *russatum* and a so-called white *flavidum*. The white *ponticum* I found in north-east Turkey, near Artvin, grew in an isolated little clump away from other *ponticum* except for a pale pinkish plant alongside.

It may be true to say that the majority of non-red, yellow, orange or typically white rhododendrons have a white form to be found somewhere in their natural habitat. Many have never been introduced and are now out of reach for political reasons, but several others do occur rarely in cultivation. I am searching high and low to discover as many of these as possible and so far have managed to collect over twenty. At least another twenty are known. Several of these whites are beautiful plants.

Of course, as with *Calluna vulgaris*, many species have just off whites more commonly than pure whites. Others have a white flower with the coloured form being the rarer. Examples are *edgeworthii* and *moupinense*. These I have not counted in the above.

One series whose colour varies from pink to purplish-crimson and as far as I know has no white variations, is the Saluenense Series. Why this should be, I would not know. Another is the Uniflorum Series

which vary from pink to purple with two yellow species. I believe with thorough searching, it could be possible to find a rare pure white even in these series.

Certain species have white geographical forms or allies, rather than albinos in an otherwise coloured population. *R. souliei* is either pink or pink in bud opening to white. *R. puralbum* comes from further west and is always pure white. Others with white forms found away from the coloured are *selense*, *trichostomum*, and probably *vernicosum*.

Very recent acquisitions of ours are the white variations of *campylogynum*, really cream coloured but nice, the charming *canadense* which comes white true from seed, *racemosum*, *dauricum*, *kiusianum*, *reticulatum* and *virgatum*; the last four have not flowered with us yet. Amongst those which appear to be unobtainable are the albinos of *camtschaticum*, *chamae-thomsonii*, and *parvifolium*. All three should be well worth growing.

Other whites in cultivation are of *campylocarpum*, *glaucophyllum*, *kotschyi*, *martinianum*, *maximum*, *serpyllifolium* and *smirnowii* and there are still more.

Bark Split

To follow up on last year's note on bark split, as I feared, established plants badly split in April 1968 are still dying in spring 1970. Others are still losing large branches. Two complete casualties were a *dichroanthum* and a *bauhiniiflorum*, both over ten years old. Their main trunks had been taped for several inches but the bark became too dry to heal properly.

Propagating off Young Stock

A few plants bought from a well-known nursery in the south, brought to my notice a practice which is carried out on many nurseries with all too many genera. These plants arrived with about half the shoot tips removed leaving ugly stumps, 3–6 inches long. Obviously these shoots had been used for further propagation. At least these stumps should have been cut off to improve the look of the bush, but the point I am getting at is the habit of propagating vegetatively from a succession of young stock, therefore getting more and more generations away from the original selected clone. While it may take literally hundreds of years for certain plants to degenerate, treated this way, many others become so weak and susceptible to disease that they may die out altogether from cultivation.

With certain plants like strawberries, with a very limited life, it is hard to avoid this. Also primulas, both species and hybrids, often become more difficult to keep going if propagated vegetatively for too long. In some cases, of course, virus may be involved. Certain shrubs appear to be losing vigour. Examples of these are *Osmanthus delavayi*

and *Viburnum tomentosum* 'Lanarth'. As for rhododendrons, Mr. G. G. Nearing, one of the pioneers of rhododendron culture in the eastern U.S.A., reports that a great loss of vigour will take place with continual propagation off young stock. Van Veen, the biggest rhododendron nurseryman in western U.S.A., has 30-year-old stock plants, which are fertilised, watered, pinched and pruned to produce ideal propagating material. All nurserymen should keep quantities of special stock plants.

Grafting versus Cuttings

Another plea is to abolish the grafting of rhododendrons, at least on to *ponticum*. Rhododendrons have a very bad name for what the average gardener calls reversion and one is frequently asked by customers if such and such a plant will revert. Either use cuttings, and the majority can be rooted and grown on quite successfully; layer, or for those too difficult to root, graft on to some stock which will not sucker such as *decorum* and *fortunei* seedlings. The Americans now only introduce a new hybrid if it is easily propagated from cuttings. We should do likewise.

Intensity of Colour from Year to Year

We have noticed this year (1970) that yellow rhododendrons do not seem to have the usual intensity of colour, compared with most seasons. Sir William Wright Smith, late Professor and Regius Keeper of the Royal Botanic Garden, Edinburgh, once told my father, E. H. M. Cox, that he had observed for years that blue or near blue rhododendrons were considerably darker after a hard winter. Now, we have just had a moderately hard winter with an exceptional number of actual days with frost recorded. The blues do seem to be good here at Glendoick, but my father, recently returned from Cornwall, says that at Major-General Harrison's garden at Tremeer they were much better.

Why then, should our yellows be paler? It must presumably be something to do with the weather because the plants have received no different treatment from other years. We have started this spring checking each plant against the R.H.S. Colour Chart so as to compare 1970 with future years. We should be interested to hear from anyone with similar observations.

PETER A. COX

RHODODENDRONS FROM TOWER COURT

In the autumn of 1960 when the late Mrs. Harrison was preparing to leave Tower Court, General Harrison approached me with the un-

Photo: A. F. George

Fig. 40—The azalea dell at Tower Court.

believably kind and welcome suggestion that I take over any rhododendrons and azaleas I could move in the time, which were surplus to their needs at Tremeer. The terms of this offer were so generous they made all the difference to our start at Hydon, which at that time was little more than a thicket of pine, birch and brambles, and where, in so short a space could we have acquired such a varied and valuable collection of species and hybrids?

The plant lift from Ascot to Godalming was a protracted affair for there were only three of us on the job, and more often than not, only two, and we had to divide our time between preparing the ground at Hydon and digging the plants at Tower Court. For two winters the work continued, fortunately both were reasonably mild so few days were lost, but when we finally stopped drawing after the Easter of 1962, I remember wishing we had a few more weeks.

By far the most punishing part of the enterprise was the removal of some four hundred large plants of Mrs. Harrison's azalea 'Cote' which were growing in a boggy area near one of the lakes. Each one came up with a sodden ball of peat, making the weight tremendous, and as the plants were lifted so the holes they left filled with water. It certainly says something for the adaptability of these dainty, sweetly scented azaleas for they had to be replanted in totally different conditions—a hot, dry, sandy slope, but they continued to flourish.

Tower Court is best remembered for its extremely fine collection of

species, and whilst it is impossible to mention all that now grow with us, I will mention some that have made a special impact.

In the Anthopogon Series a delightful plant of *R. cephalanthum* var. *crebreflorum* KW 6967, with its clear pink daphne-like flowers, and strongly aromatic foliage, is a most attractive addition to our woodland, but unfortunately it has proved difficult to propagate.

The azaleas we brought are really too many to discuss individually, except perhaps some plants of the lovely pale pink *vaseyi* and the very useful late flowering and fragrant *viscosum*.

From the Boothii Series Tower Court could boast at least two good forms of *R. tephropeplum*; unfortunately those we removed suffered badly in the severe winter of 1962/63, some plants being cut to the ground, but thankfully most of them recovered.

The Campanulatum Series is best represented with us by Mrs. Harrison's remarkably fine clone of *R. tsariense*—'Yum-Yum', with its creamy pink flowers contrasting so well with its cinnamon felted, dark green leaves, but alas it is rather shy to flower.

Two very attractive species from the Carolinianum Series have proved most welcome additions to Hydon; *R. carolinianum* itself with its small, compact trusses of greenish-white flowers, and the taller growing *R. minus* with a similar little "pom-pom" shaped truss of palest lavender-pink flowers. Both thrive on our light, sandy, well drained soil, which is absolutely essential if they are to be grown successfully, and where these conditions prevail, they are excellent plants for the small garden.

An interesting form of *R. cinnabarinum* came to us in a batch of plants Mrs. Harrison raised from seed collected by Ludlow, Sherriff and Hicks in Nepal. At the time of their removal from Tower Court none had flowered but they have since turned out to have most attractive slender, tubular flowers of a striking flame colour, rimmed with deep yellow.

Perhaps my favourite acquisition from Tower Court is the *R. fulvum* which now stands in our drive. Its foliage is magnificent at all seasons—dark green with thick cinnamon indumentum, and the flowers a good pink, heavily blotched. Every year this plant is covered in bud but recent frosty springs have deprived us of its full glory.

I shall always remember the area where members of the Lapponicum Series grew at Tower Court, and the wonderful sight they made in the spring of 1962—a positive sea of blue shading to purple, from the deepest violet of Forrest's *R. russatum* No. 25500, to the paler blues of *R. hippophaeoides*, and the charming "pin-cushion" form of *R. impeditum*, and bluest of all the blues *R. scintillans*. Growing in this same area and harmonising perfectly were some very lovely forms of *R. racemosum*, the deepest pink and strongest growing being Rocks No. 59578 which received an A.M. this year and has been given the clonal name of 'Rock Rose'.

Several good forms of *R. thomsonii* came to us from Ascot but these were outnumbered by a wealth of material from the Triflorum Series. This included *R. augustinii* in varying shades of blue, the best having lovely deep lavender coloured flowers with a green eye; and *R. lutescens* 'Bagshot Sands', a very good clear yellow, the result of Mrs. Harrison's own "selfing". But the gem of the series is *R. concinnum* var. *pseudoyanthinum*, a brilliant form with vivid magenta red flowers and another triumph of Mrs. Harrison's own pollinating. This year a group of these plants flowered to perfection in our woodland alongside the glowing purple *R. russatum*, mentioned above, and the lighter blue *R.* 'Blue Diamond'—the effect in the bright sunshine was quite breath-taking.

Touching briefly on Tower Court's own hybrids, we took over some spectacular plants of *R.* 'Rocket', with its lovely waxy red flowers, and never will we forget the first welcome sight of them flowering in all their glory against a ground cover of snow after that fierce winter of 1962/63. Another extremely good early hybrid is Mrs. Harrison's own 'Tessa Roza', the taller, pinker form of R. Tessa, which covers itself with flower every spring without fail, and given a little overhead cover the flowers will stand several degrees of frost. At the other end of the season Tower Court has contributed two more fine hybrids in R. Azor—tall growing with glowing pink flowers of excellent texture, and the ever popular *R.* 'Polar Bear', another tree form with its heavily scented greenish-white flowers coming as late as mid-July (Fig. 41). Lastly, and by no means least, I must make mention of that very good cross Mrs. Harrison

Photo: A. F. George

Fig. 41—Rhododendron 'Polar Bear' at Wisley.

made between evergreen azaleas 'Kirishima' and 'Malvatica' to give 'Eira' and the other named clones with Gilbert and Sullivan names—a remarkably hardy and free flowering collection with a fine colour range, from the palest silvery mauve of 'Tit-Willow' and equally dainty pale pink of 'Peep-Bo', through a wonderful, iridescent rosy-lilac of 'Eira' itself and 'Princess Ida', to the deeper vibrant crimson of 'Nanki-Poo' and the deep magenta-purple of 'Titipu'.

That so much of Tower Court now lives on at Hydon is indeed our very good fortune and we are everlastingly grateful to General Harrison and the late Roza Harrison.

Hydon Nurseries, Godalming A. F. GEORGE

1969/70 WINTER AT GLENARN

WE started off here with a most unwelcome and unexpected snap of frost in November 1969. And from that time onwards we had plus or minus frost, with horrible east and north winds until the end of April 1970. On the rare occasions of a thaw we found that the bone was still too deep in the ground and in consequence we were unable to shift some small treasured things or make a patch ready to receive them. We never logged more than 12° of frost on any one night, but the horrible weather went on—and on—and our tally showed something like 10°, 8°, 6°, and then a partial thaw, and then slap back to 6 and 8° again.

A few observations:

Burmanicum H 1–3. Seems tough enough in constitution, but its overwintering flower buds have been no good here for the last couple of years. The growth of the plants does not suffer, and we have it in many different positions, but with regret we find it bud-unhardy during the last two winters. Perhaps too much drying wind rather than frost damage. It was a treat in all positions in 1968.

Griffithianum H 1–3. None of our plants flowered this year because their growth was caught last year by one evil night of unexpected frost. But this year they have got away with superb new growth and so we may look forward to something good in 1971. The plants did not object to the vile winter a bit! Our best are under L. & S. (1936), 2835.

Imperator H 3–4. This lovely pygmy of the Uniflorum Series had never given us cause to worry until last winter. We had it dotted around in places where we felt sure it was safe and would prosper. But a sad count now confirms many small corpses.

The Maddenii Tribe, or Series. Quite a number are happy here; *johnstoneanum*, *edgeworthii* (neé *bullatum*) among the earlier flowerers. Also, of course, *lindleyi*. All these kept their flower buds intact, but the points per flower bud were fewer, and not so big or long lasting as

usual. *Valentinianum* as a semi-epiphyte on old tree stumps and therefore free of ground frost, laughed it off and flowered like trumps.

The later *maddeniis* are out in full fig now and who would we be to discriminate between the name of one or another! Some have an erect habit, and some are sprawlers, and all are lovely and sweet scented if they will condescend to live with you. *Rhabdotum* continues to live and grow without any protection outdoors, but always loses its flower buds.

Venator H 3–4. Had a hard time with us. Our biggest plant is about 5 feet but is layered around to a wide spread. The parent plant is in good order, but some of the layers, taken off years ago, got a bad shock after five years away from mother, and on their own.

Virgatum. H 2–3. The clear pink form growing here was very nearly lost in the winter of 1947, and again in 1963, but on both occasions we had small plants coming along. The 1969/70 winter nearly caught us out again because most of the bigger plants either died the death or suffered very badly, including one plant in a cold frame. Perhaps that very lovely clear pink is more tender than others. Anyway we still have it, but only by the skin of our teeth. A fresh batch of cuttings will be attempted presently as a re-insurance.

Glenarn, Rhu, Dunbartonshire A. C. GIBSON
June 1970

NOTES ON THE GROWTH OF RHODODENDRONS

R. giganteum and *magnificum*

The chief trouble with these species is that they try, in a normal season, to make their growth far too early in the year. The normal weather pattern here for winter and early spring is depressingly predictable—alternate frost and soft spells. With the slightest encouragement from the weather these two species like to come into growth late in February or early in March and almost invariably have their primary growth killed. There has, however, been a change in the winter weather pattern in 1968/69 and 1969/70. We have had genuine winter conditions in January, February and March, with more or less continuous frost and the temperature falling as low as 20° F on several nights. This seems to suit these two species, which stay sensibly asleep and do not make their new growth until well on in May. We have no plants of flowering size and therefore do not know whether flower buds would behave in as well conducted a manner. I doubt it, as some *magnificum* hybrids, grown from Brodick seed, have tried to flower in March of each of these two years, and have made a poor job of it. This is a small loss, as their flowers are outstandingly ugly. They are worth their place as foliage plants. They also postponed their growth until May. I have not noticed other early growing species, such as *hookeri, strigillosum* and *eclecteum* showing such good sense, but they can all stand a little frost and are not so badly at risk as the early growing members of the Grande Series.

Photo: A. J. Huxley
Fig. 42—
Rhododendron cardiobasis.

One cannot win all the time. Conditions that suited these two rhododendron species were murder to some of the Chilean plants. Crinodendrons and *Azara dentata* took a bad beating and some of the embothriums were damaged. As against this Australasians stood up well, *Acacia dealbata* and *pravissima* and *Telopea truncata* all being undamaged.

Glenarn, Rhu, Dunbartonshire J. F. A. GIBSON

RHODODENDRON CARDIOBASIS

Rhododendron cardiobasis is the only other member of the Orbiculare Subseries of the Fortunei Series. In the *Handbooks* of 1951 and 1956 it was described as "A native of Kwangsi Province in South China, recently described and not yet in cultivation, probably a very attractive plant". (In the 1963 *Handbook* it was only listed under "Rhododendrons not in General Cultivation"). I was therefore pleased when I got the opportunity to purchase three small and unflowered seedlings from Exbury in 1959.

I planted these in different sites in my garden, and it is as well I did so; for the first thing I learned about this species is that its cultural requirements are exactly the opposite to those of *R. orbiculare*. *R. orbiculare* cannot, I believe, have too wet a site; some of the best plants I have ever seen were growing in a gravel pit in Cornwall; and they

flourish in the wettest and heaviest part of my garden. But the plant of *R. cardiobasis* which I placed next to its species-sisters died within 24 months; the plant in the hottest and driest position, without any overhead shade, grew much better than the plant in light woodland; my two surviving plants are now both in this sunny border and both grow and flower well.

Its kinship to *R. orbiculare* is clear, particularly in the rather harsh pink of its flowers (the *Handbook* speaks of white flowers, but both mine are pink); to my mind it is a somewhat more elegant plant (Fig. 42). The large elliptical leaves are, I consider, superior to those of any forms of *R. orbiculare* I know when the plants are out of flower; I think it deserves a higher L rating than 2. I also prefer the loose trusses of funnel-campanulate flowers to the tight truss of campanulate flowers of *R. orbiculare*. This is clearly a matter of personal taste, but I consider it at least as good as *R. orbiculare* and of easier cultivation, though its colour is somewhat difficult to place.

Since a plant first flowered in 1967, they have come out every year between the Rhododendron Show and Chelsea, so I have never been able to bring a truss up to London. My bigger plant is now about 6 feet × 4 feet; the rate of growth is similar to that of *R. orbiculare*.

Haywards Heath GEOFFREY GORER

A SUBSTITUTE FOR SEQUESTRENE

Iron deficiency causes rhododendrons to suffer from chlorosis; the leaves turn yellow. To overcome this it has been customary to treat the plants with Sequestrene—a proprietary Swiss chemical sold in this country by Murphy Chemical Company. Unfortunately, Sequestrene is quite expensive.

An inexpensive alternative to Sequestrene is Rayplex-Fe, an organic chelating agent containing 9·6 per cent iron. Rayplex is a water-soluble brown granule or powder, extracted from the bark of the hemlock, *Tsuga heterophylla*; chemically, it is a polyflavonoid (PF) molecule which forms metal complexes (in addition to Rayplex-Fe there is also available Rayplex-Zn, Rayplex-Mn, and Rayplex-Cu). The PF molecule is common to plant life, and easily extracted from hemlock bark; this is why it is so much cheaper to produce than the wholly synthetic Sequestrene —the product of complex and expensive chemical procedures. Both Rayplex and Sequestrene are chelating agents, which work through absorption of the iron so that the iron is available to the plant, but too tightly bound to be fixed in the soil by the normal chemical reactions in a form unavailable to the plant's roots.

Application of Rayplex-Fe is very simple: Take a handful of the coarse granules and throw them at the base of the plant. It lasts a year and costs 3d. Or one may incorporate the granules in a fertilizer. For

quick results, dissolve some powdered Rayplex-Fe in water and spray it on the foliage.

Some experiments have suggested that rhododendrons will flourish under alkaline conditions if suitably treated with Rayplex-Fe, but more work needs to be done on this subject.

Wadhurst, Sussex DAN E. MAYERS, M.S., A.I.M.E., L.S.D.

A NOTE ON RHODODENDRON PSEUDOCHRYSANTHUM (Series Barbatum, Subseries Maculiferum)

R. pseudochrysanthum is one of the finest rhododendrons in cultivation. It was first found by a Japanese named Yamashita prior to 1900 on Mount Morrison, Taiwan (Formosa), and often wrongly referred to as similar to *R. chrysanthum* Pallas. Subsequently it was collected by T. Kawakami and U. Mori in the same locality and on Mushazan, Nanto Prov. (Taiwan) in 1906. The species was described by Hayata in *Fl. Mont. Formos.* (*Journal Coll. Sc. Tokyo*, Vol. 25 Art. 19), 154, t. 26 (1908)).

The plant grows up to 10 feet high. The leaves are rigid, ovate to oblong-lanceolate, up to 3½ inches long and 1½ inches broad, recurved at the margin. The flowers are in trusses of 5–9 or more, bell-shaped, up to 2 inches long, dark pink in bud opening pale pink or white with deeper rose lines outside, spotted crimson inside.

The species was introduced into cultivation by Wilson from Mount Morrison (Taiwan) in 1918. In *Plant Hunting*, Vol. II, p. 180 (1927), he refers to the peak of Mt. Morrison as "bare, save for a few herbs amongst which an Eidelweiss is prominent, occasional low bushes of *R. pseudochrysanthum*, the tiny *Gaultheria borneensis*. . . .". In the *Rhododendron Society's Notes* of 1924, Wilson, in a dramatic description, wrote: "To me *R. pseudochrysanthum* will always be associated with a struggle across the central range to the summit of Mt. Morrison. After having been storm-bound under some overhanging rocks at 11,000 feet at above sea level for sixty hours, we essayed the ascent of this peak, and in a bitterly cold storm of wind and sleet at length stood athwart the tropic of Cancer on the crumbling summit of Mt. Morrison, 13,072 feet above sea level, the highest mountain in the Japanese Empire, and the loftiest peak between the Sierra Nevadas of Western North America and the snow clad ranges of the Chino–Tibetan borderland. As a souvenir of the conquest I gathered seeds of this Rhododendron on the peak of Mt. Morrison (I could have collected them lower down) which were sent to the Arnold Arboretum and distributed. This species is now growing in the gardens of the British Isles and elsewhere, but I have not heard that it has flowered".

In view of its wide altitudinal range, *R. pseudochrysanthum* varies

considerably in height and habit of growth. There would appear to be two forms of this species. Recently, on a visit to the Far East I met Dr. Chien-Chang Hsu of the National Taiwan University at Taipei, who under the auspices of a U.S. group led by Mr. John Patrick, has carried out some interesting research on this plant which bears out that there are two forms, the one which Wilson has described as growing on or near the summit of Mt. Morrison where it grows associated with dwarf alpine willows and junipers and is less than a foot high. It is said to prefer open rocky windswept situations where it struggles hard to dominate. Lower down the mountains it grows up to 10 feet (commonly 3–5 feet) in height, with twisted stems, and covers large areas in impenetrable thickets.

It was named *R. pseudochrysanthum* because it was considered to be allied to *R. chrysanthum* Pallas, a small plant with yellow flowers in the Ponticum Series. Wilson in the *Rhododendron Society's Notes* of 1924 points out that *R. pseudochrysanthum* "is a well-marked species related to *R. wasonii* Hemsl. & Wils., native of extreme western Szechuan. It also has affinity to *R. przewalskii* Maxim . . . from Western Szechuan". In *The Species of Rhododendron* 1930, Tagg has placed *R. pseudochrysanthum* in the Maculiferum Subseries, Barbatum Series and states that it "is somewhat of an outlier in the Subseries. Its affinity is with the species of Central China, such as *R. pachytrichum*". Mr. H. H. Davidian of the Royal Botanic Garden, Edinburgh, confirms Tagg's view that *R. pseudochrysanthum* is not in any way like *R. chrysanthum*. He believes it does not even show a superficial resemblance to *R. chrysanthum*.

A distinctive feature of *R. pseudochrysanthum* is the very hairy young growths. David Leach, in his book, *Rhododendrons of the World*, Chapter II, p. 31, describes this species in these terms: "It is easy to create Japanese garden effects with certain rhododendrons. *R. pseudochrysanthum* by its perfect, mound-like growth habit and leaves borne in stiff rosettes seems to echo its Formosa homeland. . . ."

In cultivation *R. pseudochrysanthum* is most attractive when covered with a profusion of flowers in April or early May. A plant from Exbury was given the Award of Merit when exhibited in 1956. It is about 5 feet high and exhibits all the traits of the plants which are found lower down Mt. Morrison.

The species is hardy, and *R. pseudochrysanthum* is well worth a place in every collection of rhododendrons.

Exbury EDMUND DE ROTHSCHILD

RHODODENDRON KEISKEI 'YAKU FAIRY'

It is now nearly forty years since Yakushima, or the island of Yaku, became known to gardeners of the western world as the home of the remarkable *Rhododendron yakusimanum*. Since then until recent times,

when collecting of this species was prohibited, botanists and plant collectors have searched the three mountains which comprise this tiny treasure island for the different forms and variations of the species. The compact, silvered forms from higher altitudes were mostly sought, so that it is surprising that the gold of another rhododendron growing on one of these mountain peaks was overlooked. This was not a new species, but an exciting new form of the yellow-flowered, Japanese *R. keiskei.*

In July 1966 word was received that "a new fairy rhododendron has been found on the peak of Mt. Kuromi". My correspondent went on to say that in leaf and flower the plant resembled *R. keiskei,* but that it was smaller leaved, completely prostrate and mat-forming, also adding that the area occupied by the plant was exceedingly small and that there was real danger of it becoming extinct. Apparently plants had been collected in the hope of establishing them on the Japanese mainland, but the hot, dry summer atmosphere gave no encouragement to the little evacuees from wet Yakushima. However, it was thought that the climate of the British Isles might prove more amenable and some months later I heard, with delight, that plants were on their way to me by air.

On a chilly winter day the tiny, almost rootless plants arrived and were given V.I.P. treatment, including collection by car from London Airport, for these were far too precious to leave to take their chance with the Christmas mail. However, once unpacked the temptation to mollycoddle these wildlings was resisted and they were planted directly into a peat bed in the company of a happy, thriving community of small rhododendrons and other Ericaceae. They were sheltered by their taller companions and it was about three months later, when these had started to grow, that the tiny *R. keiskei* put out a fresh green toe from under bronzed winter garb to venture into this new land. Finding conditions to its liking, 'Yaku Fairy' struck out in other directions and by the end of summer the larger plant was about 10 cm. in diameter and sported three flower buds. The small buxus-like leaves of the collected plant still remained, but the leaves of the current year were up to 3 cm. long and lanceolate. Still the plants remained only 3 cm. high, no shoots having shown a tendency to grow upright.

At the end of April of the following year the flower buds opened, confirming, in my untrained mind, the specific identity of the plant. For these were typical three- and four-flowered trusses of *R. keiskei,* pale yellow, unspotted, and as large, if not larger, than the type, with corollas of up to 4 cm. diameter. Pollen was exuding from the pale orange anthers and I felt it my duty to self-pollinate the flowers to obtain seed and thereby increase stocks of this rarity. However, this was not to be. Whether centuries of wandering about the mountain top by self layering have robbed the plant of its powers of sexual reproduction can only be a matter of speculation, but the fact remains that of the very few seeds produced, only two germinated and these survived just a

Photo: Ernest Crowson

Fig. 43—*Rhododendron keiskei* 'Yaku Fairy', A.M., April 14, 1970, when shown by Mr. Starling (see p. 181).

month or two. Next year the same procedure was followed with no more success.

It is a weakness of some rhododendron enthusiasts, myself included, that while proclaiming the superiority of species over hybrids, we cannot resist the temptation to tickle the stigma of one species with the anther of another in an attempt to create a "better" plant. It seemed a good idea to attempt to add to the small range of good carpeting rhododendrons, and crosses using the pollen of *R. keiskei* 'Yaku Fairy' were made with several species, including the dwarf *R. racemosum* F 19404, and also two superb hybrids, Messrs. Cox's 'Chikor' and Messrs. Reuthe's *keiskei* × *hanceanum* 'Nanum'. So far 'Yaku Fairy' has proved to be little better as a father than as a mother, although the cross with Forrest's dwarf *R. racemosum* has yielded a good crop of seedlings. *R. racemosum* is such an easy-going plant here in the dry south-east, growing well in neutral or even slightly alkaline soils, and it is hoped that some of the offspring of this mating will show the same degree of toleration while retaining the prostrate habit of the male parent.

It was not until the summer of 1969 when, having failed to reproduce my original plants from seed after two attempts, I felt that a few shoots

could be spared for cuttings. Only three cuttings were taken in early July and these were well rooted by the time they were potted on 6 September. However they did not break into growth that year. One lingered awhile and died and the other two have, at last at the end of May, broken their dormancy. This then seems to be the means of proliferating this plant and propagating material will be severed with far less trepidation than was the case with those first three shoots.

During January 1970, the larger plant, well set with flower buds, was removed to the alpine house for protection—not from the cold which it can stand with equanimity, but from the teeth of the rabbit, starved of more succulent herbage in the depths of winter. At the beginning of April several buds were showing colour and by the 14th 'Yaku Fairy', bedecked with bloom, was judged worthy of an Award of Merit by the Rhododendron and Camellia Committee at the R.H.S. show (Fig. 43).

Epping Upland, Essex BARRY N. STARLING

CAMELLIAS IN CULTIVATION OTHER THAN *C. JAPONICA*

By CHARLES PUDDLE, M.B.E., V.M.H.

THE genus *Camellia* consists of between eighty and a hundred species, the exact number depending on which botanist is followed. It is dominated by many thousands of cultivars which have over the centuries originated from *C. japonica*, a species which displays a range of variation and ease of culture unequalled by any other ornamental evergreen. Many of the other species are not in cultivation, some are of botanical interest only, but there are several species which should enjoy greater favour in British gardens.

C. sasanqua has enjoyed great popularity in Japan for centuries and over a thousand cultivars have been named. In the wild it has small leaves and rather insignificant single or double flowers which shatter easily, the petals forming a carpet of white, pink or rose beneath the dense leafy trees. The life of individual single and semi-double flowers is short but, given the correct climatic conditions, *C. sasanqua* is exceedingly floriferous, and as many forms are scented it makes a most welcome contribution to the autumn and winter scene. Large-flowered plants with attractive foliage have arisen in cultivation and flower from early September until March. Due to minor botanical differences and time of flowering, some botanists prefer to place the early-autumn forms under *C. hiemalis*, and the spring-flowering group is termed *C. vernalis*.

C. sasanqua does not flower as freely out of doors in Britain as in countries which have hot summers. To ensure flowers, the best position is in a narrow border against a south or west wall, where the maximum amount of sunlight is gained and there is some root restriction. Fortunately it can easily be trained as a wall shrub and does exceedingly well under glass. 'Minenoyuki', 'Setsugekka', 'Sparkling Burgundy', 'Narumi Gata', 'Chansonette', 'Kanjiro', 'Showanosakae' and 'Ginryu' are cultivars which can be recommended.

The Chinese counterpart of the Japanese *C. sasanqua* is *C. oleifera*, a species with single white flowers and larger, thicker, leathery leaves. It has been cultivated in China for hundreds of years for the valuable oil extracted from its seeds. It varies considerably in leaf-shape and size, but the flowers I have seen have all been white although there is some doubling of petals. Of the forms in cultivation, those with the larger flowers (perhaps var. *confusa*) appear to be somewhat tender. Its horticultural value has not been fully assessed but it does offer interesting

hybridisation prospects particularly with *C. sasanqua* and *C. reticulata*. Many plants labelled *C. oleifera* in Britain are *C. sasanqua* 'Narumi Gata'.

C. miyagii from Okinawa is intermediate between *C. sasanqua* and *C. oleifera*. The single white flowers are small but fragrant. It is doubtfully hardy and the form in cultivation has little horticultural value. Much the same can be said for *C. kissii* which is near *C. oleifera*. Its white flowers fall so quickly that they are often missed.

Of all the species introduced this century *C. saluenensis* has made the greatest impact in Britain, for many of its forms and particularly its hybrids with *C. japonica* have proved to be of excellent garden value under our climatic conditions. *C. saluenensis* has a wide distribution in Yunnan, and in some regions grows in close proximity to *C. reticulata* and *C. pitardii* var. *yunnanica*. This area of China has been noted for centuries as a centre of ornamental camellia culture and many cultivars including *C. japonica* grace the temple gardens. *C. saluenensis* in cultivation has proved an excellent parent, hybridising freely with other species, and therefore it is not surprising that seed collections made around Kunming have produced not only plants typical of the species but others of hybrid origin.

Typically *C. saluenensis* makes a compact upright bush, thickly clothed by small serrated leaves with impressed venation on the upper surface. The flowers freely produced along the branches, are single with a prominent boss of stamens and vary in colour from white to deep rose. There is great scope for the controlled breeding of the better forms, particularly for greater hardiness of the deeper colours, which often do not display the "bluey" pink found in many of the hybrids.

C. saluenensis presents few problems in cultivation, but it is interesting to note that it prefers a less acid soil than the majority of camellias. Owing to botanical confusion when the species was first recognised, and the ease with which it hybridises with other species, both in the wild and in gardens, many of the plants designated *C. saluenensis* are of hybrid origin. This unfortunate nomenclature error has spread from Britain to all parts of the camellia world.

C. pitardii var. *pitardii* is claimed to be in cultivation, but all the plants I have seen are *C. saluenensis*. However *C. pitardii* var. *yunnanica* with long pointed leaves is a distinctive camellia of considerable merit. The single rose flowers of the form in cultivation are freely borne under glass and in the milder gardens. It is undoubtedly closely related to the wild form of *C. reticulata* and as it hybridises freely with this species, it may well be present in some of the old Chinese cultivars of *C. reticulata* introduced in recent years from Kunming.

C. reticulata has produced a series of flamboyant cultivars, yet it is the so-called "wild forms" which are the real aristocrats of the camellia world. Botanically designated forma *simplex* to distinguish them from the cultivar on which the type description is based, they provide immense interest and pleasure in the milder counties where they can be

grown successfully out-doors. The single or semi-double flowers vary from pale pink to red, with a large central boss of golden anthers and petals of good mixture. In foliage they are one of the most attractive of all camellias, and under favourable conditions quickly grow into well shaped small trees. Some of the superior forms raised in cultivation, such as 'Mary Williams', 'Elizabeth Johnstone' and 'Trewithen Pink' are outstanding.

One of the most exciting additions in recent years, *C. granthamiana* originated from a single specimen growing in the Hong Kong New Territories. It has large white flowers up to five inches in diameter and distinctive thick leaves with deeply impressed venation on the upper surface. The perules are most persistent, remaining until the seed pod opens, and this character is transmitted to several of its hybrids. As it flowers in the autumn and winter it offers great possibilities for the hybridist. Another tender species from this region, *C. hongkongensis*, has small bright red campanulate flowers and large thick fleshy leaves. Unlike *C. granthamiana* which grows freely, it is more difficult to establish. Both species are only suitable for glasshouse culture in Britain.

A rather neglected species *C. cuspidata* is not spectacular in flower, although the small white blooms are profusely produced both terminally and from the leaf axils, but its coppery young growths and compact habit make it an interesting garden plant. Perhaps its qualities are better represented in its hybrid with *C. saluenensis* 'Cornish Snow', one of the most valuable of all early spring flowering camellias. Similar but more tender than *C. cuspidata*, *C. tsaii* has pubescent pendulous branchlets, finer serrated leaves but equally attractive young growth, and small white flowers.

A species which could perhaps be used to create a range of pleasantly scented camellias, *C. lutchuensis*, forms a spreading bush with young pubescent branches and small leathery leaves. The flowers about one inch across are white and freely produced. Early reports indicate that the scent is transmitted to its progeny.

Another dainty species with small white or whitish-lilac flowers *C. fraterna* is densely hairy with most variable leaf-size. It appears well suited for pot work, making a graceful well clothed plant.

Three species belonging to the Thea Section, *C. sinensis*, *C. taliensis* and *C. irrawadiensis* are only hardy in the milder counties and even here they may need wall protection. They all have nodding stalked creamy white flowers which arise from the leaf-axils. *C. taliensis* has the largest flowers and coupled with beautiful shiny bright green foliage is easily the most ornamental. As might be expected *C. sinensis*, the tea-plant, shows extreme variation in size and type of foliage. Although pink flowered forms are known and there has been some doubling of petals no outstanding horticultural forms have been produced. *C. irrawadiensis* is intermediate between the two.

C. rosaeflora is not known in the wild state. It bears single soft pink

flowers of great charm but needs a cool glasshouse to be seen at its best. Another camellia of doubtful origin is *C. maliflora*. The flowers are double, the outer petals a delicate rose but paling towards the centre. It makes a densely twiggy upright bush and where it succeeds it is most attractive. It is surprisingly hardy but often appears to have a weak constitution and flowers very sparingly unless in the sun or under glass.

Two confused groups both at one time placed under *C. reticulata* come from Japan. *C. wabiske* contains several interesting small-flowered white, pink and red cultivars probably of hybrid origin closer to *C. japonica* than *C. reticulata*. *C. uraku* to which the cultivar 'Tarokaja' belongs appears to correspond with hybrids of *C. japonica* and *C. saluenensis* in many respects.

C. salicifolia is a tender species well worthy of culture under glass for the beauty of its foliage particularly the russet young growths. The tiny white flowers are profusely produced from the leaf-axils but are largely hidden by the leaves.

'Barbara Hillier', said to belong to *C. heterophylla*, appears to me to be a hybrid of *C. reticulata*, *C. japonica* and *C. saluenensis*.

Other species in cultivation include *C. acutisepala*, *C. assimilis*, *C. caudata*, *C. connata* and *C. transnokoensis* but whether they are true to name and their value under our climatic conditions I am unable to assess at present.

Britain has already raised many fine hybrids and I hope that breeders will be encouraged to use some of the less common species. There is little doubt that inter-specific hybrids, combining the best qualities of the parents, are the camellias of the future.

CAMELLIAS IN LONDON

By JAMES PLATT

IT is interesting to reflect that the camellia, that is *C. japonica*, was treated as a plant for the stove when first introduced to the British Isles in 1739. Even in 1788, when a single rose-pink seedling was depicted in *Curtis's Botanical Magazine* (tab. 42), William Curtis tells us that it was generally treated as a stove plant but sometimes placed in the greenhouse. He adds that in his opinion it is "one of the properest plants imaginable for the conservatory".

And in the conservatory it must have remained until the sixth Viscount Falmouth, sometime about the middle of the 19th century, made many plantings of it out of doors at Tregothnan, but that was in mild Cornwall. Mistaken reputations can linger long, and even in the years between the wars it was viewed with suspicion and only considered suitable for the milder counties. To most Londoners living in a huge city of polluted atmosphere, success with this glossy-leaved evergreen must have seemed quite unattainable, although here and there large, old plants are to be found, such as that on Mr. H. Castle Fletcher's house in the Boltons, S.W. 10, or those which used to be displayed proudly by their bolder owners, who sponged the leaves regularly with rainwater. Without any doubt the cleaner atmosphere has made a great difference and the camellia has not only reached London in quantity but is definitely there to stay.

By gracious permission of Her Majesty the Queen we have had the privilege of seeing the plantings of camellias in the garden at Buckingham Palace and of taking photographs there. Any doubts that camellias do not do exceedingly well in London were immediately dispelled by this visit and there was the feeling of being in some well-favoured country garden where camellias are known to flourish. The first camellias were planted at Buckingham Palace in 1954, when it was decided to remove groups of privet and aucuba, those dull resisters of polluted urban atmosphere. Not only were they replaced by camellias but also by rhododendrons and deciduous and evergreen azaleas with here and there maples such as *A. rufinerve* and *A. pennsylvanicum*, which have done splendidly and cast the right light shade. Surprising as it may seem, another plant with a reputation as delicate, *Pieris formosa* var. *forrestii* 'Wakehurst', also thrives under these conditions, and Mr. F. C. Nutbeam, the head gardener, told us that it provides three crops a year of its brilliant red young growth. Thus there is no monopoly of camellias. The soil though acid was spent, and had to be replaced. Otherwise no special cultivation has been undertaken.

Photo: Valerie Finnis
Fig. 44—Camellia 'Alba Simplex' at Buckingham Palace.

Camellia japonica 'Adolphe Audusson' was among the first plantings at Buckingham Palace and has now formed upright, almost tree-like plants well over 15 feet high. Those with a more horizontal habit, such as 'Mme. Victor de Bisschop', 'Contessa Lavinia Maggi' and 'Alba Simplex' ('Snow Goose') (Fig. 44), again planted at the same time, have made dense, sturdy thickets many feet through. The latter is valued particularly because it flowers early and so escapes mid and late spring frosts.

The collection of camellias at Buckingham Palace is now very comprehensive with some eighty varieties, so that it was no surprise to see the little-known *C. japonica* 'Tsukoniguruma' (Fig. 45) and some of the more recently raised American cultivars such as 'Dr. Tinsley'. *C.* × *williamsii* cultivars have been tried and are a success. More often than not camellias have again taken the place of aucuba or privet, and as there still remain more of these most expendable plants it is proposed, with Her Majesty's approval, to remove them and replace them. Some of the rhododendrons have done so well that they must soon be thinned, and no doubt will be used as replacements with new camellias which Mr. Nutbeam propagates and grows so admirably, thus completing the illusion that this great garden in the centre of London is in the heart of the country (Fig. 46).

Visitors to the R.H.S. Shows in spring need only walk a few yards east along Vincent Square to see *C. japonica* in various colours showing

Photo: Valerie Finnis
Fig. 45—
Camellia
'Tsukoniguruma'
at Buckingham
Palace.

over the wall of the front garden of the Rt. Hon. Duncan Sandys, M.P. If, as Mr. Sandys assured us, he is a lazy gardener and does no more than water his camellias in dry weather, then Mr. Sandys must choose exactly the right moment to water to have produced such thriving plants.

The visitor may also be fortunate and find himself in Chiswick Mall in camellia time on a day when the Earl and Countess of Rothes have opened the charming garden which lies behind Strawberry House (Fig. 47). Here are to be seen some twenty varieties of camellias, 'Elegans', 'Contessa Lavinia Maggi', 'Devonia', 'Nigra' and 'Nagasaki' among them and all in perfect health, with a 20-foot 'Chandleri' towering over them. The latter is in comparatively full sunlight, whereas 'Mathotiana Rosea' and 'Adolphe Andusson' both grow and flower on a wall where they receive no sun at all. There may be an added pleasure with powder-blue *Clematis alpina* and *C. macropetala* flowering with rose-pink camellias, but as Lord Rothes pointed out, they do not always oblige and flower at the same time. *C.* × *williamsii* 'Donation' has made a good start for Lord Rothes, as it has done in the neighbouring garden of Mr. and Mrs. Jeremy Benson, whose equally attractive house conceals another delightful garden filled with exciting plants. The gardens of Strawberry House and Walpole House are open twice a year in April and June in aid of the National Gardens Scheme.

Again if the visitor has time on his hands he may walk up one of the

Photo: Ernest Crowson

Fig. 46—A camellia border at Buckingham Palace.

Photo: Ernest Crowson

Fig. 47—Camellias at Strawberry House, Chiswick Mall (see p. 114).

streets running west off Kensington Church Street up to Campden Hill. There he will see camellias in many a small front garden, either in the open ground or in decorative containers, and all exceedingly healthy. Finally he may reach Holland Park, and passing the tragically blitzed great Jacobean house, find himself on the west side of the old orangery. Here he may be surprised to see a great hedge of *C. japonica*, mostly of a double white cultivar which is probably 'Mathotiana Alba' with a few red-flowered plants among them, and from 10 to 15 feet high. According to Mr. F. T. Helliar, the Superintendent, these camellias were protected by a lean-to greenhouse which had become so decrepit that when Holland House and its park passed to the Greater London Council after the war, it was useless and removed. Unfortunately there are no records but the camellia plants, which are thriving, must be quite sixty years old. Mr. Helliar has conserved many interesting and even rare trees and shrubs in the Park and is always adding to the collection, and a thriving group planted further down in the woodland and composed of *C. japonica* cultivars shows how well the camellia does on this warm hillside. And there are camellias in most areas of London from South Kensington and Mayfair to the heights of Hampstead and Highgate and south of the river.

Those who know Queen Mary's Garden in Regent's Park may have

Photo: Ernest Crowson

Fig. 48—Camellia 'Elegans' at Chiswick House.

noticed on their way to the roses sturdy camellia bushes at the back of the broad curving border opposite the lawn where the band plays. This is probably but a start, Mr. R. A. Stephenson, the Superintendent, having acquired a collection of those camellia hybrids raised in Australia, New Zealand and the U.S.A. which Messrs. James Trehane and Son of Wimborne have made available to us. Then there are camellias in Kensington Gardens. Perhaps the happiest are those planted at the east end of the new peat-wall garden, where they receive some shelter from a fine old *Parrotia persica*, the reds showing up as brightly as *Pieris formosa* var. *forrestii* 'Wakehurst' nearby when seen from a passing bus. Recently a large planting of camellias has been made on the north side of the Orangery. It was interesting watching their reaction to the very trying weather of 1970. The single and semi-double reds appear to be the most frost resistant among the *japonicas*, followed by the very double delicate pink- and red-streaked 'Contessa Lavinia Maggi'. The pinks and whites suffered most. Of hybrids the single pink 'Elizabeth Rothschild' stood up well, as did × *williamsii* 'Donation' and some of the single pinks. We venture to suggest that there is a great future for the × *williamsii* group of hybrids in London.

One of the largest concentrations of camellias in Greater London is now in the garden of Chiswick House. When Lord Burlington's celebrated villa passed from the estates of the Duke of Devonshire first to the Borough of Brentford and Chiswick in 1926 and then after the last war to the London Borough of Hounslow in 1965, the gardens as well as villa were in a state of disrepair. There was, however, the long conservatory, which is usually attributed to Henry Curry but directly influenced by Paxton. It is 300 feet long and only broken by a bow in the centre and contains a large collection of old camellias. Unfortunately no planting records appear to exist, but some idea of their age may be obtained from the tree-like stem of *C. japonica* 'Elegans' (Fig. 48). We know the greenhouse was constructed in 1850 and 'Elegans' raised in 1831. Perhaps it was one of the earliest occupants. Another interesting japonica is labelled 'Emperor of Russia' (Fig. 49) and answers to the description of the plant listed in *Camellia Nomenclature* which is mentioned by Van Geert of Belgium in 1856. This Emperor of Russia could well be Nicholas I, who died in 1855, when no doubt as being the arch-enemy behind the Crimean War he would have been highly unpopular in the Belgium of Queen Victoria's uncle, King Leopold, and considered unsuitable to give his name to a choice flower. However, long before the Crimean War in 1844 Czar Nicholas visited the sixth Duke of Devonshire at Chiswick, when 600 guests, including Prince Albert and the King of Saxony, lunched with him. Perhaps then the tradition at Chiswick that their 'Emperor of Russia' was named in honour of the visiting Czar is not so untrue in spite of the lack of records and any mention of its raiser in camellia literature. Yet another interesting camellia in the greenhouse is labelled "Variegata Vera" and is no doubt

Photo: Ernest Crowson
Fig. 49—
Camellia 'Emperor of Russia' at Chiswick House.

the pink-and-white-mottled 'Variegata' of *Camellia Nomenclature* and referred to by Chandler in 1792. The point of interest is, as Mr. A. D. MacIntyre, the deputy director of parks, pointed out, that the flowers do not bruise when touched, knocked or thrown about.

Mr. MacIntyre now has some 160 species, varieties and hybrids of camellias at Chiswick House. An ardent and skilful propagator, he has innumerable young plants at his disposal and these he has been planting in every aspect. At the same time he has been restoring Lord Burlington's original layout of the garden. The result should be, as Mr. MacIntyre hopes, an established camellia centre in an 18th-century garden in a once sylvan area now fully absorbed into Greater London.

The cultivation of camellias on a small scale in London creates no problems provided the soil is not alkaline and the would-be grower realises that the soil is usually spent, exhausted and must be rejuvenated. If the area is a small one, some gardeners prefer to replace the soil to a depth of 1 to 2 feet, but replacement is an expensive operation. The alternative is to use peat moss and spent manure in generous proportions mixed with the existing soil and to follow it up with applications of seaweed manure as Lord Rothes advocates, or such manures as the individual prefers, and to keep the plants well mulched. And it pays to water in dry weather, particularly when the plants are coming into

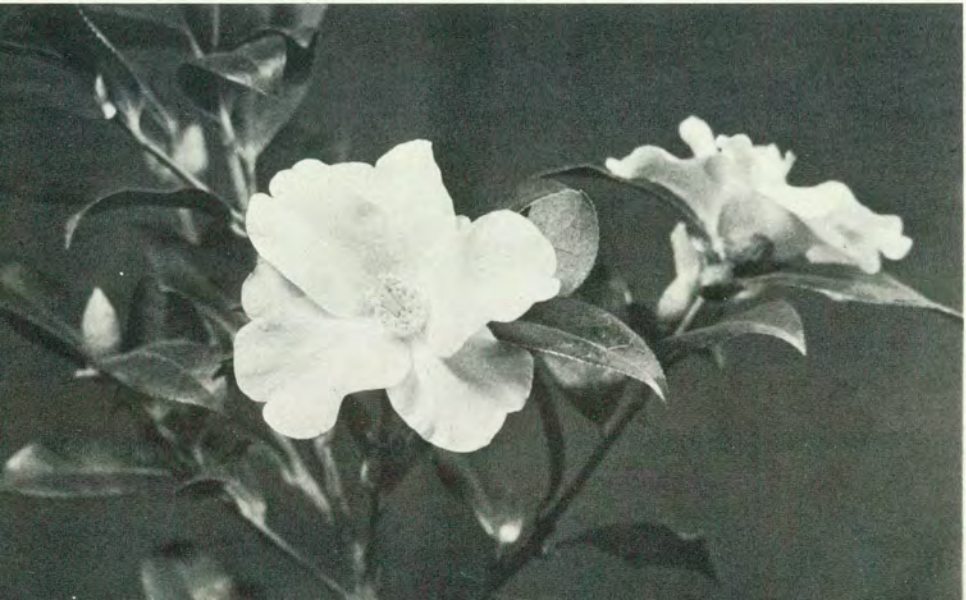
growth, when foliar feeding can also be an advantage. Every care should be taken to avoid draughts, and London with the walls of its tall houses is full of draughts. Mr. MacIntyre made an experiment by placing a large and healthy pot plant of a *C. japonica* in a very draughty position. By early spring the leaves of this plant had turned a bilious yellow and the plant looked thoroughly unhappy. Other camellia plants, which were nearby, but sheltered from draughts, remained in rude health.

Many persons are concerned at the thought of watering camellias with London water, which they claim is limey and has a flavour of chemicals. This may be so, but for years it has been used at Buckingham Palace and the Royal and other parks and by private individuals without an ill effect. Sometimes it may leave a light grey deposit on the leaves of plants grown under glass, but again without any ill effect.

I wish to express my appreciation of the help given me in preparing this article by the Earl of Rothes, Mr. F. C. Nutbeam, Mr. F. T. Helliar and Mr. A. D. MacIntyre.

Photo: David Trehane

Fig. 50—Camellia 'Flirtation' (see p. 123).



CAMELLIA HYBRIDS FROM THE U.S.A.

By DAVID TREHANE

LEST the reader, contracting from the title the modern disease of galloping assumption, should expect to learn from me exactly which new hybrid from the U.S.A. will thrive in his particular microclimate in the British Isles let me, at the outset, define my position and purpose.

I am but a nurseryman, in the most literal meaning of the word, shepherding into the Old World the best choice I can make of the myriad camellias originating in the New World, mainly California, passing them on in immaturity, after a harsh upbringing, to people seeking them, and subsequently learning from them how well or how badly they do in such different conditions as prevail in Cornwall, Ireland, Hertfordshire, Derbyshire, London and elsewhere outdoors, and also in glasshouses.

I am often asked why this information is not available before new varieties are listed. The answer is that people will not wait. There is a race on between camelliophiles to keep up with the Joneses (but Jones is spelt with a large L) or to get in front. Besides, so many people are finding camellias the ideal plants for greenhouses with no more than frost protection.

In writing about newer cultivars of *C. japonica* raised in the U.S.A. one could start with the general statement that many are hardier than most of the old European and Japanese camellias and, from experience with quite small plants in pots, one could list many of proven reliability and superiority. It is too soon to do this with many of the hybrids. The outpouring is only just coming into spate. Also, they do not reveal their qualities so early or so faithfully in pots.

Therefore, this must be an outline of the objectives of the breeders, the lines of breeding which are being followed, and the expectations which they encourage, with here and there a direction sign indicating a winner.

OBJECTIVES

The objectives can be stated as: (1) improvements in form, colour and size of flower, remembering that in the U.S.A. there is a heavy bias towards individual show blooms, (2) cold hardiness, (3) landscape value, (4) fragrance.

These are purposive objectives. Additionally there is a great deal of speculative breeding going on, combining the 27 species available, with each other and with selections of existing cultivars, to find out their potentialities.

BREEDING AND RESEARCH

Research into interspecific relationships is the main work on camellias in the Crops Research Section of the United States Department of Agriculture at Glenn Dale in Maryland.

An ambitious programme, inspired by the California Camellia Research Advisory Committee and backed by funds from Los Angeles County and from private sources, was begun at the Los Angeles State and County Arboretum in 1962 under Dr. Clifford Parks, geneticist, using adequate modern equipment. It covered cold hardiness, identification of hybridity, inheritance of colour and flower form and fragrance and it was linked with a range of sites for testing hardiness, which could have provided information of great value to us in Britain.

Unfortunately this work has now been dispersed.

Because camellias as tender as *C. reticulata* set seed outdoors in California most of the raising of hybrids is done by amateurs or commercial growers, a few such as Howard Asper and David Feathers, working methodically, many just pollen-happy enthusiasts infected with reticulata-mania!

Echoing Harold L. Paige of Lafayette, California, I wonder how much of this surge of effort would have occurred had not J. C. Williams of Caerhays Castle been the pathfinder with *C. saluenensis* and *C. cuspidata*, or if the Kunming reticulata camellias had never been imported. It is, indeed, a reflection on the past, in more than one sense of the word reflection, that a hundred years have drifted by since Mr. Davies, nurseryman of Liverpool, raised, in 1850, the first recorded *japonica-reticulata* hybrid 'Emperor'. True, this was on the threshold of the slide into oblivion which engulfed camellias in both the Old and the New Worlds about 1860, but where is 'Emperor'?

It is a measure of the revival which began about 1950 that in the six volumes of *The American Camellia Yearbook* from 1965 to 1970 inclusive no less than 321 pages are devoted to the problems and progress in breeding new camellias. The same problems occupy much space in *The Camellia Review* published by the Southern California Camellia Society.

Williamsii Hybrids

In discussing the main lines of breeding it is convenient to start with the *williamsii* hybrids, the crosses between *C. saluenensis* and cultivars of *C. japonica*.

Photo: David Trehane
Fig. 51—
Camellia
'Brigadoon'.

There are only eight of American origin in *Camellia Nomenclature*. Of these 'Brigadoon' stands out as a camellia of great quality (Fig. 51). Under glass the semi-double five-inch flowers are clear pink with a fluffy quality. Outdoors, where they should be, the colour and texture are stronger, able to stand up to Cornish rain with a gallant swirl in the petals. The bush has an open upright habit.

'Felice Harris', launched as a *reticulata-sasanqua* hybrid but now recognised as a *williamsii* hybrid, is an upright grower, branching freely, with broad dark matt leaves, flowers 3½ inches wide by 2 inches deep, clear cream-pink, darker in the centre of curved upright petals and petalodes; they drop whole.

'Flirtation', a reverse cross, is covered with 3-inch flowers of eight rounded petals of the same colour as 'J. C. Williams' which is of better quality (Fig. 50).

'Demure', single pink with darker shading, has come through the strict evaluation process used by its raiser, David Feathers, and will soon reveal its value over here.

'Williams' Lavender', raised in the U.S.A. from a seed sent from Caerhays, a medium lavender-pink, is used much as a parent because it has good petal texture and a tendency to blue.

Second Generation Williamsii Hybrids

It is in the next generation of hybrids, using a *williamsii* hybrid as one parent, that interest is developing, 'Donation' having special value because of its cold hardiness and quality. Crossed with 'Donckelarii' it

has given rise to 'Charlean', a popular but slightly washy pink semi-double. In 'Waltz Dream', 'Waltz Time' and 'Vilia' the parent 'William's Lavender' is dominant over the *japonica* 'Kuro-Tsubaki'. They are not of great value outdoors in this country. 'Blue Danube', from the same raiser, Mr. McCaskill, is listed as a vigorous rose-lavender but here it is a very pleasant slow-growing ruby-red medium-sized paeony-flowered camellia. 'Blue-blood' is a 1969 introduction not yet seen. 'Rose Parade' is a medium bright formal double on trial. In 'Black Knight', a rose-form double, not yet seen, the black-red of 'Kuro-Tsubaki' is dominant over the *williamsii* parent 'Philippa Forwood'.

David Feathers has a series of second generation crosses with 'Debutante' which includes two promising whites.

The *williamsii* hybrids are the most beautiful hardy camellias outdoors because the blown flowers drop and the bushes look clean. Before breeding further generations with *saluenensis* blood it would be sensible if someone reviewed the F_2 hybrids to ascertain which have inherited this desirable, indeed essential, characteristic and to what extent its inheritance is identifiable. If, in the drive for more sophisticated flowers, it is being lost without cause, and another set of bushes loaded with brown paper is the end product, the effort requires an adjustment of course.

'Sylvia May' and 'Apple Blossom'

Among the hybrids are certain complex camellias which have, hidden behind a deceptive simplicity, a rich storehouse of quality and variation in form, a storehouse which can be opened by the right talisman.

'Sylvia May' is one such, reputed to be from *C. cuspidata* × *C. saluenensis* but more likely a form of *C. saluenensis*. Mr. Vernon James is a good example of a breeder identifying a good breeding line in this camellia and following it consistently to get a series of new hybrids which are not world-beaters but good reliable plants which do well in this country.

Starting with seedlings of 'Sylvia May' he introduced 'Spanked Baby' (all his camellias have a lively shade of pink!) in 1956, followed in 1957 and 1958 by 'Robbie', 'Carousel' and the fragrant 'Santa Cruz', like big dog-roses, and one double, 'First Formal'. From 'Robbie' he raised a paeony-form seedling, 'Monterey Sunset' in 1960, then, aiming at fuller flowers he crossed 'Robbie' with 'Dr. Tinsley', a pale pink, to introduce paeony-form 'Dainty Dale', rose-form double 'Julie' and the lovely formal double 'Dorothy James', with picotee colouring, in 1960–61. Crossing 'Robbie' with the variegated pink 'Charlotte Bradford' he raised 'Bonnie Marie', a fine prolific 4-inch anemone to paeony-flowered hybrid in 1959 (Fig. 52b) and 'Edna Raley', semi-double to


Photos: David Trehane

Fig. 52—a. Camellia 'Carl Tourje'. (see p. 128). b. Camellia 'Bonnie Marie'. (see p. 124).

paeony, white washed pink, and 'Jimmy James' with a raised petalode centre, in 1960.

David Feathers also raised from 'Sylvia May' the lovely and hardy paeony-form pink 'Monticello', used in the R.H.S. *Year Book* of 1961 to illustrate his article on Hybrid Camellias.

He has also used a similarly obscure hybrid 'Apple Blossom', a pink and white single reputed to be *japonica* × *saluenensis*, to obtain 'Salab', a promising pink paeony flower, by backcrossing to *saluenensis*. Crossed with 'Buddha', 'Apple Blossom' gave rise to 'Francie L', a most important combination of *saluenensis* and *reticulata*.

Saluenensis/Reticulata Hybrids

There must be little doubt that anyone keen on camellias who sees the Kunming *reticulata* forms in Her Majesty's greenhouse in the Savill Garden, Windsor, covets them and, if he himself has a greenhouse, is frustrated by their dimensions or, if he has not, is put off by their tenderness. From the nurseryman's point of view they are a menace because of their virus content. The obvious objective must, therefore, be the raising of hybrids which combine the flower forms of the Kunming camellias with the hardiness and bushiness of the *williamsii* hybrids and the range of colour of the *japonica* cultivars.

Camellia saluenensis is so much better than *C. japonica* at the conversion of light and heat into flower buds, and so powerful in transmitting this efficiency to its offspring, the *williamsii* hybrids, that they alone are able to complete both growth and flowering in Scotland in an ordinary season.

But who, seeing *C. saluenensis* defoliated in the 1962–63 winter, would also have attributed to it a power greater than that of *C. japonica* to confer hardiness on its hybrid progeny? And yet it is so, with 'Donation' derived from *C. saluenensis* × *C. j.* 'Donckelarii', and with 'Cornish Snow' derived from *C. saluenensis* × *C. cuspidata*.

Is it equally so with *C. saluenensis* × *C. reticulata*?

The evidence points that way. The English hybrid 'Leonard Messel', derived from *reticulata* × *williamsii* 'Mary Christian', has been for some years the most reliable producer of blooms of reticulata character outdoors. The American 'Francie L', *C. saluenensis* 'Apple Blossom' × *C. reticulata* 'Buddha', is hardy enough to come through the past two winters as small plants outdoors in Dorset, to produce flower buds on plants 18 inches high and great semi-double flowers with rose-carmine wavy petals (Fig. 53). But it is not bushy, it goes straight up, and it has rather ugly puckered, almost lanceolate, leaves when young; later they broaden attractively.

'Innovation', raised by David Feathers from 'Williams' Lavender' × *r.* 'Crimson Robe', is also hardier than *reticulata.* It has large wine-red paeony flowers resembling the New Zealand 'Highlight', which is *reticulata* 'Purple Gown' × *saluenensis.* Another desirable flower coming along is 'Black Lace', 'Donation' × 'Crimson Robe', a dark velvet-red double 4½ inches × 1½ inches in the U.S.A. It will be interesting to see if this is equally hardy and easy to raise from cuttings. A different colour break was registered, under the name 'Dr. Louis Polizzi', in January of this year by the raiser, Mrs. Ferol Zerkowsky. It is a 4-inch × 2½-inch semi-double to paeony flower, white towards the centre, with shades of pink darkening towards the ends of the waved petals. Parentage is *C. r.* 'Captain Rawes' × *C. saluenensis.*

It is noteworthy that the hybrids between *C. saluenensis* and *C. reticulata* generally inherit the smaller leaves and neat foliage of *C. saluenensis*, only 'Francie L' having a job to make up her mind!

Photo: James Smart

Fig. 53—
Camellia 'Francie L'.

JAPONICA/RETICULATA HYBRIDS

There are about 22 *reticulata* seedlings named and available from the U.S.A., and about 19 *japonica* × *reticulata* hybrids. I have before me coloured slides, kindly sent me by Mr. David Feathers, of 12 *reticulata* seedlings, 3 putative hybrids and 13 *japonica* × *reticulata* hybrids, all new. Among a series of crosses between 'Lady Vansittart Red' and 'Crimson Robe', Mr. Feathers has some outstanding flowers, one of which, named 'La Belle France', is a unique colour break in *reticulata* camellias. It is a bushy grower with heavy broad recurving petals, white with liberal flecks and stripes of deep red, making a great semi-double flower with a fine column of stamens. The same raiser has brought a white of high quality into this group in 'Cresta Blanca'.

The salmon-pink paeony-flowered 'Howard Asper', with its big floppy leaves, has already reached the Camellia Competition at Westminster. It will be interesting to measure the impact of Mr. Asper's five-inch luminous apricot-pink semi-double 'Vallee Knudsen', the hardy red semi-double 'Diamond Head', 'Fire Chief', and the single 'Satan's Satin', the formal rose-bud centred 'Valentine Day' and the semi-double carmine pink 'Bernadette Karsten', which the lady of that name mercifully reprieved from the appellation "Two-Ton Tony".

Now this particular camellia provides an example of uncertain origin which may bedevil the future of *reticulata* hybrids.

The May issue of *The Camellia Review*, published by the Southern California Camellia Society, contains an article by Harold E. Dryden on "The Frank Maitland Reticulata Hybrids", which have attracted attention particularly because some of them, the "Mist" hybrids, have an iridescent rose-pink sheen. There are seventeen listed under names or numbers. However, the reader learns that these are putative hybrids from open bee-pollinated flowers. They may not be hybrids at all. They include 'Bernadette Karsten' and 'John Taylor'. This may not matter on the show table but it may matter a great deal where hardiness is a factor. Whatever show classification is adopted it is to be hoped that the work, begun by Dr. Parks, of identifying hybrids will continue, and become a routine, so enabling Mr. Woodroof's great biennial publication *Camellia Nomenclature* to retain its pre-eminence as an authoritative work of reference for all countries where camellias can be grown.

This is probably the place to mention a more modest, but gay, camellia, 'Freedom Bell', which attracts attention. The burning easterly gale of early June polished off the last flowers on a bush in my garden in Cornwall. The first blooms, semi-double, with widely spaced recurving petals, very like the red Portuguese form of *C.* 'Magnoliaeflora' called 'Magnolia', opened in March. They form so freely that the stiff upright bush is slow growing.

Sasanqua/Reticulata Hybrids

Hybrids between cultivars of *C. japonica* and *C. reticulata* are pretty easily come by in the climate of California, where the 60°F required for pollination is available outdoors and they seed freely. Not so with hybrids between *C. reticulata* and *C. sasanqua.*

The three available, "The Girls", introduced in 1965, were raised by Mr. Howard Asper from 'Buddha' and 'Lion Head' crossed with the *sasanqua* camellia 'Narumi Gata', which is often sold, erroneously, as *oleifera* in Britain. The influence of the apple-blossom pink 'Narumi Gata' is clearly visible in the flowers and foliage of all three hybrids, 'Dream Girl', 'Flower Girl' and 'Show Girl', but the flowers are very much larger, 4 to 5 inches across, semi-double and flat, in different shades of light pink, carried all down the branches, looking and smelling like extra strong dog-roses, for they emit the scent of *C. sasanqua.* These flowers shatter when over, making a floral carpet under the bushes, for us an additional source of pleasure but a mixed blessing in those areas of the U.S.A. where one of the control measures of Flower Blight, which we do not have, is the picking up of all dead flowers and petals.

The obvious question is what place have "The Girls" in British gardens? They flower over a long period, but it starts in late autumn so that they are as easily pulped by a white frost as 'Narumi Gata' itself, and it usually is. I think that they will very creditably open the season under glass with a touch of informality before the heavy-weights like 'Grand Jury' usher in Christmas, but I shall try them against a fairly sunny wall of my ruined mansion in Cornwall.

Pitardii × Reticulata

The status of *C. pitardii yunnanica* is debatable but it seems to confer on its hybrid offspring a particular dusky shade of pink as in 'Carl Tourje' (Fig. 52a), a pleasant large semi-double derived from a cross with 'Chang's Temple'.

Hybrids of C. granthamiana

When a camellia as beautiful and rare as *C. granthamiana* is introduced, it is inevitable that it should be crossed with everything available. The result in the first generation is sometimes horrible and the offspring are being hurriedly back-crossed in the hope of something better. Nuccio's Nurseries of Altadena have introduced 'China Lady', bred from 'Buddha' × *granthamiana* and described as a rich orchid-pink very large irregular semi-double, with the beautiful leaves of *granthamiana.* We have yet to see whether she is a lady of the old school or of

the new regime. Except for a few special places, like Tresco, 'China Lady' must be a greenhouse plant.

Fragrance

Mr. William L. Ackerman, at Glenn Dale, Maryland, has bred from *C. lutchuensis* crossed with *C. rusticana* 'Yoshida', a pale pink loose paeony-form camellia with the true osmanthus fragrance of the species. This is a first break-through but, with only ten petals and twelve petaloids and a diameter of 2¼ inches, this flower does not compete with traditional camellias, so that back-crossing is a natural sequence. As with alstroemerias and gladioli, when one attempts to combine the fragrance of small graceful species with the size and colours of large market flowers, the fragrance disappears. Mr. Ackerman reckons it will take ten years to solve this problem in camellias.

It is fitting here to acknowledge with thanks the extraordinary generosity with which the United States Department of Agriculture makes available its new introductions.

Several camellias have fragrance—*C. tsaii*, 'Kramer's Supreme' and other cultivars of *C. japonica*—and they are being used in breeding programmes.

Other Hybrids

There are many other hybrids. Some, such as 'Burma Beatnik' (*japonica* × *irrawadiensis*), are basic breeding material. Dr. Hilsman's 'Milky Way' (*cuspidata* × *fraterna*) probably comes into this category but Sawada's hybrid between *C. japonica* and *C. fraterna* is a little beauty. It is a shrub with twiggy arching branches carrying small leaves, blue-green like *fraterna*, and in each leaf-axil, flowers more closely resembling those of *fraterna*. They are waxy 1½-inch bells composed of ten ivory petals suffused with pink. Small plants have come through many frosts of 14 to 18°F but I believe that to make 'Tiny Princess' look really happy and at home the right place is a greenhouse or a sheltered moist corner. For me this means a raised bed in my ruins.

Conclusions

Perhaps I may be forgiven for drawing from this rather sketchy and anticipatory review of hybrids in the U.S.A. some conclusions relevant to the British Isles.

The first point I would make is that hybrid camellias from the camellia belt need testing for hardiness and quality and this involves two assessments, one of merit, both planted out and in pots, under glass and a separate one of merit outdoors.

Merit under glass can be assessed in one large wide-span glasshouse.

It could be in the centre of London or one of the London parks. What a sight, an attraction, it could be!

The second point, which follows, is that testing outdoors needs to be tackled methodically and it needs to be done, not only at Wisley but also in a London park, in Eire, in Yorkshire, in Scotland, in Cornwall, in a midland county and, of course, in Sussex. The information required can be assembled in a lengthy, haphazard way by a survey of one's customers successes and failures but this is in no way comparable with the assembly, management and recording of collections in a few strategic locations.

The thoughtful breeders in the U.S.A. have realised the need for this and made progress in organising the testing of seedlings, raised in California, in colder parts of the U.S.A. under conditions more like our own. I believe that nothing short of this arrangement in Britain can be commensurate with the tremendous offering of new hybrids from the U.S.A., the mounting enthusiasm for them in the British Isles, and the number of question marks they occasion.

ITALIAN CAMELLIAS, 1969*

COLONEL T. DURRANT, D.S.O., M.B.E., T.D.

(*Rotorua, New Zealand*)

ITALIAN gardeners and nurserymen played a very important part in the 19th-century development of the genus *Camellia* in Europe, and camellias from Italy are now grown throughout the world, in countries as far apart as Soviet Russia and New Zealand. The names 'Paolina Maggi', 'Bella Romana', 'Vergine di Colle Beato', 'Il Cygno', 'Giardino Santarelli', 'Elena Nobile', 'Dionysia Poniatowski' and 'Angela Cocchi' are just a few of the varieties of Italian origin which are still widely grown.

Many more are probably still with us, masquerading under names which they have acquired in the many different countries in which they are grown. Quite early in the 18th century the tea plant, *Camellia sinensis*, was being grown in Italy, as witness this letter, written from there in July 1748, by the famous English diarist and letter-writer, Lady Mary Stuart Wortley-Montague. Writing to her son, Edward Wortley, she says: "I am much pleased that you accustom yourself to Tea, being persuaded that the moderate use of it is generally wholesome. I have planted a great deal of it in my garden, which is a fashion lately introduced in the country, and has succeeded very well. I cannot say it is as strong as the Indian; but has the advantage of being Fresher and, at least, unmixed."

Unlike most of the rest of Europe, camellias in Italy were grown in the open ground in gardens and though they went out of fashion by the end of the 19th century, as they did everywhere else, many thousands of the old plants survive, especially around Lake Maggiore in Northern Italy. In 1955 Captain Neil McEacharn, the owner of the famous Villa Taranto, wrote: "The climate of Lake Maggiore is perfect for camellias and there are large specimens in the gardens of many villas. In most years there is no rain during the flowering season and late frosts are unusual, so the blooms do not get damaged.

"Camellias are certainly among the most hardy of our evergreen shrubs here and have proved remarkably good all-round plants. They stand the hot summers in full sun; they resist the cold winters and the lashing winds. In 1953, when we had a drought from October 28 until April 14, they never suffered, in spite of the fact that we were unable to water them, as in winter our reservoir and water system are emptied because of the frost. That winter I lost many plants which are usually

* Reprinted from the *New Zealand Camellia Bulletin*, 1969, vol. vi, part 4.

considered perfectly hardy, but not one Camellia." (*Rhododendron and Camellia Yearbook 1955*, R.H.S., London).

Maggiore is one of the great subalpine lakes which were carved out by glaciers during the Ice Age. It lies in the foothills of the Alps at a height of 640 feet above sea level and extends northwards for 40 miles from Arona, with its northern end at Locarno in Switzerland. It fills the floor of a great valley and is surrounded on three sides by hills and mountains. The area has a long, interesting and turbulent history which we cannot deal with here, but its natural beauty, recognised and praised in ancient literature, led to it becoming a very fashionable resort in the 18th and 19th centuries.

The steep shores of the lake are studded with villages and small towns and, in the favoured positions, are endless numbers of great villas and houses, mostly in the baroque style with imposing façades, coloured walls and red, pan-tiled roofs. They were built in more leisurely and spacious days when domestic labour was cheap and plentiful. Nowadays, they have an air of gentle age and senescence, though many are still owned by the families that built them and used in the summer season. In the gardens of these houses and of the island palaces owned by the Borromeo family, are literally thousands of fine camellias, many of them of great age and these are what brought us to Lake Maggiore.

We flew from London to Milan on March 28 and were met by the president of the Societa Italiana Della Camelia, Dr. Antonio Sevesi, who was our most kind and generous host during our short stay in Italy. The Italian Camellia Society was formed about six years ago and, under the enthusiastic guidance of Dr. Sevesi, it is carrying out a very effective programme to re-arouse interest in the fine, old plantings of camellias and to introduce some of the newer varieties which are now being produced in other countries. Research is being carried out into the origins and identities of the old varieties, hampered somewhat by the almost entire absence of old catalogues and records.

From Milan we made a very rapid 40-mile journey along the Autostrada to Arona at the southern end of Lake Maggiore and were met by Professor Bruno Caraffini. Here we had our first taste of the delightful gourmet level food and drink which were a fascinating part of this visit —my notes record that we drank a bottle of Lacrima d'Arno Melini 1965 while Bettie mentions bananas flambe in liqueur brandy! Both most delicious and mouth-watering but neither conducive to serious notetaking and accurate photography in the gardens to be visited immediately afterwards.

Most of the gardens we saw were at least 100 years old and many much older. The hilly shores of the lake provide dramatic changes of level, steep slopes and, in many cases, streams cascading down through the gardens. There were some impressive combinations of the very formal Italian style with trees and shrubs trained into architectural shapes

and mature trees, now of great size, arranged in a very natural manner. The houses and gardens are large and enjoy magnificent views of the lake and surrounding mountains, while the effect on the climate of the large area of water enables an astonishing array of plant genera to be cultivated successfully.

The whole area around Maggiore is a plantsman's paradise. The very first impression one gains is of the immense size and variety of conifers of every kind, sort and description, all of them thriving and adding character to the landscape.

We saw many fine examples of the genus *Cedrus*; *atlantica*, *deodara* and *libani*, including the blue, golden, pendulous and even prostrate forms. When one remembered the highly prized specimens of *Sciadopitys verticillata*, which in New Zealand one usually sees about one foot high on rockeries, it was a little startling to meet one at Maggiore which was 40 feet high and still going! During the period when these gardens were being made, the plant treasures of the world were being brought to Italy and even those of New Zealand and Australia are represented by numerous species of *Eucalyptus*, *Acacia*, *Podocarpus*, *Dacrydium*, *Cordylines* and the tree ferns.

One of the most striking trees we saw on that first afternoon was a 40 feet high specimen of *Sophora japonica* var. *pendula*. Standing on the edge of the lake, its bare and twisted branches made a quite fantastic pattern against the sky. It is, of course, a cousin of our Kowhai (*Sophora tetraptera*) which added to its interest.

Magnolias are everywhere well represented and the evergreen varieties have sometimes been trained into strange shapes. We saw one *M. grandiflora* trained into an absolutely symmetrical beehive about 35 feet high and as many across. *Magnolia stellata* and *M. denudata* were in full flower and looking very beautiful while, in many places, large masses of *Edgeworthia papyrifera* were adding pale golden colour to the display.

The late, cold spring, which we had already experienced in England, was also affecting Europe and, though our visit had been timed to coincide with the normal peak flowering period of camellias, we saw very few of them in bloom. Only the earlier varieties were flowering, except in extremely sheltered or favoured places. A high proportion of the camellias were planted in the middle of the 19th century and were all of great size.

C. japonica 'Alba Plena' was met frequently, flowering well and sometimes showing branches of its fimbriated sport. 'Paolina Maggi', 'La Pace', 'La Pace Rubra', and 'Contessa Lavinia Maggi', all in old plantings in New Zealand, were seen here in their country of origin and easily recognisable.

We stayed at Pallanza on the lakeside and from there were taken to visit the three islands owned by the Borromeo family, Isola Bella, Isola Madre and Isola dei Pescatori. The Borromeos are an ancient and noble

Italian family and have owned these islands since the early 16th century, holding many important positions in Church and State.

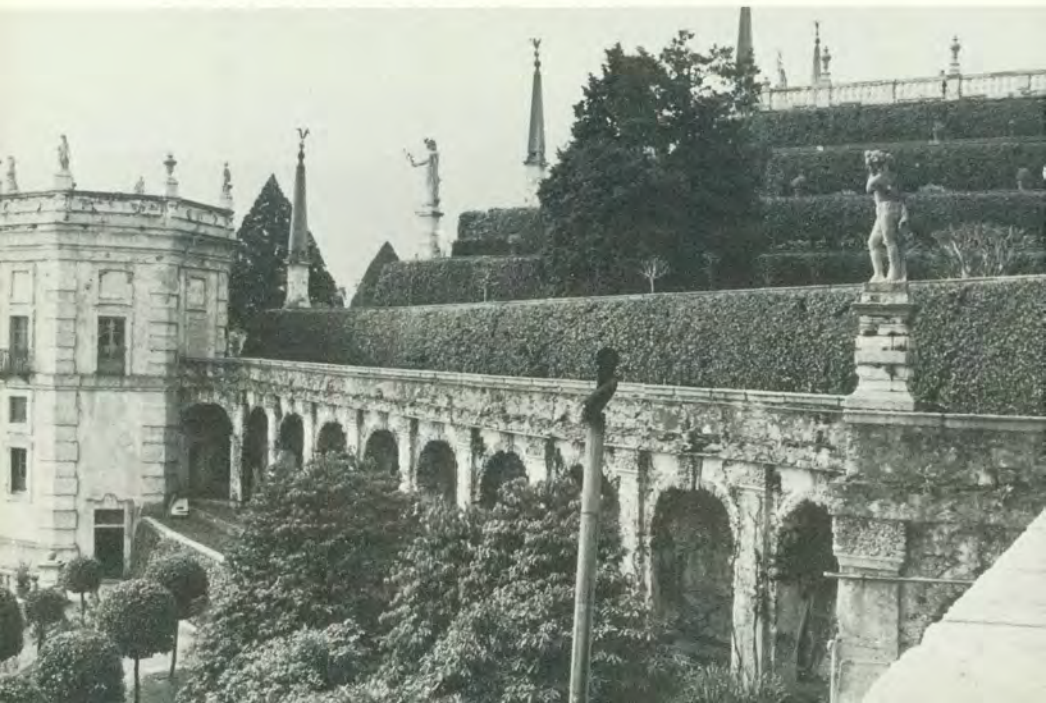
Isola Bella has a great palace and a quite fantastic garden which is a unique example of the baroque Italian style. The palace has State apartments filled with art treasures; many famous people have stayed there, including Napoleon with his General Staff during the 1797 Italian Campaign, Queen Victoria of England and, in 1935, Mussolini, Ramsay MacDonald and Pierre Laval, who held their Stresa Conference on the future of Europe in the great hall of the palace.

The grand design of the island can be best described by borrowing some lines from the official history, of which we were kindly given a copy.

"The palace and garden were conceived, from the very beginning, as a single creative effort. This purposed the transformation of the island into an imaginary pleasure ship, in placid repose, on the blue expanse of the lake . . . The island was subjected to a new kind of creation. Its altimetry was corrected in order to make room, in addition to the palace, for ten superimposed terraces in the form of a truncated pyramid, on the example of the ancient hanging gardens of Babylon. The terraces were hedged in by high espaliers covered by laurels and evergreens (mostly camellias, see Fig. 54) as well as by parapets adorned with monumental vases of citrus fruits and flowers. Every terrace had

Photo: T. Durrant

Fig. 54—Clipped camellia hedges at Isola Bella.



its own garden which was often embellished by pools and fountains. "The latter were supplied with water from an enormous reservoir installed and hidden under the surface structures . . . On this fantastic ship, one of the most elaborate creations of the Italian gardens of the baroque period, the gardens of the various terraces had, in the beginning, a function more imitative than decorative: they were supposed to simulate the ship's smooth, covered surfaces."

The 1906 plant catalogue, which refers to both Isola Bella and Isola Madre, only lists 30 varieties of camellias but one has the impression that there are many more than that, including a substantial number of single flower forms, which are probably locally raised seedlings. There are numbers of fine specimen camellias, including *C. reticulata* 'Captain Rawes', but one of the many striking features of this remarkable garden is the extensive use of camellias as espaliers and clipped hedges. The picture on page 134 (Fig. 54) shows a corner of "the great ship" with its many decks or terraces. The mophead trees at the lowest level are citrus, showing golden fruit among the dark leaves. Immediately above them are camellias and some rhododendrons allowed to grow naturally while above the line of the arches can be seen some of the long, clipped camellia hedges which clothe the terrace walls. Each of these is about 16 feet high and runs for many hundreds of feet. It seemed a little strange that they had been clipped just before they were to come into flower, though closer inspection showed great numbers of flower buds among the branches. The picture also shows a few of the hundreds of statues, pinnacles and balustrades which are among the architectural features of this garden.

On Isola Madre is another palace, built in 1620, and a very beautiful garden. It has some stone-paved walks, and terraces, but in a spacious and natural setting there is a great collection of rare trees, shrubs and plants brought together from all over the world.

We came to Isola Madre in a high-speed launch, after a gourmet lunch in a famous restaurant on Isola dei Pescatori, the Isle of the Fishermen. Landing at a stone jetty, we came through the wrought-iron gates to be greeted by flowering camellias, flourishing in full light and exposed to the strong winds from the lake. There was a long line of them extending round almost two sides of the island and many different varieties. Most we could not recognise but, here and there, were old friends such as 'Alba Plena', 'Fimbriata', the ancient 'Variegata' (of which we have only ever found one example in the old plantings in New Zealand), 'Elegans', 'Donckelarii' and 'Paolina Maggi' with its sports. The camellias were about 10 feet apart, and almost all of them in excellent condition (Fig. 55). Australian acacias, callistemons and eucalypts were present in considerable variety in this part of the garden.

In the centre of the island, protected from the wind by high hedges and trees, were large plantings of rhododendrons, azaleas, camellias and countless other species. Many of the *indica* azaleas were of

immense size—7 or 8 feet high and 14 or 15 feet across. There were camellias growing in sheltered positions, some 25 feet high and with glowing red flowers. Planted in grassy glades of extraordinary beauty were rare trees and shrubs of many species—so many in fact, that detailed description is impossible.

From another jetty and through a fine pair of old iron gates, there is a long stone-flagged path which rises up gentle steps and through high clipped hedges of camellias and other evergreens, to the broad square in front of the palace. Dominating this is the world-famous and magnificent specimen of *Cupressus cashmeriana* 'Glauca' which is about 60 feet high and 72 feet across. It is a wonderful blue colour; its huge size and pendulous habit making it a remarkable sight and well worth a very long journey to see. Tall camellias, magnolias and many azaleas and rhododendrons, backed by conifers and deciduous trees, complete the square which has a broad gravel walk and a low stone wall around it.

Isola Madre has a remarkable collection of rare birds, including parrots, parakeets, snow-white peacocks and Chinese pheasants. They are all very tame, fed regularly and unable to fly away because of the distance from the shore. The peacocks and some of the pheasants, Silver, Golden and Lady Amherst, had obligingly posed for photographs at short range but it was on our way back to the jetty that we saw something we shall never forget. When we reached a small glade

Photo: T. Durrant

Fig. 55—The long camellia border at Isola Madre.

surrounded by trees and many azalea bushes, our guide threw out a couple of handfuls of grain and gave a low whistle. Immediately eight or ten hen pheasants appeared from among the azaleas and began to feed. Seconds later about a dozen Lady Amherst cock pheasants came, half-running and half-flying, into the clearing. They were magnificent in full breeding plumage and, for a few moments, they ran, danced, postured and displayed in a fantastic ballet of movement and colour, shining in the golden light of the setting sun.

Villa Taranto, near Pallanza, is a botanical garden of world renown which was given to the Italian State on the recent death of its owner, Captain Neil McEacharn. The collection of trees, shrubs and plants covers an astonishing range and the 1963 edition of the catalogue contains over 8,500 entries. The garden is about 100 acres in extent and has a great deal of geographical feature, some of which was substantially modified by Captain McEacharn when designing the layout (Fig. 56).

As in most of the gardens around Lake Maggiore, the first impression at Villa Taranto is the magnificence of the conifers of which there are literally hundreds of species, including some from New Zealand. *Podocarpus*, *Dacrydium*, *Sophora*, *Pseudopanax*, *Dracophyllum* and even *Libertia* are among the many New Zealand genera included.

The magnolias, many of them fine specimens, included 50 species and varieties while the Genus *Rhododendron* is represented by over 500

Photo: T. Durrant

Fig. 56—Camellias in a shady situation in Villa Taranto.

entries in the catalogue. It is beyond the scope of this article to attempt a detailed description of this splendid garden which has areas treated in the formal Italian manner, water gardens and fountains, and trees and shrubs used in the grand landscape style of large English gardens.

Our brief visit had to be concentrated on the camellia collection which has over 200 catalogue entries. It was interesting to note a substantial number of varieties raised in Australia, including our old friend, 'Spencer's Pink'. These are a relic of the period Captain McEacharn spent in Australia when he was exiled from his Italian property during the Second World War.

It was very interesting to see a large plant of 'Vergine di Colle Beato' with many seven-spiralled flowers. A very large example of the true 'Anemonaeflora' looked most unusual. It had leaves and flowers only on the extreme periphery, the interior branches had been pruned away and the bright red flowers were positively sparkling in the sunshine. We noted some good examples of some of the old varieties grown in New Zealand. Among them, 'Alba Plena', 'Fimbriata', 'Gloire de Nantes', 'Ville de Nantes', 'Great Eastern', 'Imperator', 'Magnoliaeflora', 'Leviathan' and 'Hana Fuki'. *Reticulatas* were represented by 'Captain Rawes' and the hybrids only by 'Donation'. The newer American japonicas have not yet reached Villa Taranto but, with the current wave of interest in camellias in Italy, no doubt they will soon do so.

There were still some exciting things to see at Maggiore: in a lakeside garden were many great old camellias, 150 or more years old; among them, one with a trunk 70 inches in circumference and two fine 'Alba Plena' over 40 inches round the base.

At Cannero, near the headquarters of the Italian Camellia Society, we were entertained to lunch by our host, Dr. Sevesi, at his summer villa. This is on a very steep hillside and much of the garden is in a ravine with overhanging trees and a small stream cascading among rocks and ferns. We had to go to Italy to realise just how good *C. japonica* 'Magnoliaeflora' is and here was a magnificent specimen of great size and age with enormous numbers of perfect flowers. In some nursery beds nearby, Dr. Sevesi has young plants of many new kinds of camellia.

Back in Pallanza, we visited Signor Piero Hillebrand's nursery, about whose reticulata seedlings we reported in an earlier article. Propagating camellias by cutting has, apparently, almost disappeared as a practice in the Italian nursery trade, which has relied on the very extravagant method of aerial layering. Signor Hillebrand has tackled cutting propagation with very excellent results and we saw some impressive batches of very well grown young plants. Care had been taken to ensure ample space for roots to develop—a basic requirement for good, mature plants and too often neglected in common nursery practice. This nursery has a hillside garden nearby, on the terraces of which are large numbers of stock plants, all carefully mulched with sawdust. The most

remarkable plant was a fine and thriving specimen of *Camellia maliflora*, something one sees very rarely in the southern hemisphere.

For our final garden visit, Dr. Sevesi took us back into the 19th century. Among the Italian nurserymen who had developed and introduced many fine camellias, the Rovelli Bros., of Pallanza, were regarded as very important. Their nursery was long since out of business and even the site of it no longer remembered. Searching in the area Dr. Sevesi came across some old trees and a great mass of creepers and brambles. Breaking through these, he found over 150 great old camellias and subsequent entries confirmed that this was indeed the site of the Rovelli nursery.

Here were gigantic camellias of the size and vigour we expect to find in old settlers' gardens in New Zealand. Not many were flowering when we saw them, though some old favourites were showing blooms. There were several large examples of *C. sinensis* (the tea plant), some sasanquas 25 feet high and the largest ever *C. maliflora*, at least 15 feet high and measuring 16 feet across. This was just a solid mass of flower buds and must be a spectacle when in bloom.

Such a large collection of old camellias is of enormous interest and importance and there is a fascinating task awaiting in the cataloguing and identification of all the varieties. It is hoped that the old plants can be preserved but it is important that they should be propagated and kept together as a 19th-century collection for future reference.

This article, and its illustrations, can do no more than convey a very faint impression of the gardens and camellias of Lake Maggiore. For us it was an unforgettable and fascinating experience, not only because of the many beautiful and interesting things we saw, but for the kindness and warmhearted hospitality we received. We record our sincere gratitude to the many people who helped us, showed us their gardens and entertained us so generously. To Professor Bruno Caraffini of Arona; Dr. Vallenzasca, of Isola Bella; Dr. Antonio Cappalletto, at Villa Taranto; and, especially, to our friend, Dr. Antonio Sevesi, who arranged everything for us and entertained us throughout, we are very deeply grateful and hope that we may see some of them in New Zealand.

Finally, many thanks to a very gracious lady, Signora Allesandra Anelli, who not only entertained us but acted as interpreter on more than one occasion.

FLOWERING OF CAMELLIAS IN 1970

By G. H. PINCKNEY

IT was a very late season for camellias with me this year, and nothing much showed any colour before mid-April.

'J. J. Whitfield' (dark red, paeony form) was first to open in woodland cover in mid-March and continued flowering throughout the late frosts.

The *williamsii*'s—single pink—showed their first flowers on 20 March and were slightly frozen, but subsequently made a fine show. I would like to see more people growing these as ornamental hedges. An old plant of 'Apollo' on the north wall of the house was first out with a dozen flowers at the top; it is now some 12 feet high and sheltered by the eaves.

April 12 brought the first flowers of *C.* 'Inspiration' (*reticulata* × *saluenensis*), and this in my opinion is a first class garden camellia. It is upright in growth and shows its flowers without any drooping, continuing in flower almost longer than any other camellia. To my mind it is a better garden plant than 'Donation', though some may consider the rather mauvish tint of the flower not so attractive. Give me growth and habit, and I will sacrifice some small failing in colour.

Some three days later came 'Mathotiana', well known to all, but probably not a good outdoor garden camellia, 'Frosty Morn', a superb double white, and 'John Bell'. *Reticulata* 'Capt. Rawes' and 'White Empress' all showed flower. Most whites, however, suffer from damage in their flowers either from frost or heavy rain.

April 16/19 produced the first mild spring days and showers, but this was unfortunately followed by 4° frost on 28 April just when the daffodils were at their best.

At the end of April everything seemed to flower. 'Apollo', a semi-double with a boss of lovely yellow stamens, was at its best. This is one of my favourites as it lasts so long in flower (2 months). 'Leonard Messel' (*reticulata* × 'Mary Christian') very deservedly received an F.C.C. this year. Its parentage, I feel, is somewhat suspect, as though it has distinct *reticulata* foliage I would have thought its other parent is more likely to be a pure *japonica* variety, rather than *saluenensis* × *japonica* as is 'Mary Christian'. You may suspect that it is slightly tender but not at all. This hybrid, raised at Nymans and introduced by Waterers, is in my opinion one of the finest outdoor garden camellias and won many awards already in the U.S.A. My own plant, one of the original grafted stock, is now 8 feet high and 6 feet wide. Planted on the north side of the house, where even the early morning sun reaches it, it

flowered magnificently this year. I weighed six flowers and on reckoning the number on the bush I estimated that it held ½ cwt. of blossom.

A large bush of 'Coquettii' was in full flower by the end of April. A formal double red of good foliage and compact habit and a very regular bloomer. Its only fault, as the Americans describe it, is that it "shatters". The flowers just fall off as soon as they mature.

After them came 'Guilio Nuccio', a large red semi-double, another excellent variety; it is a very strong grower, and needs plenty of room, furnishing itself well to the ground. 'Betty Sheffield', 'Drama Girl', a slightly blousey, large semi-double deep salmon rose pink—of vigorous pendulous growth. 'Carter's Sunburst', a large semi-double flower pale pink striped deeper rose-pink and medium compact growth. 'R. L. Wheeler' is a very large semi-double rose-pink with a solid circle of stamens; vigorous upright growth. Slightly later comes a good New Zealand variety 'E. G. Waterhouse', a medium formal double light pink which has a vigorous almost fastigiate growth. 'Mrs. D. W. Davis', blush pink is a very large semi-double and although described as compact upright growth in *Camellia Nomenclature*, sprawls with me. A magnificent flower in indoor culture but I am afraid it will never make a successful garden plant in this country.

Last of all with me was 'C. M. Wilson', a beautiful and delicate light pink sport of 'Elegans', but with all these delicate colours the flowers suffer from browning unless grown in perfect conditions. There is however a long continuity of bloom.

These are just some of the good garden varieties, but it will take many decades to prove the several thousand named American clones.

A yearly mulch of leaf mould with a little fertiliser before the flowering period—and I use dried blood—is well worth while and please give plenty of water in the growing period.

THE INTERNATIONAL DENDROLOGY SOCIETY'S TOUR, MAY 1970

By SIR ILAY CAMPBELL, Bt.

THE International Dendrology Society, unlike some bodies who use that adjective, is genuinely international, and seven countries were represented when we met for our Spring Tour at the White Hart Hotel at Salisbury, on the evening of Monday, May 4, 1970.

Sharp at 9 next morning we clambered into our bus to drive to Minterne, near Dorchester, in the neighbouring county of Dorset. To many of us this was a return to a well known and loved garden, as it was for so many years the home of our co-founder and first President, the late Lord Digby, whose vast knowledge and pre-eminent plantsmanship played so great a part in the creation of the garden as we see it today.

We were particularly pleased, therefore, to find waiting to welcome us at the front door, not only Lord and Lady Digby who are so ably carrying on his father's work, but Pamela, Lady Digby who lives at nearby Cerne Abbey, where she now has a notable garden of her own.

Readers of the *Rhododendron Year Book* will need no detailed description of the Minterne gardens, where a horseshoe-shaped outcrop of greensand provides an oasis for calcifuge plants amid rolling acres of chalk, for a full account appeared in the 1956 edition. Thus I will confine myself to mentioning some of the rhododendrons and camellias which particularly caught my eye.

To set the scene for us and give us a taste of joys to come, a huge plant of *R. euchaites*, bowed down with flower, was displaying itself near the front door, where there are a large group of both species and hybrids.

But this was only titillation, the entrance to the garden proper is to the south of the house where, passing a robust young plant of *Magnolia loebneri* with its feet in a carpet of fritillaries, we started upon as exciting a walk as a rhododendron enthusiast can imagine!

Great groups of *R. rubiginosum* and *concinnum*, and a mountain of *R. williamsianum* near the stream, were particularly fine, as was an unnamed Minterne hybrid, *wardii* × *griffithianum* × *campylocarpum*, bearing good trusses of pale primrose flowers with back curved rims to the corollas. Another from the same stable is 'May Day' × 'Lady Digby', bright pillarbox red and most effective with the sun shining through.

A species not commonly seen is *R. wasonii*, which combines yellow flowers with a deep crimson blotch, and a cinnamon indumentum below

the leaves. A member of the Barbatum Series under the number K.W. 7189, and obviously close to *R. crinigerum*, it has pink buds, opening to white with a carmine blotch.

Another and slightly different form of *R. euchaites* (F 24091) sprawled up the steep bank in effective abandon while nearby were *R. venator* (KW 6285) and a form of *R. rex* with truly gigantic trusses, somewhat looser in habit than usual, the white flowers tipped with shell pink. There was some speculation as to whether there might be hybrid blood in this magnificent plant.

R. arizelum is a variable species, and I noticed two very distinct forms at Minterne, one under the collector's number KW 8163 has good foliage but rather washy pinky-cream flowers. Not far away, down the hill near the water, is a far more attractive butter-yellow form.

In this area too, I noticed another "house" hybrid, 'Lady Digby', deep red in flower and showing clearly in form and foliage its *strigillosum* (Barbatum Series) ancestry. It has grown to some 18 feet in height and as much as 16 feet across.

The big groups of different forms of *R. augustinii* were just coming into flower, somewhat later than usual, and near them we enjoyed the sight of an old *Camellia japonica* with its masses of small, very clear pink flowers showing up well against dark glossy foliage. Next door is *R. haemaleum*, a very dark form. There are several examples of this attractive member of the Sanguineum Series at Minterne.

An appealing piece of planting consists of a good bright pink form of *R. racemosum*, with several well-known red hybrids, including *R.* 'Siren', backed by a towering white *arboreum* hybrid. At the most southerly part of the garden where the path turns westward to return towards the house, we picked out for admiration a 16-foot high *R. fictolacteum*, a pure white form with dark purple blotch, and *R. metternichii*; while travelling northwards again we passed a floriferous specimen of that superb Cornish hybrid, *R.* 'Alison Johnstone' (*concatenans* × *yunnanense*) and *R.* 'Blue Diamond', looking particularly well against a green background with no other colours to compete.

From a horticultural feast to a gastronomic one, for on our return to the house we found a superb buffet lunch waiting for us, which certainly got the attention it deserved!

The other two gardens visited that day, Melbury House and The Manor House, Cranborne, were equally enjoyable but do not come into the remit of this article as, at the former, rhododendrons are only just beginning to be planted under the great specimen trees, for which it is famous; and the latter, delightfully pretty and full of unexpected treasures, is on alkaline soil.

After dinner at the hotel, Major Peter Barber, Gardens Manager, and Mr. Christopher Fairweather, the Nursery Manager at Exbury, which we were to visit on the morrow, showed us a film of that garden through the seasons, with special emphasis on some of the celebrated hybrids

produced there over the years, and gave us a preview of some of the newer members of the Exbury family.

Early next morning we were in the bus again bound for Pylewell Park, Lymington, home of Mr. William Whitaker, the garden largely planted by his late father, Mr. William Ingham Whitaker, between 1893 and 1936.

A detailed description of the garden, with particular reference to rhododendrons and camellias, appeared in the *Rhododendron and Camellia Year Book 1958*, and so as with Minterne, I will do no more than refer briefly to the plants I picked out as highlights of this extraordinarily representative collection, so well planted and lovingly cared for.

On entering the hall we had a taste of the pleasures in store, being greeted by a glorious *R.* 'Countess of Haddington', in full flower, while in the drawing room stood an even larger plant of *R.* 'Fragrantissimum', more than living up to its name.

As we passed down the broad walk linking the house with the lake, we noticed a fairly recent planting of *Camellia japonica*'s including the pink 'L'Avvenire', and further on a group of rhododendron hybrids. Beyond the gate, with laburnums to the right, we emerged on to a broad area of lawn bordered by rough grass which a little earlier in the season had obviously been a mass of daffodils.

Specimen shrubs and trees are flourishing here, among them the autumn colouring *Nyssa sylvatica*, *Embothrium longifolium*, *Clethra fargesii*, a red flowered form of *Acer palmatum*, the rare *Leptospermum stellatum* and many eucryphias, viburnums and magnolias, including the evergreen *M. delavayi*.

Further on, past tall conifers, among them a magnificent *Pinus insignis*, is another group of young camellias and beyond again an open area with cherries interplanted with hydrangeas, evergreen azaleas, fothergillas and other smaller shrubs. This is one of the few British gardens in which I have seen *Magnolia grandiflora* growing quite happily as a standard tree in the open.

The rhododendron collection is to be found on both sides of the lake, and includes too many, both species and hybrids, for me to attempt to do more than single out a few of the most striking.

Near the gate beyond the bridge spanning the narrowest part of the lake is *Camellia japonica* 'Lady Clare', backed by a large bush of *C. japonica* 'Magnoliaeflora', also a graceful pink hybrid of *Rhododendron desquamatum*, and the white *C. japonica* 'Nobilissima' and *Rhododendron* 'Unknown Warrior' ('Queen Wilhelmina' × 'Stanley Davies'), the branches literally bowed to the ground with the weight of its trusses—these though of superb form are of a hue rather strong for some tastes.

R. falconeri, 15 feet high, looked the picture of health and was just coming into flower. *R.* 'Dr. Stocker' was at its peak, while nearby is a pale form of *R. vaseyi* and *R. arboreum cinnamomeum* of vast height.

Among the *arboreum* hybrids I noticed a particularly lovely shell pink one, while another spectacular rhododendron is 'J. G. Millais' ('Ascot Brilliant' × 'Pink Pearl'), an old hybrid now, but one which has never really been superseded for colour or form.

Among outstanding species are two plants of *R. campylocarpum elatum*, and an impressive 12-foot-high mauvy-pink *concinnum*, which had many of us guessing, so untypical was it in colour, form and height.

A pale yellow 'Penjerrick' was another to catch the eye as was a plant labelled "Aucklandii Rosea", possibly an old cross between *griffithianum* and 'Broughtonii'.

R. auriculatum, which does not always thrive in the south of England, is obviously very much at home in the warm moist Solent climate, as is exemplified by three handsome plants, and the Loderi's, still in bud, were full of promise.

Other notabilities on this side of the lake are a tall and spreading *R. yunnanense* some 15 feet high, a very long-leaved form of *R. barbatum* and *R.* 'Kewense', a hybrid of similar parentage to Loderi, but taller growing and rather earlier to flower.

On the house side of the lake I was glad to see two *R. sinogrande*'s whose two-foot-long leaves gave them a very "West coast" appearance, also coming on well is a young plant of *R. pseudochrysanthum*, and, of quite startling size, a 7-foot-high *R. schlippenbachii* which must measure quite 14 feet in diameter.

Notable hybrids are the good red *arboreum* cross, 'Sun of Austerlitz', 'Lord Swaythling', probably of 'Pink Pearl' parentage, on which it is a great improvement, 'Gill's Crimson', 'Loder's White' × *campylocarpum*, with compact trusses of pink-tipped cream flowers, and the unusual 'William Watson' ('Ascot Brilliant' × *griffithianum*) whose tubular flowers are white with pink stripes. We all felt that the Head Gardener and his staff should be warmly congratulated on the fact that there was no dead wood to be seen on any of the rhododendrons in their care.

So busy was I, making notes for this article, that I lost track of time and so missed the liquid refreshment our kind host provided, before we departed for lunch at the Montagu Arms at Beaulieu.

Exbury, of all English gardens, needs the least introduction to rhododendron enthusiasts—it is, after all, the *fons et origo* of many of the best hybrids over the last forty years. Successful hybrids argue, amongst other things, the presence of the very best forms of the species. That this is the case at Exbury is proved each spring when the Rothschild family carry off so many prizes in the species classes at the R.H.S. Rhododendron Show.

Since the war, under the guidance of Mr. Edmund de Rothschild, with the assistance of Major Peter Barber, Exbury has "turned commercial" in a vast way, enabling the family to maintain the garden, and

to continue with their hybridizing experiments, while at the same time putting the results of their many years of experience and expertise at the disposal of the whole gardening world.

On this occasion we were shown, in addition to the garden itself, the fascinating recent developments in the growing and marketing of trees for city centres and parks, Exbury being in the van in meeting a new but ever-increasing demand. The trees, decorative hardwoods, such as whitebeam, cherries, maples, copper beech and sycamore, are grown to 8 or 10 feet before being sold.

Also on the programme was a visit to the highly efficiently run nursery department administered by Mr. Christopher Fairweather which supplies, wholesale, the products of the gardens to nurserymen all over Britain and abroad.

The garden was clearly suffering from the prolonged drought which had followed a more than usually severe winter and late spring, but even so there were many fine plants full of flower. A young *Rhododendron* 'Prelude' (*fortunei* × *wardii*), a good clear yellow, stood out, as did the pure white *R.* 'Quaker Girl' ('Avalanche' × *hyperythrum*), and *R.* 'Halton' from the same grex as that magnificent *lacteum* hybrid 'Lionel's Triumph'. Most of the seedlings from this cross which have so far flowered are extremely good and there are still some which have yet to show their paces.

Bodnant's *R.* 'Cowslip' (*wardii* × *williamsianum*) was displaying its pastel bells to perfection and *R.* 'Ivery's Scarlet' showed that some of the older hybrids can compete on equal terms with their newer competitors.

Perhaps the finest of all the yellow hybrids produced so far at Exbury is 'Crest'—the most dramatic of the Hawk family ('Lady Bessborough' × *wardii*)—here we saw an established bush, well furnished with buds just beginning to open, and throughout the tour we were to meet this very successful garden plant in many of the places we visited. By way of contrast Carita (*campylocarpum* × 'Naomi'), growing near the pond, is an example of that other colour range in which Exbury has specialised, the cream, buff and peach shades.

Among the camellias I especially noticed *C. japonica* 'Apollo', having a very prolific second flowering, but most of them, including the *reticulata*'s, *saluenensis* and large collection of × *williamsii* hybrids, were going over by the time of our visit.

A particularly graceful *augustinii* hybrid is 'Eleanore', which I was pleased to see, as I have often admired it in the Rt. Hon. Michael Noble's garden at Strone in Argyll where it is outstanding among the smaller-flowered hybrids. A less attractive species in the same series as *augustinii* is *R. searsiae* which was also in flower at Exbury.

R. quinquefolium 'Five Arrows', which won a well deserved Award of Merit in 1958, is a wonderful plant, outstanding among the azaleas. I hope that this clone will become easier to obtain in the trade, now that

the Exbury propagators have come nearer to solving the problem of rooting deciduous rhododendrons.

R. 'Idealist' ('Naomi' × *wardii*), another successful yellow, paler than the Hawks but very effective as a foil for the brighter colours surrounding it, was full of flower, but the big group of *R.* 'Elizabeth' did not seem to be flowering as profusely as is usual with this hybrid. I put this down to its having too much overhead cover.

A large massed planting of *R. ambiguum* × *augustinii* from which the clone 'Candida' was selected was a startlingly lovely sight, pale creamy in general tone, but varying subtly from bush to bush, with touches of pale or deeper orange and pink. Not far away, and just at the end of our tour we came across *R.* 'Paris', of the Naomi family, another good example of a large flowered, peach-tinted yellow rhododendron.

So often, I fear, the gardening public seem to gain the impression that Exbury is devoted almost entirely to the cultivation of rhododendrons and camellias. This is far from the truth, for there is also one of the most representative selections of rare and interesting trees and shrubs, both broad-leaved and coniferous in the country, which as we were lucky enough to have Mr. Alan Mitchell with us on the tour, we were not allowed to miss. He pointed out among other things, the rare *Acanthopanax pictus* (*Kalopanax pictus*) and a group of graceful *Picea breweriana*, planted in 1928.

After tea, we departed for our last night at Salisbury, with happy memories of the great gardens of Hampshire and Dorset.

The first call next morning on our way to Exeter was at Abbotsbury, an old garden belonging to Viscountess Galway, neglected for many years but now, under the direction of a new and enthusiastic head gardener, being skilfully restored to its former splendour.

Lying close to the channel, between Weymouth and Lyme Regis, it is sheltered by a ridge of land from the prevailing wind, gets little frost, plenty of sunshine and enjoys a moist maritime climate.

There are many fine old trees and shrubs, some of them tender elsewhere, and with soil on the acid side of neutral, it is especially suited to the cultivation of rhododendrons. Peacocks stalk the lawns and wide grass walks, adding a very lordly touch to their surroundings.

The first thing I noticed was a truly gigantic pink and white striped camellia. As my wife and I were on our own at this point, there were no experts to call upon to identify it, but we felt it could have been quite a hundred years old, possibly contemporary with the massed banks of *R.* 'Broughtonii' and other hybrids dating from the first half of the last century. In contrast, a new planting of primulas, rodgersias and other moisture loving plants hugs the banks of the stream which runs the whole length of the garden. At one point, overhanging the water, we were struck by a handsome pink hybrid of Cornish Cross persuasion. Near here too is a group of *R. lutescens*, a tall *R. grande*, *R. neriiflorum*

and a remarkable *Magnolia delavayi*, free standing, and even taller than the one at Pylewell.

The mild climate and fertility of the soil at Abbotsbury is well demonstrated by a hydrangea hedge bordering one of the paths, seven or eight feet high, and showing no signs of frost damage to the young growth, though we were told that there had been 12° in the last week of January. Arums, too, grow happily along the banks of the stream, seeding themselves freely.

Overgrown shrubs have been cut back to make room for newer ones planted in front. These include deciduous and evergreen azaleas, and other of the smaller growing rhododendrons, as well as senecios, hoherias, leptospermums, myrtles etc.

Two other aristocrats in this area are a monster *Magnolia campbellii*, still retaining some of its pink flowers and *Viburnum carlesii* some 12 feet high, by as much across.

In the walled garden, as well as an *Acacia dealbata* going over after three months of continuous flower, are an especially good blue *Rhododendron augustinii*, *R. edgeworthii*, a large *niveum* hybrid, a floriferous pink camellia, which appears elsewhere in the garden and has been identified as 'Duchess of Buccleuch'. *Magnolia stellata*, enormous and healthy had, we were told, been planted as early as 1835, and another fine old plant is *Cornus nuttallii*.

Just outside the walled garden we came across a pure blood-red *R. arboreum*, *R. giganteum* is here too, and a good pink *R. davidsonianum*.

There are great potentialities at Abbotsbury which will, I feel sure, be fully exploited in the years to come. The garden is open to the public from March to October from 10 a.m.–4.40 p.m., Sundays 2 p.m.–6 p.m. and is very well worth a visit.

Having spent so long at Abbotsbury we had to miss Dr. Nathan Mutch's unique bamboo garden at Uplyme, and joined the rest of the party at the Talbot Arms there, for what was described in our book of words as a "snack lunch", the description hardly did it justice!

Our next stop was Killerton, an attractive 18th-century house, which, with its gardens and estate was given to the National Trust in 1944 by Sir Richard Acland who, however, still lives in part of the house, and takes a keen interest in the garden which was laid out by his great-great-grandfather, Sir Thomas Acland, in the years following the Napoleonic wars, and has been cared for and improved by successive generations of the family.

An excellent descriptive pamphlet including a plan of the garden, is published by the National Trust, so that here again I will only try and pick out a few of the more impressive plants which were in flower during our visit.

Near the house is a spectacular mass of white *arboreum* hybrids, in front of which japanese evergreen azaleas have been planted. A little

further on, behind a 24-foot-high *Magnolia soulangeana* dating from the 1920's, is a fine white double camellia which was laden down with flower.

Most of the rhododendrons are to be found on the steep, south facing slope above the house, where, under the shade of tall trees, they obviously find conditions very much to their liking.

As we wound our way along the many paths which are laid out to enable visitors, without unduly exerting themselves, to see at close quarters the whole collection, we were all, I think, staggered by the health and vigour of the rhododendrons which do not enjoy the same mild maritime conditions as at Abbotsbury and are fairly exposed to wind, though the steepness of the slope must give good frost drainage.

At various points we stopped to admire large plants of *Rhododendron yunnanense*, a particularly fine form of *R. rubiginosum* with larger leaves and flowers than usual, and *R. augustinii*, near which we noticed *Cyclamen repandum* happily naturalised and flowering away contentedly—unfortunately the vigorous spring grass largely hid it from view.

R. delavayi, badly damaged, we were told, in a gale some years ago, was coming up strongly from the root. It is planted near a form of *R. arboreum cinnamomeum* with a much fuller truss than I have seen before on this sub-species. Another of this family is *R. arboreum* forma *roseum*, of a type having cinnamon indumentum below the leaves as opposed to the typical smooth silvery surface. A group of large-leaved species are most impressive and include *R. sinogrande*, *R. hodgsonii* and a promising looking *falconeri* hybrid. *R. venator*, nearby, had grown to large dimensions, 8 feet high by certainly 20 feet across. I have never seen a plant of this size in Scotland, where it does not seem quite as much at home.

Three great bushes of *R.* 'Dr. Stocker', growing together, were just going over, and also worthy of attention was a large trussed *wardii* cross with delightful apricot buds. Three other species near here are *coriaceum*, *eclectum* and *mallotum*.

Japonica camellias do not seem to have been widely planted at Killerton but I saw a floriferous young plant of *C.* 'Donation' in a group of *williamsii* hybrids. Mention must be made, too, of the collection of magnolias, whose spare form of growth seems so perfectly to complement the more chunky rhododendrons. They include *M. campbellii*, *sieboldii*, *dawsoniana* and the rare *fraseri*.

After an overnight stay in Exeter, the first stop on Friday, May 8, was Bicton, between Exmouth and Sidmouth, for four centuries the seat of the Rolle family from whom it has descended to the present owner, Lord Clifton. In 1957 Bicton House and part of the estate was sold, but the gardens and pinetum were retained and are now open to the public from Easter until the end of September from 2 to 6 p.m.

The gardens were originally laid out by Henry Rolle, created Baron

Rolle of Stenenstone in 1748, to designs by André Le Notre, and there is indeed a marked family similarity between Bicton and Le Notre's most celebrated achievement, the formal gardens at Versailles. The view from the temple, across lawns, flowerbeds, statues and ornamental water, down a long vista framed by two fine cedars away into the open country beyond is a breathtaking prospect. This is known as the Italian garden.

Here, as in most of the old-established gardens we visited, we found groups of the tall old hybrid usually known as *R.* 'Broughtonii', developed from crossing the early *ponticum* and *caucasicum* hybrids with the red *R. arboreum*. They must have represented a great "breakthrough" in breeding in the early 19th century—certainly they found their way into most of the notable gardens of the day.

Also in the upper and more formal part of the garden are *R. arboreum cinnamomeum*, a group of *R. viscosum*, apparently a form lacking its typical honeysuckle fragrance, and *R. yunnanense* peeping over a wall and mingling with an ancient "espallied" *Magnolia grandiflora*.

In the lower part, near the stream, are beds of rhododendrons including a very tall *R. thomsonii*, the earlier introduction with its yellow calyx and *R. arboreum*, showing the effects of early spring frost and cold winds, as was the huge pink camellia.

Most recent planting has been concentrated in a wooded valley near the new Countryside museum. Here are to be found a good selection of hybrids, many of Exbury origin, including *R.* 'Fusilier', 'Dusky Maid', 'Dragonfly', 'Major', 'Gina', 'Karkov', 'Impi', 'Marshall' and 'Damozel' and a number of species such as *discolor*, *neriiflorum* and a white form of *R. metternichii*.

From Bicton we drove to Knightshayes, near Tiverton, where Sir John and Lady Amory had most hospitably asked us all to lunch, and what a spread this turned out to be! Afterwards we toured the impeccably kept garden which has largely been developed since the war by our host and hostess themselves, both of whom are immensely knowledgeable and discerning gardeners.

To the east of the house, below stately birches and other trees, they have formed a series of large, irregularly shaped beds, containing all manner of plants, thriving together in happy association. Perhaps what struck me most was, firstly the fact that the Amory's have obviously taken great pains to acquire the very best forms of every species and hybrid they wished to plant, and secondly the sensitive way in which they have combined colour and form to give a universally pleasing effect with no jarring notes. The enthusiastic young head gardener told me that they were quite ruthless in cases where plants did not look well together.

One example of effective colour planting near the house is the combination of a good form of *R. vaseyi* with the white narcissus 'Chelsea China'.

Rhododendrons which caught my eye were a good dark unnamed hybrid, very similar to 'Queen of Hearts' but with more pinnate leaves, a deep yellow Hawk seedling which had come from Mr. Anderson's garden at Porlock, 'Carmen', 'Cowslip' and the red "Waley Hybrid" with its flat trusses of beautifully shaped flowers.

As the annual rainfall at Knightshayes only averages 36 inches it is amazing to see how healthy and vigorous are these plants. It is, of course, necessary to grow them in cultivated soil and thus eliminate competition from weed growth.

There are some good *johnstoneanum* seedlings in various shades of cream, the new dwarf hybrid 'Chikor', made by Mr. Peter Cox of Glendoick in Perthshire, *Camellia* 'Cornish Snow', a big bush of *C. japonica* 'Adolphe Audusson' and the deep red *C. japonica* 'Arejishi'.

Another successful planting is the clever combination of the deep blue *R.* 'St. Tudy', with pale yellow *R. johnstoneanum* and *Camellia* 'Barbara Forward'.

Planting is still going on apace and a whole new area had been laid out in the last 18 months. Here were a group of the deep red, Windsor form of *R. calostrotum*, young *sinogrande*'s making excellent progress, also *R. macabeanum*, *arizelum*, *mollyanum* and *mallotum*.

My wife and I were delighted by the various different colour forms of *R. augustinii*, widely spaced among tall beeches, at that moment in their first flush of young green foliage, and also by a group of pale rhododendrons, including *R. yakusimanum*, *R. aberconwayi* × *hypenanthum*, *R. yakusimanum* × 'Dido' and *R. aberconwayi* × *anwheiense*, all from the Savill Garden, against a background of portuguese laurel and interplanted with the yellow flowered *Euphorbia robbiae*.

In the south garden, below the house, grow *R.* 'Idealist', 'Queen of Hearts' (*meddianum* × 'Moser's Maroon'), 'Cinnkeys', 'Lady Chamberlain', several Hawk clones, including 'Crest', 'Alison Johnstone' and the Windsor hybrid 'Seven Stars' (*yakusimanum* × 'Loderi King George'). Yet another striking grouping is provided by a mass of pink *R. davidsonianum* planted below a vast holm oak with a well flowered *caloxanthum* nearby. Species in this area included a nice compact form of *R. sidereum* with upright primrose trusses, further *augustinii*'s, and the white form of *R. campanulatum*.

Nearly all the Loderi family are represented at Knightshayes, perhaps the best of all being 'Loderi Patience', with deep pink buds opening to pure white.

Before leaving, two further treats were in store, as not only had Lady Amory kindly laid on tea for us all, but we were also able to enjoy Sir John's personal collection of pictures, in the choice of which he has shown the same discrimination as is apparent in the garden.

On Saturday, May 9, a whole day's trip was planned to our most easterly port of call, Dr. and Mrs. G. Barker's amazing garden at East Portlemouth on the east side of the Kingsbridge estuary.

Here in his mild moist climate, with wind his only major enemy, Dr. Barker has, during the last 14 years, gathered a fantastic collection of plants from Madeira, South America, South Africa and Australasia, most of them too tender to be grown elsewhere in Britain, with the exception of Tresco in the Scilly Isles.

An account of the garden appeared in the April 1968 number of the *R.H.S. Journal*, so I will concentrate on rhododendrons and camellias, although perhaps the unique climate has not yet been exploited in relation to the genus *Rhododendron* as much as it might have been.

Alongside the steep drive leading up to the house *Camellia* 'Donation' was in flower, with *C.* 'Cornish Snow', *C. japonica* 'Lady Clare' and *C.* 'Jupiter'. Behind them flourish promising plants of *Rhododendron giganteum* and *magnificum* which I have only seen in such good health at Brodick on the Isle of Arran. Along the paths which wind through the garden itself we noticed *R. edgeworthii*, *oreotrophes*, a large flowered form of *tephropeplum*, various different *augustinii*'s and the pale cream 'Letty Edwards' (*campylocarpum elatum* × *fortunei*).

Shelter planting at Casa di Sole has been all important and this and the incredible luxuriance of growth has tended to impart a rather "jungly" appearance to parts of the garden. To offset this, clearings have been left, with no overhead cover, so that the visitor can get glimpses of the incomparable view across the estuary. In one of these, a clever grouping of both evergreen and deciduous azaleas were just beginning to flower, also the azaleodendron, 'Glory of Littleworth'. I feel I cannot forbear to mention the young plant of *Cornus nuttallii* which had the largest and most regularly formed bracts I have ever seen. Envy was an ingredient not entirely absent from the chorus of praise that went up at the sight of it.

A plant of the deep red Exbury hybrid 'Gaul' (*elliotti* × 'Shilsonii') was in flower, it had come originally from Mr. Lionel Fortescue's garden which the tour was to visit the following afternoon. Near it is a group of five nice plants of *R. beanianum* var. *compactum* and above them a good *arboreum* forma *roseum*, with a deep maroon blotch in the base of the corolla. More recent additions were *R. triflorum* var. *mahogani* with two or three *concinnums* and another form of *R. edgeworthii* with deep cream buds. A group of *crinigerum* flowering for the first time showed considerable variation, as did a planting of geranium-red hybrids of *griffithianum*, we wondered what the other parent could have been. One was very much finer both in foliage and flower than its 'litter sisters'.

Among a number of japonica camellias close to the garden house, where Dr. and Mrs. Barker entertained us to a most delicious tea, were 'Lord Robert', pink and white, 'Tricolor', with red stripes on a white ground, and *C.* × *williamsii* 'Charles Michael'.

Below the garden house are promising examples of *R. hodgsonii* and *R. wallichii* but *R. fictolacteum* was looking far from well. Here also

grows *Camellia japonica* 'Shiro-botan' with its large semi-double flowers and a nice *Rhododendron crassum* which had obviously flowered well last year, backed by pale and dark *augustinii*'s.

This lower part of the garden is so filled with tender plants such as the outstandingly beautiful *Acacia longifolia* with its primrose catkin-like flowers, *Callistemon citrinus splendens*, *Solanum aviculare*, *Clianthus puniceus* and the like, that even rhododendrons seem something of an anti-climax; however in this area we noticed an outstandingly good *R. tephropeplum*, *R. fulvum* of the type which used to be known as "*fulvoides*", and a deep red *R. cinnabarinum roylei*.

As far as my wife and I were concerned we were now regretfully reaching the end of the tour, as time and tide forced us to leave Devonshire after lunch on Sunday, thus missing the visits to Mr. and Mrs. Fortescue's garden at Buckland Monachorum and Dartington Hall, both of which I have previously visited and to which I would have enjoyed returning. None the less, the visit to Col. J. E. and Lady Anne Palmer's garden at Rosemoor, near Torrington, was a fitting climax to an exciting week.

Rosemoor was only acquired by the Palmers a mere ten years ago, so that this was the youngest garden we had visited. It certainly did not give this impression, for it already has an air of maturity, partly no doubt to the fast rate of growth in the West Country's climatic conditions, but largely through the planting and grouping skill which is Lady Anne's great forte as a gardener.

During the early stages of the garden's development Lady Anne had the advice of Capt. Collingwood Ingram, and many of the older plants in Rosemoor came from his garden at Benenden. There could be no better foundation on which to build, and Lady Anne has built well. Rosemoor now has a character which is completely individual and owes nothing to any other garden. Lady Anne says that hers is "no specialist collection" and I think I detect a note of apology which is surely quite unnecessary, for specialist collectors often make poor gardeners!

Lady Anne's arrangements of her representative selection of genera are marked with a very special skill and finesse, and though this article is meant to concentrate on rhododendrons and camellias I hope I may be forgiven for citing an example of this in the curved border of *Primula* 'Garryarde Guinevere' backed by a miniature hedge of *Prunus cistena*, a perfect example of the blending of foliage and flower tones.

Near the house is a cool coloured hybrid of *R. aberconwayi* × *souliei*, while steps leading from the lawn to the woodland garden are bordered by camellias, among them the red flowered 'Mercury', the white 'Shiro-botan' and pink 'Leonard Messel'. These are interplanted with cistus, anemones, tulip species, meconopsis and primulas.

In the very attractively laid out rock garden, which has the advantage of being nearer to eye level than most, thus avoiding back ache or a rush of blood to the head in those seeking to admire it, are several interesting

dwarf rhododendrons, among them a lovely primrose yellow Reuthe hybrid between *R. hanceanum* and *R. keiskei*, even better than the similar Cox hybrid, 'Chikor', which grows nearby. *R. hanceanum nanum* was in flower, with beside it a very compact growing species with deep cinnamon-coloured indumentum labelled *R. proteoides*, though Lady Anne doubts if it is correctly named.

Growing beside the most appealing little white flowered *Phyllodoce nipponica* is another good Cox hybrid *R. tephropeplum* × *racemosum*, and two members of the Azalea Series, a clear shell pink form of *schlippenbachii* and *pentaphyllum* with its distinguishing red tips to the young foliage. Other plants of interest are the Windsor form of *R.* 'Carmen', a white flowered form of *R. flavidum*, with this species irritating characteristic of dying back for no apparent reason, and a pure white form of *R. racemosum*.

Near the pond we saw a lovely group of *R. davidsonianum* in a variety of colour forms ranging from deep pink to near white, most effectively displayed against the grey eucalyptus foliage behind them.

Along the south side of the garden a series of large beds have been made and these are mainly devoted to rhododendrons interspersed with magnolias and other shrubs. Here are two plants of *R. venator*, a species by no means commonly grown but of which we saw a number during this tour, *R.* 'Alison Johnstone', *R.* 'Lady Rosebery' and two unnamed hybrids, 'Jalisco' × *yakusimanum* showing the typical compact growth of the latter parent and with tight trusses of cream flowers edged with pink, and *griffithianum* × *decorum* which has pure white flowers.

In this part of the garden grow one of General Harrison's "blue" hybrids, 'St. Breward', and a good free flowering form of *R. spiciferum* which is sometimes rather a disappointing species.

The old crimson Van Nes hybrid 'Langley Park' seems here to have developed a creeping habit whether by accident or design I did not ascertain, and others we saw were two *griersonianum* crosses, 'May Day' and 'Elizabeth', and the cream version of *R.* Penjerrick.

Three plants labelled *concatenans* × 'Lady Alice Fitzwilliam' were in flower, but it looked as though the cross had not "taken" as all three have the attributes of true *concatenans*, with no hint of the other parent.

In the woodland garden, where there is plenty of scope for development, are some interesting ideas—I liked best a young plant of *R.* 'Humming Bird' rising out of a carpet of *Cornus canadensis* and *Gaultheria procumbens*, while an outstanding plant in this area is *Rhododendron cinnabarinum* 'Copper', an unusual variation, from Ludlow & Sherriff seed.

At Rosemoor, as in other gardens on the tour, it was borne in upon me not for the first time that *Camellia* 'Donation' is head and shoulders above any of the *williamsii* hybrids. Here in a group near the house it shamed into insignificance the normally attractive *williamsii* cultivars surrounding it.

After we had been entertained to yet another delicious lunch, my wife and I had regretfully to tear ourselves away, taking with us, however, ideas, impressions and very happy memories of the gardens of Hampshire, Dorset, Somerset and Devon, to which one day we hope to return.

I'm sure that my fellow members of the I.D.S. who were on the tour, would like me to mention with gratitude all our kind hosts and hostesses who did so much to make us welcome. We know we were an imposition, we assure them they never made us feel it! Above all our thanks are due to Lady Anne Palmer who masterminded the whole excursion and was such a serene, cheerful and conscientious courier. Without her hard work, tact, patience and efficiency the tour could not possibly have been the success it undoubtedly was.

THE RHODODENDRON COMPETITION

March 17 and 18, 1970

By SIR GILES LODER, Bt.

DUE to the prolonged cold weather, entries in the Rhododendron Competition, held on March 17 and 18, 1970, were not so numerous as in previous years. There were 13 exhibitors and 78 entries, as opposed to at least 175 entries in previous years.

In Class 1 for four species Major E. W. M. Magor from Lamellen, Cornwall, was first, aided by an extremely well-formed truss of *R. mallotum* and one of *R. praevernum*, trusses of which stood him in good stead in other Classes. Mr. J. Campden of Wentworth, Surrey, was second, including a good *R. barbatum* in his entry. In the next Class for a spray *R. sutchuenense* took first prize with a form from Leonardslee with only faint specks, which beat Mr. Campden's more heavily blotched form. In Class 3, for a truss of any one species, the same species was again first and also third. Mr. G. L. Pilkington's truss from Grayswood, which was first, had both big blotches and speckles, showing the very wide range of variation that *R. sutchuenense* can provide. Major Magor's *R. praevernum* was in the second place.

In Class 8 for a truss of the Fortunei Series Mr. Pilkington took the first prize with one of *R. calophytum* and the second prize with his *R. sutchuenense*. His truss of *R. calophytum* was clear and particularly well built up, with characteristic foliage which showed it off to the best advantage.

The hybrid classes were rather better supported. In Class 15 for a spray that of *R.* 'Seagull' from Leonardslee was first with shapely trusses showing off its clear white flowers. The second and third prizes were taken by well-flowered examples of 'Cilpinense' and 'Seta' shown by Lord Aberconway and the National Trust, Bodnant Gardens.

In Class 16 for a truss of any hybrid Maj.-General E. G. W. W. Harrison of Tremeer, St. Tudy, Cornwall, was first with a perfectly shaped truss of the soft glowing red 'Edmundi', a hybrid between *arboreum* and *barbatum* raised in 1876. *R. sutchuenense* was the parent of the second and third prize winners, both of which went to Sir Giles Loder. The first was a cross with *R. arboreum album* and the second with *R.* Loderi

Class 21 for a spray of a Lepidote Hybrid produced keen competition with a well-flowered example of *R.* 'Bric-à-Brac' from Mr. G. L. Pilkington providing the winner. Mrs. E. Kitson of Netherton, Liskeard, took the second prize with a good contrast in the pale yellow *R.*

'Quaver' while *R.* × *praecox*, entered by the Hon. Edward Boscawen of High Beeches, Handcross, was third.

In the Classes for tender species grown under glass the Crown Estate Commissioners, The Great Park, Windsor, were first in Class 22 with a deep yellow truss of *R. chrysodoron*, which quite eclipsed their *R. sulphureum* in the next Class.

We cannot be but grateful to those enthusiastic exhibitors, who must have taken great trouble in disagreeable weather to produce suitable entries and make the Competition possible.

THE RHODODENDRON SHOW

April 28 and 29, 1970

By T. H. FINDLAY, M.V.O., V.M.H., ALAN HARDY and JAMES PLATT

THE Rhododendron Show, held on 28th April, was rather lower in quality of exhibits and in quantity of entries than in previous years; this was no doubt due to the abnormal spring we had—frost, snow and gales. We, as exhibitors, found that flowers as they started to emerge from the bud stage were damaged by frost, and it was a really difficult job to find a really clean truss.

As always climate played a big part in this Show, and this year the higher rainfall areas came into their own with many fine examples of how to grow rhododendrons. But due to the fact that this was such a difficult year we have purposely omitted some classes and entries as we felt no constructive comments could be contributed by us on them.

SPECIES

We must admire the courage of the long-distance entrants who travelled a hundred miles or more to compete at our annual Show. In Class 1 an example of this was Mr. S. F. Christie's first prize exhibit, for which he was also awarded the Lionel de Rothschild Cup. He showed eight species, all with good foliage, to advantage; these included *hodgsonii* in good form with a fine well-built-up truss, also a very fine *hookeri* and *basilicum*, *eximium*, *sutchuenense* var. *geraldii*, *fulvum* and *barbatum*, all grown in his garden at Blackhills in Morayshire. The group which won the second prize was entered by Lord Aberconway and the National Trust, Bodnant Gardens. In it we noted the infrequently seen *diphrocalyx* and *arizelum* (F27067), which was a distinctive dull cream

with bright mauve on the outside of the petal. This group also included an *arboreum* ssp. *cinnamomeum* f. *roseum*, which was more heavily blotched than usual. Mr. E. de Rothschild's third-prize group from Exbury contained a very nice tight-trussed, blush-pink *fictolacteum* with unusually long leaves.

In Class 2 the first prize went to the group of three trusses from the Earl of Stair's famous garden at Lochinch. It contained *arizelum*, *thomsonii* and a magnificent truss of *macabeanum*. The latter was exceptional in colour, being we felt an even darker yellow than the well-known plant at Trewithen in Cornwall. Second were the Crown Estate Commissioners and third Sir Ilay Campbell, Bt., from Argyll. In both these groups the *niveums* were outstanding. It seemed that this was a *niveum* year, as it was good from the north of Scotland to the south of England.

In Class 3 for three species entry is restricted to those who have never exhibited in this Class before, and this first prize was won by Major E. W. M. Magor of Lamellen, Cornwall, with three large-leafed species, *arizelum*, *eximium* and *preptum*. The latter is a most interesting plant with a good compact truss, but its chief attraction is in its deep mud-coloured indumentum. Mr. J. Camden of Westbourne, Wentworth, who was second, included a good coloured form of *R. beanianum*. Due to the season the range of flowers shown in Class 4 for the McLaren Cup for one truss of any species was smaller than usual, nearly all the entries coming from the big growers. The first prize went to the Countess of Rosse and the National Trust, Nymans Gardens, with a large truss of *macabeanum* of a rather pale creamy yellow. On its right day no truss one feels can beat a good *R. macabeanum*. The second went to Mr. J. Camden with an old type, but beautiful *fictolacteum* and the third to the well-known beautiful form of *lacteum* from Scotland shown by Mr. F. L. Ingall. The fourth prize was gained by the Countess of Rosse with *arboreum* forma *roseum*, cherry red with a paler whitish base which lit up beautifully with the sun behind it.

In Class 5 for a spray of any species the entry was one of the biggest and best seen for a long time. In a difficult year it was surprising to see so many fine sprays shown. The first prize was won by Lord Aberconway with a brilliant *euchaites* with large, open, well-filled campanulate flowers. The second prize went to the Crown Estate Commissioners with *morii*, a member of the Series Barbatum, with an unusually clean white flower with a light blotch. It is a plant which shows up well in the garden. A good spray and well-flowered *thomsonii* was third from Colonel N. R. Colville of Penheale Manor, Cornwall. Lord Aberconway's *cinnamomeum* was fourth. It was surprising but such was the strength of this Class that a fine pink *davidsonianum* and a very good *beanianum* did not find a place in the prize list.

Class 6 for *arboreum* or its subspecies was disappointing. This species was seen better at the earlier Show, but the Countess of

Rosse's forma *roseum*, previously mentioned, is a fine plant and was a worthy winner. In Class 7 for any member of the Series other than *arboreum* or its subspecies, *niveum* was to the fore. First prize went to Sir Ilay Campbell's *niveum* and third prize to Lord Stair. They were, however, split by the Crown Estate Commissioners, who showed a particularly attractive deep pink *argyrophyllum* set off with fine foliage. The next class for members of the Barbatum Series was one of the most interesting owing to the wide range of plants shown. The first prize was won by Lady Marion Philipps, Picton Castle, Haverfordwest, Pembrokeshire, with a good *habrotrichum*, but it was Mr. Christie's scarlet *smithii* that seemed really outstanding for its colour although only gaining second. *R. pseudochrysanthum* was third for Exbury. Mention must also be made of *hirtipes*, the aberrant member of the Series from Messrs. Reuthe Ltd., Keston, and the not-often-seen *spilotum* and *monosematum*. The Boothii Series (Class 9) had only two entries, *megeratum* from Bodnant, a pleasing plant in foliage and flower which also received the A.M. that day, and *leucaspis* from Nymans. In the Campanulatum Series (Class 10) a form of *campanulatum* with a nice pale rose-purple flower won the first prize for the Crown Estate Commissioners. Second, from Messrs. Cox of Glendoick, came the white form under number SSW9106/7. In the third place was a very late-flowering form of *fulgens* from Mr. Christie. Also of interest in this class was a nice truss of *tsariense*, an attractive member of the series. With almost total absence of entries Exbury won the next class for the Cinnabarinum Series with *cinnabarinum*, whilst the next class was devoid of any entries. Class 13 for *fictolacteum* or *rex* was in general not up to standard. First prize was won by a *rex* from the Crown Estate Commissioners under KW4509 and Bodnant were second with another *rex*; Mr. Camden came third with *fictolacteum*. In Class 14 a good truss of Bodnant's (already described) *arizelum* took first prize. The second place went to *preptum* from Mr. R. Strauss of Stonehurst. This was of interest as it was totally different to Major Magor's form. This plant had little or no indumentum to its foliage and perhaps a more compact truss with heavy staining on the flower and a deep mauve blotch. Another *arizelum* from Nymans was third. It was also nice to see a good truss of *arizelum* Farrer 863 in this class.

Class 16 for members of the Fortunei Series was won by a fine *calophytum* from Bodnant, showing very definite scarlet-red petioles which greatly enhanced its attraction. Second was the interesting *vernicosum* var. *euanthum* from the Cox's, with a very pretty, dainty and graceful pink flower. Third was Sir Ilay Campbell's *fargesii*. Perhaps a little unlucky not to gain a prize was Mr. Christie's *sutchuenense*. In Class 17 for the Fulvum Series all the entries were of *fulvum* itself and there was little to choose between them. Class 18 for the Grande Series brought *macabeanum* to the front again. Form was upset in this class by the reversal of previous placings. Lord Stair's deeply

coloured and marked form conquered the more popular form from Nymans. Third was Mr. Christie's *praestans*, a good coloured form.

In Class 19 for Irroratum Series the Cox's won the first prize with a lovely true *irroratum*, a fine clear white almost devoid of any blotching, whilst Major Magor's second-prize winner was the exact opposite, being very heavily blotched and much darker in colour, perhaps not everybody's choice. In third place was the infrequently seen red *lukiangense* from Nymans. The class for the Lacteum Series was not a vintage one; nevertheless, Mr. Ingall's *lacteum*, with its heavy red blotch, was a worthy winner of the first prize. It was noticeable that the blotch on this flower was very much darker in colour than any others shown. The Cox's again produced a good flower with their *phaeochrysum*. This year produced a wide range from the Series, Bodnant showing a nice *traillianum* which was in the third place and Exbury *dictyotum* in the fourth.

Class 21 for the Megacalyx Subseries has always something spectacular in its ranks and this year was no exception. Windsor showed an immense truss of *lindleyi* with nine large bells in immaculate condition both of flower and foliage, and was without doubt one of the highlights of the Show (Fig. 57). It is interesting to note that Mr. Davidian of Edinburgh

Photo: Ernest Crowson

Fig. 57—*Rhododendron lindleyi*, shown by The Crown Estate Commissioners, Windsor Great Park, in Class 21.

thought this plant was from the very old type *lindleyi* introduced many years ago. Sir Ilay Campbell's *dalhousiae* in the second place was a lovely creamy yellow and also outstanding. To follow this came another large and most interesting class for the Maddenii Series other than the Megacalyx Subseries. This produced more entries than for many years, some 15 in all. The first prize was won by Mr. H. S. T. Gunn from Edinburgh with *cubittii*. *R. ciliicalyx* from Windsor was second and Sir Giles Loder's clear yellow *burmanicum* third. This class contained 12 different members of the series, which is unusual. Of interest was the recently collected *inaequale* of Cox and Hutchinson 301 as opposed to the old original type form. Class 23 for the Haematodes Subseries was won by a *chaetomallum* from the far north shown by Mr. Christie. *R. beanianum* var. *compactum* KW8254 from Nymans came second. *R. haematodes* itself from Colonel Colville was third. In the Class for Neriiflorum Subseries it would seem that Sir Ilay Campbell's form of *euchaites* is a particularly good one, a consistent prizewinner in its class yearly. This year it succeeded in being head of 16 entries. It is good compact truss of very clear scarlet. Messrs. Cox's *euchaites* was second whilst Nymans came third with *sperabile* var. *weihsiense*, a clear deep-red wavy flower set off by its characteristic short white indumentum. Another good class was the one for Sanguineum or Forrestii Subseries. First was Lord Aberconway with a nice true pink-coloured *aperantum*, the flowers, however, were smallish for this variable species. It was unusual for this colour form to beat some of the well-known good deep-red forms shown of this plant. Second was the Earl of Stair's *sanguineum* and third Sir Ilay Campbell's *chamae-thomsonii* var. *chamaethauma*. A small-flowered form of *dichroanthum* which was very early for the season was also shown, as was a good form of the unusual *parmulatum* KW5875 from Nymans. It is two-coloured like their outstanding form of *cerasinum* 'Cherry Brandy', but with a mauve band instead of red.

The Pontica series was disappointing although the first prize winner, *degronianum*, was a good form. The season reacted against the usual large and interesting class for the Taliense Series. However, *russotinctum*, which won the first prize for the Cox's, is a rarely seen member of the Series and was upstanding and outstanding in every way, having a very erect compact truss of white flowers flushed rose with a fine spotted petiole (Fig. 58). Also of interest, as it is rarely seen, was Mr. Christie's *globigerum*. In Class 29 a spray of *campylocarpum* is required and Mrs. Potter from Wentworth, Surrey, produced a fine one to win the first prize. This was undoubtedly the form of the day of all the *campylocarpums* shown. An unusually pallid form, almost white, of *caloxanthum* shown by Bodnant won the next class for members of the Campylocarpum Subseries. It was interesting to note the large variation in this class considering that *caloxanthum* was shown by all the prize-winners. For the Selense Subseries in Class 30 Bodnant's *dasycladum* was first and was outstanding (Fig. 59). This was a deep dull pink in

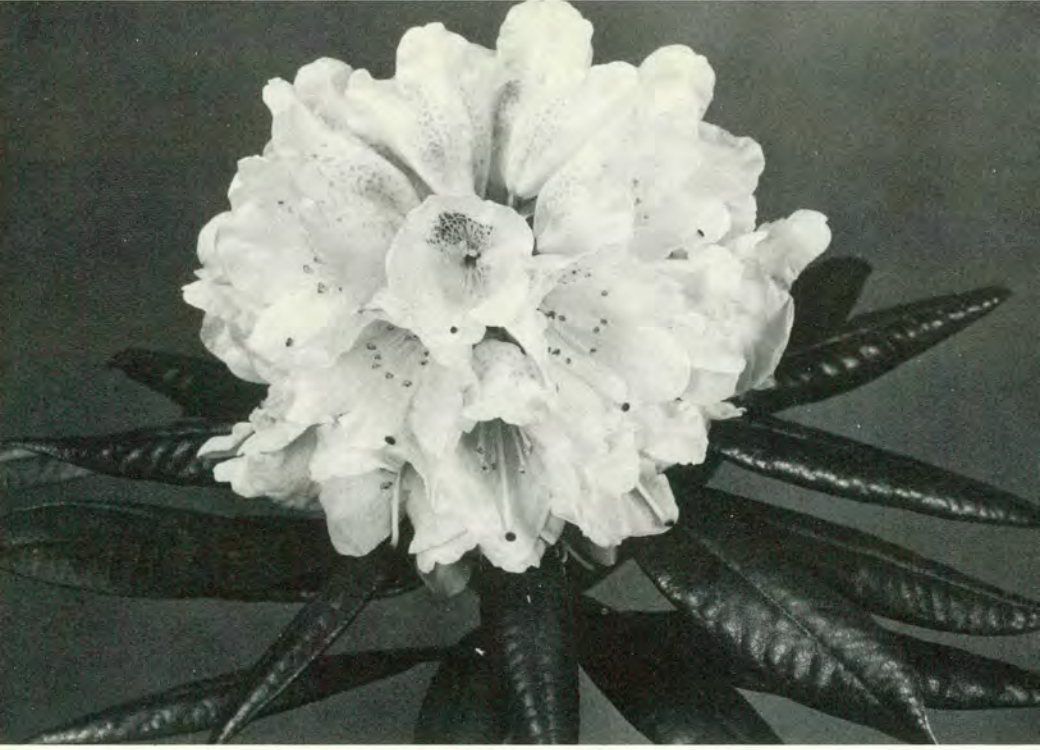


Photo: Ernest Crowson

Fig. 58—*Rhododendron russotinctum*, shown by E. H. M. and P. A. Cox in Class 28 (see p. 161).

the bud and young flowers turning to a pleasing flesh pink as the flower matured. This is always a difficult class to judge as sprays or trusses are allowed, it would seem with obvious disadvantages. In the Thomsonii Subseries (Class 33) there was a large and varied entry. Colonel Colville won with what one may describe as a typical *thomsonii*, Mr. Christie came second with a very good form of *hookeri* and Sir Giles Loder third with a spotted, rather dark *thomsonii*.

In normal years the classes for deciduous azalea are a feature, but this year they were a little disappointing and the only plant of real interest was Lord Aberconway's *dilatatum*, which was a white form we have not seen at the Show before. Class 37 for the Anthopogon Series was well supported and full of interest. All prizes went to Bodnant. They won with a true plant of the white *trichostomum* var. *ledoides*, a plant noted for its pungent scent and its free flowering. The not often seen and unusual *kongboense* with its small truss of red flowers was second and a nice *primulaeflorum* was third. In Class 39 for the Edgeworthii Series a beautiful and very well-shown spray of *edgeworthii* won for Sir Giles Loder. This plant had a very open flower with some pink flushing on the outside and a very bullate leaf; this was a clear winner over the other exhibits. In Class 40 for the Glaucophyllum Series one's eye was immediately taken to the recently introduced *glaucophyllum* var.

Photo: Ernest Crowson

Fig. 59—*Rhododendron dasycladum*, shown by Lord Aberconway and the National Trust, Bodnant in Class 30.

luteiflorum shown by Bodnant. It was a lovely clear yellow and is a fine introduction. A pink *glaucum* was second and a *tsangpoense* from Nymans third. For the Heliopsis Series Mr. P. J. Urlwin-Smith, a newcomer from Ascot, Berks, stole the thunder from well-known exhibitors by producing a lovely well-flowered spray of *rubiginosum*, which was a much more pleasing and clearer colour than usual. The Class for Lapponicums, No. 42, was another well-filled one, again showing the wide variety of the Series in shape, size and colour. It was won by a magnificent vase of *scintillans* from Colonel Colville. Second was a very dark form of the same species from Bodnant and third *paludosum*, which is not often seen, from Glendoick. A lovely vase of a fine coloured form of *chryseum* gained fourth prize for the Crown Estate Commissioners.

Class 45 for *racemosum* produced 15 entries and was won by an outstanding form from Hydon Nurseries, Godalming, under Rock No. 59578. This had a very deep pink, very round truss which appeared to be larger than usual. It later went on to receive the A.M. It was a mediocre year for Triflorums and as a result it was difficult to pick out anything really worthy of mention. This again reflected the difficult season. Normally Class 53 has little in it but was exceptional this year and *pemakoense* was to the fore in this class. Nymans' first-prize form under KW 6301 was without doubt the best of the many shown.

R. uniflorum was second for The Crown Estate Commissioners who were third with another *pemakoense*.

HYBRIDS

In Class 61 for 8 hybrids, a very fine selection which won the first prize was shown by General E. G. W. W. Harrison of Tremeer. Particularly fine was his 'Robert Keir', a *lacteum* hybrid well worthy of the name of a great cultivator. A truss of 'Mariloo' was also outstanding from Exbury and was second in this Class. Mr. Gorer's first prize in Class 62 for 3 trusses included a very fine 'George Sansom', a sister seedling to 'Robert Keir'. In Class 63, a restricted class for 3 hybrids, Lord Stair won the first prize with three large-leafed hybrids, but none were superior to their parents. Three well-shown hybrids won the first prize in Class 64 for Lord Aberconway. These included 'Barclayi' and 'Coreta'.

In Class 65 for any hybrid a very fine truss of 'Galactic' ('Avalanche' × *lacteum*) won the first prize for Mr. de Rothschild, and the Loder Challenge Cup. There was little doubt that it was the finest of the Class. It also received the F.C.C. on the same day. Mr. Strauss's 'Avalanche' (F.C.C.) in the second place also had a very nice truss and Mr. Christie's 'Lochinch' was third. This is an interesting hybrid named 'Lochinch' by the late Lord Stair in 1932, with a large full truss of off-white flowers and good indumentation—derived through 'Elsae' and *eximium*.

Class 66 is for 6 hybrids. Mr. E. de Rothschild was first and included a very nice truss of 'Eurydice', one of 'Lionel's Triumph' and a good truss of 'Galactic' which demonstrated the value of *lacteum* as a parent. The second-prize group from Bodnant had exceptional quality in 'Choremia', this being in superb condition and showing its pre-eminence amongst the bright blood-red hybrids. The third prize was won by the Goldsworth Nurseries, several plants of which appeared to be forced out of season and therefore quite varied in colour. Class 67 was poorly supported with only two entries. In Class 68 for any hybrid one parent being of the Arboreum Series, the first prize went to Lord Aberconway with 'Choremia'. Sir Ilay Campbell's *venator* × *arboreum* was second and Sir Giles Loder's *sutchuenense* × *arboreum album* was third. 'Choremia' was the brightest red shown in the Class. Classes 70 to 72 were not up to the usual standard. 'Avalanche' from Exbury was a worthy winner of Class 73, rich in texture with its white flowers and flesh-pink stamens. Class 75 was for any hybrid of which one parent is of the Neriiflorum Series. 'Choremia' again took first prize for Lord Aberconway. The second prize went to Messrs. G. Reuthe for a *facetum* × *haematodes* named 'Pyrex', a good red.

In Class 78 where one parent must be *griersonianum* and the other a species, Colonel Colville won easily with 'Elizabeth', although many

and varied 'Elizabeths' were shown, and indeed some were not quite 'Elizabeth'. In the next Class when one parent must be *griersonianum* and the other a hybrid, the first prize went to the Countess of Rosse with 'Siren', very bright red with a large double calyx, a good winner. A single truss of Lord Aberconway's 'Tyermannii' won the first prize in Class 82 for a hybrid of the Maddenii or Edgeworthii Series, beating a full spray of Mr. G. Gorer's 'Countess of Haddington' (second) and a nice vase of 'Folies Bergère' (third) from Sir Giles Loder. In the blue tribe Class 83 for any hybrid between species of the Triflorum and Lapponicum Series (*russatum* × *pseudoyanthinum*) shown by Colonel Colville gave us a promising new winner in the stakes for blue hybrids. Second was 'Blue Diamond' from Lady Marion Phillips and third was Mr. E. de Rothschild's 'Blue Tit'. Class 87 for any hybrid between two species not provided for in the foregoing Classes produced a truss of a new hybrid shown by Major A. E. Hardy which won the first prize. It had beautiful open bell-shaped lavender flowers and appeared in some ways an improvement on *floribundum* but perhaps not on *campanulatum*, its parents. A nice vase of 'Alison Johnstone' was shown by Mr. P. A. Cox in Class 91 for a truss or spray of any hybrid. This is a *concatenans* hybrid which has become a popular garden plant.

The interesting class for rhododendron leaves, No. 105, was not well supported. It could create not only a lot of interest, but is extremely educational as well. This year the Class was won by Exbury who showed *sinogrande*, *mallotum*, *campanulatum* and *falconeri*. The Countess of Rosse was second and Major Hardy third. Class 107 is for a species or hybrid grown under glass. The first prize was won by the Crown Estate Commissioners with a fine-looking new hybrid raised at Brodick, one parent being *supranubium* and the other unknown. It had an attractive flower. The second prize was won by Sir Giles Loder with *chrysodoron* which always gives us one of the prettiest yellow but small-flower types. The third place went to a species of the Maddenii Series L.S.H. 19848, close to *inaequale* and entered by Major A. E. Hardy.

The death in August 1970 of Mr. R. C. H. Jenkinson has sadly deprived us of his great knowledge of rhododendrons and pithy comments when preparing Reports of the Rhododendron Show, as was so often the case in the past.

TRADE EXHIBITS

Waterers of Bagshot won the Rothschild Challenge Cup for the second year running with a large exhibit of splendidly shown rhododendrons and azaleas. The centre was dominated by a large bush of the light scarlet 'Matador', a recently raised hybrid of *R. griersonianum* supported by some of the old established favourites such as the lovely white 'Mrs. A. T. de la Mare' with its buds delicately tinged pink,

'Earl of Athlone', one of the most brilliant of all reds, and the lavender-blue 'Fastuosum Flore Pleno'. Among their mollis azaleas 'Brilliant Red', rich yellow 'Hortulanus H. Witte' and 'Strawberry Ice' were particularly attractive. The Knaphill Nurseries had a splendid exhibit also. Their bush of the tender rhododendron 'Fragrantissimum' with its beautifully shaped white flowers was an inducement and temptation to invest in a cool greenhouse. One of the more conspicuous hybrids they showed was 'Tortoiseshell Champagne', of a shade which contrasts well with the richly coloured 'Purple Emperor' and the dark red 'Moser's Maroon'. An outstanding blue, of which more should be heard, was their *R.* 'Sapphire' × *augustinii*. It associates well with the brilliant red of 'Elizabeth'. Knaphill Nursery is famous for deciduous azaleas, and showed their rich yellow 'Cockatoo' and pink 'Linnet', to mention but two on their stand, and also *R. canadense*, with delicately formed purple flowers on the bare twiggy growth.

Slocock's Nursery of Woking had a large exhibit, with tall standards of 'Elizabeth', 'Doncaster' and their yellow 'Letty Edwards', among others, rising from many good plants, including the white, purple-spotted 'Sappho', the more recently introduced 'Idealist', with orange buds opening to soft yellow flowers, and their own 'Tortoiseshell Wonder'. The Tortoiseshell cross produces considerable variation in colour, including the unusual orange and pink of 'Wonder' and the biscuit-yellow of 'Champagne'. Their finest dwarf rhododendron was *R. russatum*, with intense dark violet flowers, whilst among the deciduous azaleas the yellow 'Mrs. Oliver Slocock' stood out. Reuthe of Keston on their stand showed the soft yellow 'Chaste' to advantage, with the fine white 'Mount Everest' and brilliant red 'May Day Exbury'.

The final trade exhibit was that of Hillier and Sons. Although species, including the yellow-flowered *R. wongii* and such hybrids as 'Elizabeth' gave plenty of colour, it was those species with unusual and attractive foliage which gave so much interest to the exhibit, in spite of their lack of flower. Among those shown were *R. makinoi*, *R. faberi*, *R. hyperythrum*, *R. pseudochrysanthum*, *R. wiltonii*, *R. roxieanum*, *R. recurvoides* and *R. metternichii*.

THE CAMELLIA COMPETITION

March 17 and 18, 1970

By G. H. PINCKNEY and JAMES PLATT

THE Camellia Competition, in which flowers cut from plants grown under glass may be entered as well as those from the open, was held at the Early Spring Show on March 17 and 18. It cannot be said that camellias had enjoyed the grey, sunless and chilly weather of early 1970, which had persisted for far too many weeks, any more than their growers. There were few of those splendid, sumptuous flowers in the Competitition, distinguished for their perfect form as well as size, to which we have become used in previous Competitions. However, it was an enjoyable occasion, the great variety of camellias on the Trade exhibits adding to the interest of the Show.

Trade Exhibits

James Trehane and Sons Ltd., of Longham near Wimborne, staged a large exhibit, mainly of hybrids raised in Australia, New Zealand and America, including as well a number of British hybrids such as *C.* × *williamsii* 'St. Ewe' and 'Donation'. It was of great interest in that we were able to see hybrids which we have heard of or read about. We noted 'Barbara Clark' (New Zealand; *C. saluenensis* × *C. reticulata*), a rose-pink semi-double; 'Felice Harris' (U.S.A.; *C. sasanqua* × *C. reticulata*), another rose-pink semi-double; 'Grand Jury' (New Zealand; *C. saluenensis* × *C.* 'Salutation'), a salmon-pink of paeony form; and the clear pink 'Elsie Jury' (New Zealand). There were also outstanding cultivars of *C.* × *williamsii*; the semi-double rose-pink 'Brigadoon' (U.S.A.), 'Anticipation' (New Zealand), also semi-double, but glowing crimson, the dog-rose pink 'Lady Gowrie' (Australia) with several rows of petals, 'E. G. Waterhouse' (Australia) a formal double pink and the rich pink paeony-flowered 'Debbie' (New Zealand). We could compare these varieties with others of the same group on the exhibit of Treseder's Nurseries, Truro, which were all raised in Cornwall and included the single pink 'Rosemary Williams' or 'Mary Jobson' and the semi-double 'George Blandford'. Haskin's Nurseries of Ferndown remained faithful to cultivars of *C. japonica* and had lovely flowers of 'Mrs. D. W. Davis', 'C. M. Wilson' and the rich formal double 'Italiana'. Waterer, Sons and Crisp Ltd., of Bagshot, Hillier and Sons of Winchester and L. R. Russell Ltd., of Windlesham, also showed camellias in their exhibits of spring flowers, trees and shrubs. We noted in

particular *C.* 'Inspiration' (*C. reticulata* × *C. saluenensis*), *C. japonica* 'Lavinia Maggi', *C.* 'Tricolor' and *C.* 'Elegans', which still remains one of the most lovely and satisfying of the semi-double pinks.

The Competition

The outstanding flower in Class 1 for a single-flowered white cultivar of *C. japonica* was that of Australian-raised 'Henry Turnbull' entered by Dr. J. A. Smart of Barnstaple. With wavy petals and a lovely ivory sheen it outclassed 'Rogetsu' and 'White Swan'. In Class 2 for a single self-coloured cultivar the Duke of Devonshire's 'Jupiter' from Chatsworth was easily first with 'Hatsu-Zakura' some lengths behind. Class 4 is for any three single-flowered cultivars and the outstanding flower was one of 'Alexander Hunter' from Exbury Gardens, near Southampton, with half of the flower the normal crimson and the remaining petals heavily variegated with white, an effective combination. Classes 5 to 8 are for semi-double cultivars of *C. japonica* and the judges must have had difficulty in making a decision in Class 5 for a white cultivar. Mr. H. G. Ayling of Stanmore entered 'White Nun' and 'Lovelight' and there was one 'Frosty Morn' equally lovely. 'White Nun' received the first prize but 'Lovelight' seemed to us just that more perfect. The next Class for self-coloured cultivars gave us some flowers which were up to the standard of previous years. Sir Giles Loder's Nuccio' 'Guilio from Leonardslee, which was first, was over 6 inches across and very splendid. A well-formed 'Drama Girl' from Exbury was second but in our opinion Sir Giles' 'Spring Sonnet', which is a delightful full semi-double with medium-sized soft pink flowers with deeper margins, was superior. The flower exhibited was beautifully formed and in perfect condition. This leads us to wonder if there should not be a class for cultivars with larger flowers and also one for the smaller. Another excellent flower in this class was Mr. Ayling's brilliant 'Grand Prix', making its first appearance in the New Hall. Mr. Ayling was first in Class 7 for a variegated flower with a lovely red and white *C.* 'Guilio Nuccio', just beating Sir Giles' 'Geisha Girl' with its light stripes of pink on a delicate blush ground.

Class 8 for three cultivars produced some lovely flowers. Exbury Gardens were first and their 'Betty Sheffield Supreme' with its white, rose-red bordered petals was particularly beautiful. Seldom has a seedling sported quite so freely and 'Supreme' is one of a dozen but perhaps the most outstanding. Sir Giles took the second and third prizes. His most attractive flower was one of the blush pink 'Melody Lane' with deeper markings. Like 'Mrs. D. W. Davies' in Dr. Smart's entry which was Highly Commended, it is of great beauty in a cool greenhouse, but a risk out of doors.

Classes 9–12 are for anemone and paeony-formed cultivars, forming a division in which many famous old varieties are now out-rivalled by newcomers, although 'Elegans', raised in 1831, still holds its own and

was in two prize-winning entries in Class 12. Of the whites Exbury's 'Miss Universe' with a creamy yellow flush was first with a good 'The Pilgrim' from Leonardslee in the second place. In Class 10 for a coloured cultivar another flower from Exbury, 'Kramer's Supreme' was first. The flower was the usual shade described as Turkey Red but unusually full and dome-shaped and showing few stamens. The Duke of Devonshire entered in this Class a flower of 'Bokuhan' (known in America as 'Tinsey') with red outerguard petals and a white paeony centre. It is a miniature and a perfect buttonhole flower for the day when buttonholes are once again in favour and supersede or join chains of flowers, or shells or metals base and precious as an adornment to male attire. It is not alone as a miniature and might well some day join a special class.

In the next Class in which the flowers have to be variegated, the Countess of Rosse and The National Trust, Nymans Gardens, were first with a nameless anemone-centred seedling, such as one seldom sees. It was very well shaped, and red and white. 'Carter's Sunburst', also red and white but paeony-formed, was entered by Sir Giles and Mr. Ayling and although it took no prize we mention it as it is a very good garden plant. Mr. Ayling entered another red and white, 'Rebel Yell', and we wonder if the name of this Georgia-raised seedling is of historical and political significance. In Class 12 for three cultivars Mr. Ayling took the first prize with a splendid 'Kramer's Supreme', the deep 'Red Rogue' and 'Tiffany' which, though a luscious pink, escapes the ice cream shade and is an excellent garden plant. Sir Giles took the second and third prizes, having among his entries a good flower of the heavily veined, pink 'C. M. Wilson', old 'Elegans', which was also in Exbury's entry and the large dark 'Red Elephant'.

The rose-formed and formal double cultivars occupied Classes 13–16. Although the first prize was given to Mr. Ayling's nice 'Mathotiana Alba', it was not quite typical as was Dr. Smart's flower of it in the third place and we considered that the Duke of Devonshire's 'Alba Plena' in the second place to be quite perfect. In Class 14 for a coloured cultivar the finest flower was the Duke of Devonshire's well-known dusky red 'Mathotiana' which took the first prize. There were equally fine flowers in the next Class for variegated varieties with the Crown Estate Commissioners' white veined 'Augusto L. Gouveia Pinto' first, and Mr. Ayling's and Sir Giles' 'Betty Sheffield Supreme' second and third respectively. We noted a fine peach-pink flower with the outer petals a darker shade which was Dr. Smart's 'Berenice Perfection' in Class 16. Sir Giles won the first prize in Class 17 for three cultivars of mixed types. Perhaps we have been spoilt by the superlative quality and size of his entries in previous years but in spite of good 'Mrs. D. W. Davis' and 'Drama Girl' those for 1970 were a little disappointing. Mr. Ayling was second and we thought his group better, with a fine flesh-pink 'Tiffany', 'Guest of Honor' a most free-flowering cultivar with large flowers, in this case quite 6 inches across and of a red-toned pink, and

'Disneyland'. We do not recollect seeing a flower of this large, rose-pink cultivar in a previous Competitition. Dr. Smart took the third prize with a good international selection and we admired his 'Adolphe Audusson' both as a flower and for holding its own in the company of 'Drama Girl' and 'R. L. Wheeler'. Exbury Gardens took the fourth prize with an American selection. Their 'Guilio Nuccio' reminded us how much this variety can resemble the best reticulatas when doing really well. Sir Giles also won all three prizes in the next Class which was for three cultivars of mixed types. We liked his 'Flamingo' and 'Pink Clouds' which is another light pink and unusual in that one does not often see a white or flesh pink ground flecked with pink.

The next six Classes were for species other than *C. japonica*. The finest flower was that of the Duke of Devonshire's *C. reticulata* 'Captain Rawes' which was first in Class 20. We are tempted to repeat that it remains unbeatable, even when compared with Sir Giles' very fine 'Crimson Robe' in the next Class. 'Lion Head', another Kunming *reticulata* entered in this Class, had the appearance of suffering so much from virus it might well have qualified for a special class with variegated foliage. In Class 22 for a spray of *C. reticulata* the Crown Estate Commissioners were first with a fine one of 'Robert Fortune', which reminded us of early 19th-century Chinese paintings of camellias, the flowers having lighter rims to the petals and slight veining. Sir Giles was second with 'Buddha' which is a pleasing pink and a change from the more usual Kunming reds. He also took the third prize with 'William Hertrich', a seedling from the Kunming 'Lion Head' and of a striking dusky Turkey red. Class 23 was for a flower of *C. saluenensis* which is valuable as a parent and attractive out of doors where it is hardy, but hardly worth valuable greenhouse space. We were indebted to Maj.-General E. G. W. W. Harrison of St. Tudy for bringing up from Cornwall a large flower of it of a telling bluish pink and for reminding us that it is a pleasing garden plant. Other species occupied Class 24 where they are rather oddities when shown as sprays rather than the charming plants they form in a cool greenhouse or out of doors in Cornwall. The Crown Estate Commissioners showed *C. tsaii* with its little white flowers and willow-like foliage and *C. fraterna* from the splendid greenhouse in the Savill Garden and took the first and second prizes with these. The latter also has small white flowers and arching growth which has been described as resembling that of a cotoneaster.

The next six Classes were devoted to hybrids, starting with single-flowered cultivars of *C.* × *williamsii*. The Crown Estate Commissioners' 'Parkside' took the first prize not only because it was a lovely flower but also perhaps because it is one of the true pinks in this often blue tinged tribe. This blue tinge was pronounced in 'St. Ewe', also from Windsor, which was in the third place. We do not wish to imply that 'St. Ewe' and its blue-tinged relatives are unattractive but there can be a surfeit of this shade. There were no outstanding flowers in the next

two classes but Sir Giles Loder's flower of 'Leonard Messel' in Class 28, for a hybrid with *C. reticulata* as one parent, was beautiful. Were it not for the shadow of virus which overhangs it this would be one of the great hybrids both for its fresh pink flowers and its long flowering season and sturdy upright growth. Sir Giles also took the second prize with 'Valentine Day', a double pink with a rose-bud centre which was making its first appearance in the New Hall. Mr. J. J. Scott from Grimsagh, Lancashire, and a newcomer to the Competition was Highly Commended in this Class for his flower of 'Grand Jury' which we have already noted in Mr. Trehane's collection. In Class 29 for a spray Sir Giles' 'Leonard Messel' was again first with the semi-double 'Inspiration' from Windsor in the second place. This latter is of a shade described as phlox pink which might equally be called paeony pink. Dr. Smart is fast becoming known for the camellias from overseas which he has seen, and described in the *Year Book*. The prizes in Class 30 were almost all his. His 'Elsie Jury', so like a herbaceous paeony in shape and colour, was first but in our opinion, less perfect than his 'Debbie', which was second and had the charm of a Victorian posie with its firmly rounded petals and centre of curved petalodes. His 'Brigadoon' was Highly Commended, beaten to the third place by Lady Rosse's 'Donation'. The Crown Estate Commissioners' bright pink 'Inspiration' was lovely in Class 31 for three sprays, another fine spray in the Class being Sir Giles Loder's 'Leonard Messel'.

The final Class in the Competition was for a camellia plant in bloom and was won by Dr. Smart with a well-grown and healthy 'Tomorrow'. The second prize was won by Mr. J. J. Moore of Crowborough Road, S.W.17, with a plant of 'Blood of China', sometimes known by the less sanguine name of 'Victor Emmanuel', which had a nice well-spaced branching habit. Mr. Moore was showing for the first time and is a welcome newcomer to the Competition.

As an appendage to the Competition, Dr. Smart stepped in and filled the vacancy caused by an exhibit of camellias from America which did not materialise. He showed flowers of 35 different cultivars, all well grown and in fine condition. We liked particularly the large white semi-double ruffled 'Emmett Barnes', the soft pink 'Julia Hamiter' and a lovely blush-pink called 'Alexis Smith'. We are indeed grateful to Dr. Smart and would add that it is no mean accomplishment to bring up from Barnstaple and show in perfect condition so many flowers which are notorious for their susceptibility to bruising.

AN EXHIBIT OF CAMELLIAS FROM LEONARDSLEE

April 2 and 3, 1970

By JAMES PLATT

THE weather for the Show held on the Thursday and Friday, April 2 and 3, of Easter Week was as unpleasant and cold as it had been over the holiday. Pleasure in a splendid exhibit of camellias from Leonardslee, staged by Sir Giles Loder, was intensified by the brilliant colours of many of the flowers, which shed a glow of warmth throughout the Hall. Fellows and visitors to the Show owe much to Sir Giles.

Once again we were delighted by the growth of such comparatively recently acquired plants, which enabled the Loders to cut not only sprays but branches of them from their cold greenhouses. There were in all 112 varieties, many of them raised in the U.S.A., New Zealand or Australia and some of them flowering for the first time in this country. Single flowers set in a mossy background, as in the front of this exhibit or in the Camellia Competitions, give much pleasure and help in assessing the many new varieties from overseas which are fast becoming available in Britain, but it is only from such branches and sprays as we had before us on this occasion that the true splendour of many of them was revealed. These branches and sprays were arranged in tiers with rows of single flowers set in moss to the front.

It was only appropriate that Sir Giles should include the Leonardslee-raised *C. williamsii* 'Cherub' in the exhibit and its particular shade of bright pink was in no way lessened by a neighbouring branch of the brilliant hybrid 'Leonard Messel'. 'Cherub' approaches in colour that of 'St. Ewe' from Caerhays, but its habit is upright while 'St. Ewe' is more spreading. *C. reticulata* 'Crimson Robe' was nearby and *C. japonica* 'Pink Champagne' was most effective in the proximity of the dark red *C. reticulata* 'Purple Gown'. More delicate in colouring was the warm shell-pink 'Felice Harris', a hybrid between *C. sasanqua* and *C. reticulata*. It made a contrast with the splendid rich rose-red flowers of *C. japonica* 'Guest of Honor'. Many of these seedlings of *C. japonica* produce flowers of the dimensions of the double forms of *C. reticulata* and we were struck by the resemblance of the bright red 'Ellen Sampson' to them, not only in size but in form. 'Guilio Nuccio', which grows so well at Leonardslee, is another of them, but 'Drama Girl', also in the exhibit, remains in spite of its immense size unmistakably a *japonica*.

Sprays of *C. japonica* 'Kramer's Supreme' were also impressive, laden with paeony-sized flowers of dark, rich red.

It was interesting to see 'Carl Tourje' in such upper class company for its reputation has preceded it by many years and its parentage (*C. pitardii* × *C. reticulata* 'Chang's Temple') was exotic at the time of its raising. We were perhaps a little disappointed as it has the blued tone of many a wild *C. reticulata* to its soft pink. Perhaps we are prejudiced and only appreciate blued pinks when they are strong as in 'Cherub' or 'St. Ewe'. The sprays of *C. japonica* 'Velma Grantham' on the exhibit were the first we had seen and its large semi-double, white and pink striped and flecked flowers are decidedly attractive. *C. reticulata* 'William Hertrich' is another camellia we know by repute. It is a seedling of the Kunming 'Lion Head' with flattish flowers of a dark cherry red and was conspicuous in the centre of the exhibit. Among the sprays and branches we have left that of *C. japonica* 'Betty Sheffield Supreme' to the end. The flower is that of a loosely formed picotee with the white petals deeply bordered with rose-red. In our opinion it is attractive, unusual and distinctive.

There was much interest in a number of miniatures on the exhibit. The Japanese *C. japonica* 'Bokuhan', seen in the Competition recently, must be their forerunner, with 'Boutonnière' shaped like a double rose and with a known date of 1840 in Europe, and its white counterpart 'Compacta Alba' dated 1859, also approaching them, but the two we admired were raised very recently in America. One of them, 'Tinker Bell', is attractively anemone-shaped with rose-pink and red stripes on a white ground. The other, 'Cardinal's Cap', had five widely spaced outerpetals of cardinal red of good substance with a fine boss of lighter red petalodes. We also liked two rather larger flowers. One of them 'Little Bit', had a full, rounded paeony form with red petals flecked white. The other, 'Grace Bunton', which was a little larger, was a lovely deep rose-pink.

Of very large flowers there were many to choose from. *C. japonica* 'Grand Slam', with clear red wavy petals and anemone-centred, was quite 5 inches across and an equally substantial *C. japonica* 'Laurie Bray' was showing yellow stamens among its lovely dog-rose pink petals. Among other *japonicas* we noted 'Sawada's Dream', a white formal double with the outer petals attractively pale pink, the shell-pink 'Tomorrow Park Hill' which is semi-double and has some white variegation, the light pink formal double 'Eleanor Hagood' and another semi-double, 'Geisha Girl', of a light pink delicately striped with red. There was a large flower of the dark 'Red Elephant', which can be even larger still, and one of the red and white striped 'Guilio Nuccio Variegata'. 'Lawrence Walker Variegata' was another red and white which showed its yellow stamens attractively. The very large 'Kick Off', an attractive pink with pinkish red stripes, did not suggest football of any kind to us, but it must to its raiser, who also named a rose-pink sport

of it 'Touchdown', but then American football is as uncomprehensible to us as cricket is to an American. Finally among the *japonicas* we must mention the lovely white, paeony-like 'Evelina'. Another white on the exhibit and as lovely, 'Edelweiss' is surely by now well known for the prizes it has won in the Competition.

We will finish with *C. reticulata* 'Butterfly Wings' with its rose-pink, wavy petals poised for flight, and two × *williamsii* hybrids 'Elsie Jury' and 'Mildred Veitch'. The former is one of the most beautiful seedlings raised by Mr. L. E. Jury in New Zealand, aptly described as resembling a Victorian posy of clear pink and five inches across. The latter was named after the late Miss Veitch who died as recently as March 1970, one of the last members of the great house of Veitch to take an extremely active part in the Royal Nurseries at Exeter and latterly at Alphington nearby, where the cross was made, raised and named. Its colour is a soft orchid pink and its form semi-double to anemone.

THE CAMELLIA SHOW

April 14 and 15, 1970

By JAMES PLATT

THE Camellia Show for flowers cut in the open was not quite the disaster that had been anticipated. As usual it was held in mid-April, but the weather had remained perverse in the extreme!

The Competition was saved by a small group of enthusiasts who must have gone to great trouble to produce the flowers they entered. Once again we were filled with admiration for the care taken in transporting these, so easily bruised flowers. However the Competition was not up to its usual high standard, although there were some creditable entries in view of the weather conditions.

There were 16 entrants, two of whom were obliged to cancel their entries. To Maj.-General E. G. W. W. Harrison, of Tremeer, who took 17 first prizes, 14 seconds and 7 thirds, we are indeed grateful for such support from Cornwall. His nearest rivals were Sir Giles Loder, Bt., and the daughters and executors of the late Mrs. Gertrude Harrison of Slaugham Park, Haywards Heath. The Hon. Edward Boscawen of Handcross and Mr. R. Strauss of Ardingly were also among the prize winners with some excellent entries. They and all the entrants must be thanked for their support and making the Competition possible under such trying weather conditions.

TRURO SHOW, 1970

By NIGEL HOLMAN

DESPITE the late spring, The 58th Truro Spring Flower Show, held by the Cornwall Garden Society on April 22nd and 23rd, was one of the most successful, with record entries, and from the comments of the judges, no lack of quality. One of the latter, who judged camellias both at Truro and at the R.H.S. Camellia Show in London the week before, found his task at Truro very much the harder.

There were excellent Trade Stands from Treseder's of Truro and Trehane's of Wimborne. Treseder's relied on first-class garden plants, with camellias such as *C. japonica* 'Rubescens Major' and 'Contessa Lavinia Maggi' and *Rhododendron* 'Elizabeth'. Treseder's stock a wide range of magnolias, and they included on their stand a good plant of *Magnolia* 'Picture', which is a welcome addition to the Soulangeana Group, and certain to become widely grown.

Trehane's, under the guidance of David Trehane, have become one of the most interesting of camellia nurseries, especially for those looking for new varieties of × *williamsii* raised in New Zealand and Australia. Many of these have lost the tinge of magenta which some find objectionable amongst many of the English varieties. The collection of cultivars they showed, both of *C.* × *williamsii* and *C. japonica*, was so large that it is difficult to select out for a report such as this. However, 'Debbie', 'Shocking Pink' and 'Brigadoon' were new × *williamsii*'s to me well worth garden space, following on from 'Anticipation' and 'Elsie Jury', which have already proved themselves in Cornish gardens; *C.* 'Elegant Beauty' and 'Guilio Nuccio' were outstanding amongst the japonicas, both of which are good garden plants, unlike some American varieties.

Over the past few years the highlight of the Show has been the large island exhibit from Caerhays, and we are deeply grateful to Julian Williams and his garden staff, headed by Philip Tregunna, for the time and trouble (and expense) they have given to its staging. This year they had as a centre-piece a 12-foot branch of *Michelia doltsopa*, surrounded by a veritable cornucopia of good things—fine forms of *Rhododendron morii*, *maculiferum*, *quinquefolium* and *sinogrande*, *Rhododendron* 'Sir Charles Lemon' shown to the advantage of its russet indumentum, Lamellen's 'Damaris' and their own 'Yellow Hammer'. Amongst the camellias were some very fine seedlings of the wild form of *reticulata*, and a newly named single pink × *williamsii*, 'Mary Larcom', with large flowers of great substance. Outstanding amongst the trees and shrubs was *Magnolia campbellii alba*, surely one of the most beautiful of

magnolias, flowering sprays of two Forrest seedlings of *Pieris formosa*, and a branch of *Quercus* (syn *Lithocarpus*) *glabra* with entire leaves like a rubber plant.

Equalling the Caerhays stand in excellence was a very exotic exhibit from Tresco, sent over with great generosity by Lt.-Cdr. Tom Dorrien-Smith, and containing a wide range of plants from the southern hemisphere impossible to grow on the mainland—Proteas from South Africa, Dryandras from Australia, winter flowering Fuschias, and a wonderful piece of the purple leaved Cordyline.

Competitive Exhibits

Perhaps the most interesting section of the Show for the up-country gardener are the miscellaneous Tree and Shrub Classes. This year they were outstanding—with no less than four gardens showing flowering sprays of *Michelia doltsopa*—other fine shrubs were Trewithen's seedling of *Pieris formosa* with massive flowering panicles, their weeping form of *Laurelia aromatica*, Trengwainton's *Clematis indivisa* var. *lobata* and Tregothnan's *Acacia riceana*. In a fine group of mixed shrubs from Mrs. Charles Williams, Trewidden, was a superb form of *Rhododendron arboreum* var. *album*, with very large tight trusses with some 30–40 flowers.

Camellias

The Camellia section was the largest yet, taking up over 100 feet of three-tier staging with blooms wholly cut from out-door plants. In a difficult year such as 1970 the genus has proved, at least in Cornwall, to be among the best of winter flowering plants.

Camellia japonica

The class for any three single varieties was won by General E. G. W. W. Harrison, Tremeer, with 'Sylva', 'Hatsu-Zakura' and 'Spencers Pink'. 'Spencer's Pink' is a clear pink Australian cultivar with an attractive habit of growth that should be more widely grown. The General's 'Hatsu-Zakura' showed some frosting of the stamens, as did all the flowers of this variety in the Show.

Any one single form was won by Col. Norman Colville, Penheale, with a very good form of 'Devonia', followed by Mrs. George Johnstone with an attractive pale pink flower of 'Shin-Akebono'.

Penheale also won the next class for any three semi-doubles with two first-class garden varieties in 'Adolphe Audusson', 'Lady Clare' together with 'Mrs. D. W. Davis' which, although well shown here, is happier under glass. This is not the case with 'Guilio Nuccio' which won for Cdr. B. E. Penrose, Killiow, the class for any one semi-double form; this American cultivar has proved to be very robust. It was interesting to note that 'Lady Clare' pushed 'Drama Girl' into third place in this class.

The class for any three Anemone or Paeony forms was won by Nigel Holman, Chyverton, with three proven varieties in 'Eugene Lize', 'Blackburniana' and 'Nobilissima', the latter flower picked off an old bush that had been in flower since Christmas. 'Blackburniana', shown by Spencer Copeland and the National Trust, Trelissick, won the class for any one paeony or anemone form. (This variety is considered by Mr Charles Puddle to be synonymous with 'Altheaflora', but the Cornish, in their obstinacy, feel he is mistaken.)

Chyverton won the class for any three doubles with 'Mathotiana Alba', 'C. M. Hovey' and 'Valtevaredo', a very old variety with an eight month flowering season in some years.

The class for any six japonicas was won by Trelissick with a collection of old varieties dominated by a fine unspoilt flower of 'Grandiflora Alba'.

Miscellaneous Camellias

Even though the Show was late for single forms of *reticulata*, Trewithen won the class for three blooms with some very good flowers, whilst the flower of General Harrison's which won the one bloom class was of great size and substance.

For the first time the schedule had two classes for semi-double or double forms of *reticulata*—the first, for one flower of 'Captain Rawes', was won by a large bloom from Chyverton, but I thought that Cdr. W. R. Gilbert, Compton Castle, Paignton, was unlucky to be second with his brighter coloured form. The second class included any other semi-double form—sadly there was only one entry, a beautiful flower of 'Lion Head' from Mrs. Johnstone, but it is hoped that in years to come this will be one of the outstanding classes in the Show.

The Show was too late for good single flowered forms of × *williamsii*, but the quality and variety of the semi-double and double forms has never been better. Tremeer won the class for any three with good blooms of 'Anticipation', 'Citation' and 'Donation'. The class for 'Donation' was the best supported in the Show with fifteen entries—it was won by Cdr. B. E. Penrose, Killiow, with a fine flower—Penheale showed a very dark sport in this class, but it did not find favour with the judges. Any semi-double or double variety other than 'Donation' was won by Chyverton with 'Mildred Veitch', which certainly in that garden is proving outstanding. The same can be said for *C.* 'Leonard Messel', a cross of *C. reticulata* × *williamsii* 'Mary Christian', which won both the class for any hybrid of *reticulata*, and for any hybrid from × *williamsii*, shown by Penheale and Chyverton respectively. This is, surely, one of the best camellia hybrids yet raised.

The class for any six camellias was won by Trewithen with 'Lady Clare', 'Lion Head', 'Adolphe Audusson', 'Senator Duncan Fletcher', 'Herme' and an unnamed white paeony seedling. It was good to see two

Photo: T. P. Roskrow

Fig. 60—The class for six hybrids, at Truro Show, won by Maj.-General Harrison.

Kunming reticulatas in this class, Chyverton's second prize group including a flower of 'Noble Pearl'.

The Camellia Cup for six vases of cut sprays to include three or more species or hybrids was won by Chyverton with 'Eugene Lize', 'Inspiration', *saluenensis*, *reticulata* forma *simplex*, 'Adolphe Audusson' and 'Donation'. The vase the judges liked the best was that of 'Donation', a very free flowerer in Cornwall, aptly christened Ostentation by one of our local vicars.

RHODODENDRONS

Species

The class for any six species was won by Lord and Lady Falmouth. Tregothnan is famous for its *arboreums*, and they showed a beautiful truss of the blood-red form, together with *delavayi*, *niveum*, *calophytum*, *falconeri* and *thomsonii*. Major E. W. M. Magor, Lamellen, had in his second prize group a good *macabeanum* with red stigmas and an attractive form of *irroratum*. Trewithen's third prize six included a very bright *delavayi* and a huge, but damaged, truss of *sinogrande*. The class for any three species was won by General Harrison with fresh, unmarked trusses of *macabeanum*, *semnoides* and *niveum*.

The class for any species of the Falconeri or Grande series was won with a perfect truss of *eximeum* forma by Spencer Copeland and the N.T. Trelissick. The judges were so taken by it that they awarded it the Abbiss Memorial Trophy for the outstanding competitive exhibit in the Show, a great boost to Trelissick's enthusiastic head gardener, Jack Lilley. The class for one truss from a series other than the above was won by Trewithen's very good form of *delavayi*. The Arboreum Series was won by Lady Bolitho and the N.T., Trengwainton, with a truss of their A.M. form of *lanigerum* in very fine condition. The same can be said of a very large flowered *thomsonii* from Colonel Colville, Penheale, which won the class for any species from the Thomsonii Series.

Outstanding amongst the spray classes were Lamellen's dark waxy form of *euchaites* and their pale lavender *hormophorum*, which easily won a strong class for the Triflorum or Heliolepis Series. Of even greater merit was Trengwainton's *cubittii*, a fine form in perfect condition and a great credit to Cornwall's climate, as it won the class for the Maddenii or Edgeworthii Series grown out of doors. They also showed a good spray of *johnstoneanum* var *rubeotinctum* in their prize winning group of any three species.

Over the past few years Penheale has won the class for a spray from any of the smaller growing series other than Lapponicum with their very dark form of *racemosum*. The Lapponicum Series was won by Chyverton with the F.C.C. form of *scintillans*. Chyverton also won the class for one spray of the Azalea Series with a lovely form of *schlippenbachii*, although they would not have done so if Trewithen's very dark *albrechtii* had been fully out.

Hybrids

This section was very much Tremeer's. General Harrison marshalled his troops with consummate skill, winning both the class for any six hybrids and for any three hybrids, and coming first and second in the class for any one hybrid (Fig. 60).

Outstanding in his six (which won for him the Mrs. Charles Williams Trophy) were two hybrids of Luscombei: 'Robert Keir' (× *lacteum*), and 'Shepherd's Delight' (× Loderi), backed up by 'Mariloo', 'Barclayi' × 'Lacs', 'Matador' × 'Gaul' and 'Barclayi Robert Fox'—'Robert Fox', raised at Penjerrick before the Great War by Smith, stood up well in such company.

His prize winning group of three included a very lovely pale yellow truss of *lacteum* × 'Damaris', together with 'Diane' and 'Fortune'. 'Shepherd's Delight' and 'Fortune' gave him the major prize in the single truss class. All his trusses were fresh and unmarked and were a great tribute to the General's showmanship—it was interesting to see how many of his best hybrids were secondary or tertiary crosses.

The class for a hybrid raised in the garden of the exhibitor was won by 'Jack Skelton', that very fine hybrid of *lacteum* × 'Mrs. Lindsay Smith' raised at Trewithen by the late George Johnstone. Another pre-war Cornish hybrid, 'Arbalco', won for Major Magor the class for any hybrid with a parent from the Fortunei Series.

Colonel Colville had two outstanding entries in the spray classes. His prize winning spray—of a hybrid of which one parent is a species of the Triflorum Series was *pseudoyanthinum* × *russatum*—looked very good, although it was hard to assess its true colour in the artificial light. He also won the class for a rhododendron grown under glass with a very lovely spray of 'Bulbul'.

It was good to see a fine spray of 'Elizabeth' winning for Lord St. Levan, St. Michael's Mount, a strong class for one spray of any hybrid. The Mount is exposed to every wind that blows, and it says much for 'Elizabeth's' constitution that she appeared in such good condition.

It was sad that the section for the smaller garden was not better supported, the rhododendrons being very disappointing. However, there were some very good camellias from Mrs. M. C. Reid, Falmouth, and from Mrs. W. D. Martin of St. Austell. Capt. J. N. Hicks showed a very fine flower of 'R. L. Wheeler' from his cold garden in North Cornwall. This variety produces flowers as large in the open as under glass, but perhaps one does not like one's garden full of soup plates!

RHODODENDRON AND CAMELLIAS WHICH HAVE RECEIVED AWARDS IN 1970

Colour references are to the R H.S. Colour Chart (1966)

Rhododendron 'Galactic' (R. lacteum × R. 'Avalanche'). F.C.C. April 28, 1970, as a hardy flowering plant (Votes 14 for, 0 against) (Fig. 61). Corolla 5 joined petals. Calyx rudimentary, trusses of 20–22 blooms. Flowers 3 inches long and $3\frac{1}{2}$ inches across, openly campanulate, a creamy white, close to Yellow Group 4 D, paling towards the outer corolla, some light crimson marking in throat. Stamens 14, irregular, brown anthered. Style and stigma green/yellow. Stamens and style both held within corolla. Pedicel sturdy, up to $1\frac{3}{4}$ inches long. Leaves oblanceolate to narrowly lanceolate, 8 inches long and 3 inches across, mid-rib prominent, under surface lightly covered with plastered indumentum. Petioles stout, 1 inch in length. Crossed and raised by Lionel de Rothschild, Esq., exhibited by Edmund de Rothschild, Esq., Inchmery House, Exbury, nr. Southampton, Hants.

Rhododendron 'Loderi King George' (R. griffithianum × R. fortunei). F.C.C. May 18, 1970. Crossed and raised by Sir Edmund Loder. Exhibited by Sir Giles Loder, Bt., V.M.H., Leonardslee, Horsham, Sussex (frontispiece). For description, see: *R.H.S. Journal*, Vol. XCIII (1968) p. 489; *Rhododendron and Camellia Year Book*, 1969, pp. 134–5.

Rhododendron 'Golden Gift' ((R. cinnabarinum × R. maddenii) × R. concatenans) A.M. May 18, 1970. (Votes: 18 for, 2 against), as a hardy flowering plant (Fig. 62). Flowers campanulate, with 5 well-defined lobes, $1\frac{3}{4}$ inches long, 2 inches across, in trusses of 7 or 8. Flower colour Yellow-Orange Group 20A, faintly tinged outside with pale purple and darker yellow, the inner corolla showing some pale olive green mottling of the upper throat. Stamens 12, irregular in length, hairy at base, filaments white, anthers brown held within corolla. Style and stigma green, protruding very slightly from corolla. Calyx rudimentary, up to 3 mm., pedicels up to $\frac{3}{4}$ inch long. Calyx and pedicels uniformly covered with yellow scaly indumentum. Leaves on specimen shown up to 5 inches long and 2 inches across, narrowly elliptic to elliptic, apiculate, oblique, under-surface covered with fine brown scaly indumentum. Younger leaves glaucous. Petioles up to 1 inch, scaly. Crossed, raised and exhibited by Maj.-General E. G. W. W. Harrison.

Rhododendron keiskei 'Yaku Fairy'. A.M. April 14, 1970 (Votes unanimous), as a flowering plant for the alpine house (Fig. 43). A prostrate plant with flowers held up, clear of the foliage, in trusses of 2 to 5

Photo: Ernest Crowson

Fig. 61 (*above*)—Rhododendron 'Galactic', F.C.C., April 28, 1970, when shown by Edmund de Rothschild (see p. 181).

Photo: Ernest Crowson

Fig. 62—Rhododendron 'Golden Gift', A.M., May 18, 1970, when shown by Maj.-General E. G. W. W. Harrison (see p. 181).

blooms. Flowers widely funnel-shape, $1\frac{7}{10}$ inches across and $\frac{4}{5}$ inches long. Corolla 5 joined, deeply divided petals. Pedicels $\frac{2}{5}$ inches long, yellow/green, lightly covered with scaly yellow indumentum. Calyx rudimentary. Stamens 10, orange anthered, variable in length, held within corolla. Filaments and style self-coloured, style slightly longer than stamens. Flower colour Yellow Group 2D. Leaves lanceolate, acute to apiculate, leaf base acute: up to $\frac{3}{5}$ inches across and $1\frac{1}{2}$ inches long, undersurface lightly covered with pale scaly indumentum. Upper surface of youngest leaves also lightly covered. Petiole $\frac{1}{5}$ inch long, flattened upper surface. Collector not known, raised and exhibited by Barry N. Starling, Esq., Little Marles Cottage, Severs Green, Epping Upland, Essex.

Rhododendron megeratum. A.M. April 28, 1970, as a hardy flowering plant (Votes: 17 for, 1 against) (Fig. 63). Flowers campanulate, $\frac{1}{2}$ inch long and $1\frac{1}{2}$ inches across, carried singly or in clusters of two or three. Corolla 5 joined petals, flower colour Yellow-Green Group 153D. Calyx 5 joined deeply divided lobes, green, up to $\frac{1}{3}$ inch long, stamens 10, held within corolla, filaments stout, anthers large, dark brown. Style short, held free of, and below, stamens, stigma green. Pedicels $\frac{1}{2}$ inch long, lightly hairy. Leaves on specimen shown up to $\frac{4}{5}$ inch long and $\frac{1}{2}$ inch across, elliptic, glaucous and scaly below, with bristly hairs fringing the leaf margins. Petioles $\frac{1}{5}$ inch long and bristly. Collector not known:

Photo: Ernest Crowson

Fig. 63—*Rhododendron megeratum*, A.M., April 28, 1970, when shown by Lord Aberconway and the National Trust.

raised and exhibited by Lord Aberconway and The National Trust, Bodnant, Tal-y-Cafn, Colwyn Bay, Denbighshire, N. Wales.

Rhododendron nakaharai 'Mariko'. A.M. July 14, 1970, as a hardy flowering plant (Votes: 6 for, 0 against) (Fig. 21). Flowers funnel-campanulate, 5 joined petals, up to $1\frac{1}{2}$ inch long and 1 inch across, in 1–2, occasionally 3 flowered clusters. Flower colour Red Group 43C with a flush of Red Group 54A on the centre of upper throat. Stamens 10, irregular in length, held free of calyx: filaments red, hairy towards base: anthers black. Style held free of corolla: stigma dark red. Calyx 5 joined, deeply divided lobes, hairy, up to $\frac{1}{4}$ inch long. Leaves dark green persistent, up to 1 inch long and $\frac{3}{8}$ inch across, elliptic. Petiole $\frac{1}{8}$ inch long. Shoots, leaves and calyx densely covered with adpressed hairs. Collector not recorded. Grown and exhibited by Hydon Nurseries Ltd., Hydon Heath, Godalming, Surrey.

Rhododendron orbiculatum 'Painted Snipe'. A.M. May 18, 1970 (Votes: 12 for, 0 against), as a flowering plant for the cool greenhouse (Fig. 18). Calyx 5 joined, deeply divided lobes, up to $1\frac{2}{5}$ inches across. Individual lobes up to $\frac{1}{2}$ inch across and $\frac{3}{5}$ inches deep, joining to form a long, slender, tubular corolla, broadening slightly at the base and up to $1\frac{3}{4}$ inches long. Flowers fragrant, colour White Group 155D. Flowers carried in firmly held, open, rounded trusses of 22 to 24 flowers per truss. Stamens 10, irregular in length, filaments white, anthers yellow/orange, held just within the corolla tube. Style greenish, slightly shorter than stamens, hairy. Stigma yellow-green. Calyx rudimentary, 5 joined green lobes. Bud scales persistent. Pedicels slender, flushed red, hairy, up to $\frac{4}{5}$ inches long. Leaves on specimen exhibited up to $3\frac{1}{4}$ inches long and 2 inches across, broadly elliptic, pale green, with mid-rib and leaf veins slightly raised on upper surface, slightly retuse, subcordate, with dark red mid-rib broadening at base to form a rudimentary petiole. Underside of leaf blade pale, lightly covered with brown pitted indumentum, upper surface of leaf blade and rudimentary petiole very lightly scaly. Collected, raised and exhibited by Mr. and Mrs. E. F. Allen, Felcourt, Copdock, Suffolk.

Rhododendron racemosum 'Rock Rose' A.M. April 28, 1970, as a hardy flowering plant (Fig. 36), (Votes: 20 for, 0 against). Flowers axillary, forming a many flowered raceme, funnel shaped, up to $\frac{3}{4}$ inch long and 1 inch across. Corolla 5 joined, deeply divided petals. Flower colour Red-Purple Group 68B facing to white in the throat. Some greenish-red and scarlet spotting in upper throat. Stamens 10, filaments white, anthers pale brown, irregular in length, style and stamens held free of corolla. Calyx rudimentary. Pedicel $\frac{3}{10}$ inch long. Calyx and pedicel lightly covered with green, scaly indumentum. Leaves aromatic, $1\frac{9}{10}$ inch long and 1 inch across, oblong-elliptic, glaucous and scaly below. Collector Rock, raised by J. B. Stevenson, Esq., exhibited by Hydon Nurseries Ltd.

Rhododendron 'Red Rock' (R. 'Bibiani' × R. elliottii—Gibraltar grex) A.M. June 9, 1970, as a hardy flowering plant (Votes: 10 for, 0 against)

(Fig. 64). Flowers widely-funnel campanulate, 5 lobed, 2 inches long and up to 3¼ inches across. Trusses full, rounded, up to 7 inches across, with up to 22–24 flowers per truss. Flower colour close to Red Group 53A at outer edge of corolla, diffusing in the throat with the brighter Red Group 50A. Upper corolla lightly spotted with black. Veins darkening in throat. Stamens 10, variable in length, of equal length with corolla or included within corolla. Filaments red, white tipped. Anthers light brown. Style held free of corolla. Stigma and style red. Nectaries prominent. Calyx 5 irregular, deeply divided, reddish lobes, up to $\frac{3}{16}$ inch long, lightly hairy and with traces of scaly indumentum. Pedicels up to 1 inch in length, sturdy. Bud scales persistent. Leaves narrowly elliptic to elliptic, up to 8 inches long and 3½ inches across, upper surface dark green, lower surface pale green with prominent veins and mid-rib. Traces of indumentum along the mid-rib. Petioles stout, rounded, up to 1½ inches long. Cross made by Edmund de Rothschild, Esq., plant grown and exhibited by Major A. E. Hardy, Sandling Park, Hythe, Kent.

Rhododendron 'Saint Merryn' (R. 'Saint Tudy' × R. impeditum). A.M. April 28, 1970, as a hardy flowering plant (Votes: 20 for, 0 against) (Fig. 65). Flowers in trusses of 2–4, widely funnel shape, $\frac{3}{5}$ inches long and approximately 1 inch across. Corolla 5 joined deeply divided petals. Flower colour Violet Group 86C. Throat hairy, calyx 5 joined, deeply divided lobes, up to 4 mm. long, green, fringed with hairs and lightly covered with scaly indumentum. Stamens 10, irregular in length, violet with black anthers. Style/stigma crimson. Pedicels up to 4 mm., scaly. Leaves lanceolate, $\frac{7}{10}$ inches long and $\frac{3}{5}$ inches across, apiculate, obtuse, both surfaces lightly covered with pale, scaly indumentum. Petioles flattened, scaly, $\frac{1}{10}$ inch long. Crossed, raised and exhibited by Maj.-General E. G. W. W. Harrison, C.B., C.B.E., M.C., Tremeer, St. Tudy, Cornwall.

Rhododendron 'Warfield' (R. 'Jalisco' × R. 'Crest'). A.M. May 18, 1970 (Votes: 13 for, 5 against), as a hardy flowering plant (Fig. 66), shown as No. 132/53. Flowers widely funnel-campanulate, 7 lobed, 2 inches long and up to 3¾ inches across. Trusses rounded, up to 6 inches across with 10 to 12 flowers per truss. Flower colour Yellow Group 4D, deepening to Yellow Group 4C at the centre of each joined petal, particularly in the upper three petals. Bud scales persistent. Throat a deeper yellow, heavily marked with Red Group 46A. Stamens 14, irregular in length, filaments yellow, anthers brown, held within corolla. Style reddish-flushed, held free of corolla, stigma purple. Calyx 7 irregular lobes, up to 7 mm., flushed red and fringed with fine hairs. Pedicels up to 1¼ inches, slightly hairy. Leaves up to 5½ inches long and 2½ inches across, elliptic, apiculate, sub-cordate, free from indumentum. Petioles up to 1¼ inches long. Upper surface of petioles yellowish green with this colouring extending along upper surface of leaf-vein. Crossed, raised and exhibited by Crown Estate Commissioners, Windsor Great Park, Windsor, Berks.

Rhododendron campylogynum form. P.C. June 9, 1970 (Votes: 10 for,

Photo: Ernest Crowson

Fig. 64 (*above*)—Rhododendron 'Red Rock', A.M., June 9, 1970, when shown by Edmund de Rothschild (see p. 184).

Photo: Ernest Crowson

Fig. 65 (*below*)—Rhododendron 'Saint Merryn', A.M., April 28, 1970, when shown by Maj.-General E. G. W. W. Harrison (see p. 185).

0 against). Collector/origin not known: grown and exhibited by Captain Collingwood Ingram, F.L.S., V.M.H., The Grange, Benenden, Cranbrook, Kent.

Rhododendron rarum. P.C. April 28, 1970, as a flowering plant for the cool greenhouse. Collected, raised and exhibited by Mr. Michael Black, Green Bank, Grasmere, Westmorland.

Rhododendron 'Throstle' (R. fargesii × R. morii). P.C. April 14, 1970, as a hardy flowering plant. Hybridised, raised and exhibited by Captain Collingwood Ingram.

Rhododendron 'Wantage' (R. 'Fabia' × R. 'Dido'). P.C. June 9, 1970, as a hardy flowering plant (Votes: 7 for, 3 against). Crossed, grown and exhibited by Crown Estate Commissioners, Windsor.

Rhododendron 'Saint Kew' (R. augustinii × R. 'St. Breward'). P.C. May 18, 1970 (Votes: 12 for, 6 against), as a hardy flowering plant. Crossed, raised and exhibited by Major-General E. G. W. W. Harrison.

Rhododendron 'Throstle' (R. 'Lady Bessborough' × R. 'Vanessa').

Photo: Ernest Crowson

Fig. 66—Rhododendron 'Warfield', A.M., May 18, 1970, when shown by the Crown Estate Commissioners (see p. 185).

P.C. May 18, 1970 (Votes: 15 for, 3 against), as a hardy flowering plant. Crossed, raised and exhibited by Mrs. M. Rabbetts, Beacon Hill Copse, Rockford, Ringwood, Hants.

Rhododendron 'Katharine Fortescue' (R. 'Hawk' × R. griffithianum). P.C. May 18, 1970 (Votes: 18 for, 0 against), as a hardy flowering plant. Crossed, raised and exhibited by L. S. Fortescue, Esq., The Garden House, Buckland Monachorum, Yelverton, S. Devon.

Rhododendron 'Buckland' (R. 'Vanessa' × R. yakusimanum). P.C. May 18, 1970 (Votes: 19 for, 0 against), as a hardy flowering plant, subject to the application of a clonal name. Crossed, raised and exhibited by L. S. Fortescue, Esq.

Rhododendron diaprepres 'Pantagruel' C.C. July 14, 1970. Grown and exhibited by G. Gorer, Esq., Sunte House, Haywards Heath, Sussex.

Camellia 'Leonard Messel' (C. reticulata × C. × williamsii 'Mary Christian'). F.C.C. April 28, 1970 (A.M. 1958), as a hardy flowering plant (Votes: 20 for, 0 against). The flowers are semi-double, with a prominent cluster of stamens, 4 inches across and contain about 14 petals. Flower colour Red-Purple Group 58D with darker veining of Red-Purple Group 58C. Crossed and raised by the late Lt.-Col. L. Messel, O.B.E., T.D., exhibited by The Countess of Rosse and The National Trust, Nymans Gardens, Handcross, Haywards Heath, Sussex.

AWARDS TO RHODODENDRONS AFTER TRIAL AT WISLEY 1970

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

The number in brackets after the description of the plant was that under which it was grown in the trial. All colour references in the descriptions are to the R.H.S. Colour Chart.

Hardy Hybrid Rhododendrons

Rhododendron 'Snow Queen' (*R.* 'Halopeanum' × *R.* Loderi grex). (Raised by the late Sir Edmund Giles Loder in 1926; introduced by the late Mr. J. G. Millais; sent by Messrs. Knap Hill Nursery Ltd., Woking, Surrey.) **F.C.C.** May 27, 1970. Plant 8 feet high, 12 feet spread, vigorous, upright and slightly spreading habit, very free-flowering; leaves 8 inches

long, 2½ inches wide, dark dull green. Flower truss 7 inches diameter, 8½ inches deep, compact, dome-shaped, twelve to fifteen flowers per truss; corolla 4 inches diameter, 3 inches long, fully expanded funnel-shaped, white with very slight pencilling of Red-Purple Group 61A at base of throat on upper segment, buds white flushed Red-Purple Group 62A. Flowering from May 18, 1970. (**A.M.** 1946). (147).

Rhododendron 'Souvenir de Dr. S. Endtz' (*R.* 'John Walter' × *R.* 'Pink Pearl'). (Raised by Messrs. L. J. Endtz & Co. in 1927; sent by Mr. Frederick Street, Heathermead Nursery, West End, near Woking, Surrey.) **F.C.C.** May 27, 1970. Plant 4 feet high, 5½ feet spread, vigorous, upright and slightly spreading habit, very free-flowering; leaves 6½ inches long, 2½ inches wide, dark dull green. Flower truss 8 inches diameter, 8 to 9 inches deep, compact, dome-shaped, fifteen to seventeen flowers per truss; corolla 3¼ inches diameter, 2⅕ inches long, fully expanded funnel-shaped, a colour near Red-Purple Group 66D, flushed round margins and more heavily on upper segments with Red-Purple Group 66C and Red-Purple Group 67C, spotting on upper segment of Red-Purple Group 59A. Flowering from May 23, 1970. (**A.M.** 1924). (190).

Rhododendron 'Hardijzer Beauty' (*R. racemosum* × Kurume Azalea). (Raised by W. H. Hardijzer, introduced by P. W. Hardijzer, sent by Messrs. Willem Hardijzer & Co., The Nurseries, Wilhelminalaan 53, Boskoop, Holland.) **A.M.** May 12, 1970. Plant 2¾ feet high, 3¼ feet spread, vigorous, compact and upright habit, very free-flowering; leaves 1½ to 1¾ inches long, $\frac{9}{10}$ inch wide, light to medium dark glossy green tinged red. Flower truss 3¼ inches diameter, 3 to 3½ inches deep, very compact, dome-shaped, fifty to sixty flowers per truss; corolla $1\frac{1}{10}$ inches diameter, 1 inch long, fully expanded funnel-shaped, Red-Purple Group 67D lightly flushed Red-Purple Group 66C, spotting in throat Red-Purple Group 61B on upper segments. Flowering from May 6, 1970. (216).

Rhododendron 'Sweet Simplicity' (*R. ponticum* cross). (Raised by the late F. Gomer Waterer before 1922; sent by Mr. Frederick Street.) **A.M.** June 11, 1970. Plant 3¾ to 4 feet high, 6 feet spread, fairly vigorous, upright to slightly spreading habit, free-flowering; leaves 6½ inches long, 2½ inches wide, dark fairly glossy green. Flower truss 6 inches diameter, 4¾ inches deep, slightly lax, fairly compact, globular-shaped, eighteen to twenty flowers per truss; corolla 2½ to 2¾ inches diameter, 2 inches long, fully expanded funnel-shaped, white lightly flushed on upper margins and mid-ribs with Red-Purple Group 68D, reverse of mid-ribs Red-Purple Group 68B, green spotting on upper segments. Flowering from June 3, 1970. (181).

Rhododendron 'Kluis Sensation' (*R.* 'Britannia' × an unnamed seedling). (Raised (1946) and introduced by Anthony Kluis; sent by Mr. Frederick Street.) **H.C.** June 11, 1970. Plant 3¾ feet high, 6¼ feet spread, fairly vigorous, upright and slightly spreading habit, free-flowering;

leaves 5 inches long, 2 inches wide, dark dull green. Flower truss 5½ inches diameter, 4¼ inches deep, compact, globular-shaped, seventeen to eighteen flowers per truss; corolla 1¾ to 2 inches diameter, 1¾ inches long, funnel-shaped, a colour near Red Group 53C with blackish-brown spotting on upper segment. Flowering from June 1, 1970. (154).

Rhododendron 'Lady Clementine Mitford' (*R. maximum* cross). (Raised by A. Waterer, sent by Mr. Frederick Street.) **H.C.** June 11, 1970. 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, young leaves light glossy green with grey hairy covering. Flower truss 5 inches diameter, 4½ inches deep, very compact, dome-shaped, seventeen to eighteen flowers per truss; corolla 2 to 2⅕ inches diameter, 1¾ inches long, fully expanded funnel-shaped, white flushed all round margins Red-Purple Group 65A, lightly touched with Red-Purple Group 73B, upper segments spotted on lower margins with Red-Purple Group 64C and with Greyed-Orange Group 163B. Flowering from June 5, 1970. (158).

Rhododendron 'Scarlet Wonder' (*R.* 'Essex Scarlet' × *R. forrestii* var. *repens*). (Raised and sent by Herr Dietrich G. Hobbie, Linswege uber Westerstede, Oldenburg, Germany; introduced by Herr Dietrich G. Hobbie, Mr. J. H. P. Holt, Virginia Water, Surrey, and Messrs. Le Feber & Co., Boskoop, Holland.) **H.C.** May 12, 1970. Plant 2 feet high, 4¼ feet spread, vigorous, upright habit, very free-flowering; leaves 2$\frac{1}{10}$ inches long, 1⅕ inches wide, medium dark dull green. Flower truss 5 to 6 inches diameter, 4 inches deep, fairly compact, flattened globe-shaped, five to seven flowers per truss; corolla 2⅕ inches diameter, 1¾ inches long, fully expanded funnel-shaped, a colour near Red Group 53B with some extremely faint brown spotting in throat. Flowering from May 6, 1970. (161).

Rhododendron 'Tiger' (*R. dichroanthum* × *R.* 'Cremorne'). (Raised (1960), introduced and sent by Messrs. C. Reuthe Ltd., Fox Hill Hardy Plant Nurseries, Keston, Kent.) **H.C.** May 12, 1970. Plant 2¼ feet high, 2¼ feet spread, vigorous, compact, and upright habit, free-flowering; leaves 3 inches long, 1¾ inches wide, medium dark dull green. Flower truss 6 inches diameter, 3 inches deep, lax, flattened dome-shaped, four to six flowers per truss; corolla 2¾ inches diameter, 2⅕ inches long, fully expanded funnel-shaped, two lower segments Yellow Group 8B, lightly flushed round margins Red Group 44D, three upper segments Yellow Group 10A flushed round margins Red Group 44D and lightly tinged with Orange-Red Group 35B, quite heavy spotting on upper segment of Greyed-Purple Group 185A. Flowering from May 6, 1970. (254).

Evergreen Azaleas

Rhododendron 'Mother's Day' (Hybrid of *R.* 'Hinodegiri'). (Raised and introduced by Aug. van Hecke; sent by Messrs. Walter C. Slocock

Ltd., Goldsworth Nursery, Woking, Surrey.) **F.C.C.** May 27, 1970. Plant 1 foot high, 2 to 2¼ feet spread, vigorous, compact and spreading habit, very free-flowering; leaves 1 to 1¼ inches long, ¼ inch wide, medium dark bright green tinged red, young leaves light glossy green. Flower truss 3½ inches diameter, compact, two to three flowers per truss; corolla 2 to 2¼ inches diameter, 1¾ inches long, fully expanded funnel-shaped, Red Group 53C with light flush of Red Group 53B, faint spotting on upper segment Red Group 53A. Flowering from May 23, 1970 (**A.M.** 1959). (2).

Rhododendron 'Bikini' (*R.* 'Hinomayo' seedling). (Raised, introduced and sent by Mr. M. Haworth-Booth, Farall Nurseries, Roundhurst, near Haslemere, Surrey.) **A.M.** May 12, 1970. Described *R.H.S. Proceedings*, Vol. 93, p. 124. Flowering from May 8, 1970 (**H.C.** 1968). (49).

Rhododendron 'Blue Danube'. (Raised by Aug. van Hecke, sent by Messrs. Walter C. Slocock Ltd.) **A.M.** May 27, 1970. Plant 2½ feet high, 5 feet spread, vigorous, upright and spreading habit, very free-flowering; leaves 2 inches long, ¾ inch wide, medium dark bright green with young leaves light glossy green. Flower truss 4 inches diameter, compact, two to three flowers per truss; corolla 1½ to 1$\frac{7}{10}$ inches diameter, 1½ inches long, funnel-shaped, a colour near Red-Purple Group 72B flushed along mid-ribs Red-Purple Group 74B, spotting on upper segment of Red-Purple Group 60A. Flowering from May 22, 1970. (38).

Rhododendron 'Satsuki'. (Subject to a check before registration.) (Sent by Messrs. Knap Hill Nursery Ltd.) **H.C.** June 11, 1970. Plant 3½ feet high, 9½ feet spread, very vigorous, compact and upright habit, very free-flowering; leaves 1$\frac{1}{10}$ inches long, ⅖ inch wide, medium dark glossy green. Flowers borne singly or occasionally in pairs; corolla 2¼ inches diameter, 1$\frac{9}{10}$ inches long, fully expanded funnel-shaped, a colour near Red Group 55A, lightly flushed along mid-ribs and on upper segment Red Group 52B, some light spotting of Red Group 46A. Flowering from June 9, 1970. (30).

Deciduous Azaleas

Rhododendron 'Windrush'. (Raised (1951) at The Royal Horticultural Society's Garden, Wisley, Ripley, Woking, Surrey.) **A.M.** May 27, 1970. Plant 3¼ feet high, 2¾ feet spread, vigorous, compact and upright habit, very free-flowering; leaves 4 to 5 inches long, 1½ inches wide, light glossy green heavily flushed and overlaid brownish-red. Flower truss 6 to 7 inches diameter, 5 to 6 inches deep, compact, globular-shaped, ten flowers per truss; corolla 3 to 3¼ inches diameter, 2½ to 2¾ inches long, fully expanded funnel-shaped, Red Group 55A flushed and veined on white with tinges of Red-Purple Group 61D, flushed at base of throat with Red Group 52B, some spotting of

Yellow-Orange Group 17A on upper segment, buds Red Group 52B flushed Red Group 52A. Flowering from May 3, 1970. (69).

ADDITIONS TO THE INTERNATIONAL RHODODENDRON REGISTER, 1969–70

Except where otherwise quoted, colour references are to the RHS Colour Chart (1966)

Alston — cl. 'Hawk' (Exbury A var.) × *griffithianum* (L. S. Fortescue, Buckland Monachorum, Yelverton, S. Devon); lvs. 5–7½ in. long and 2¾ to 4 in. broad, ovate-lanceolate, dark green; fls. 5–7 in. each truss, 5 lobed, openly funnel-shaped, 3½ in. in diameter and 2¼ in. long, reflex; White Group 155A with base of inner corolla faintly stained Green-Yellow Group 1D. Selected for trial at Wisley (1968).

Bashful — cl. *yakusimanum* × 'Doncaster' (John Waterer, Sons & Crisp Ltd., The Nurseries, Bagshot, Surrey); plant of compact habit; fls. R.H.S. Colour Chart Camellia Rose 622/3 shaded Camellia Rose 622/2 with a reddish-brown blotch.

Ben Lancaster — cl. 'Lackamas Spice' × 'Evening Glow' (raised by Ben Lancaster, 1963). Plant 3 ft. high in 7 years. Habit medium bushy; lvs. persistent, 5 in. long and 2 in. across; flr. colour Mimosa Yellow (H.C.C. 602 to 602/2), deepens with age. Truss full, round, upright, 12 flowered; corolla bell-shaped, 3½ in. wide and 1½ in. long; fragrant. Late flowering.

Bolero — cl. 'Addy Wery' × 'Salmon Elf'; (W. L. Guttormsen, Canby, Oregon, U.S.A.); evergreen, habit compact; fls. hose-in-hose, in clusters of 5, strong purplish red (Nickerson 10RP5/12). Flowering April 30th.

a Bourbon Supreme — cl. 'Melford Chief' × 'Melford Glory' (Crossed by Bob Badger, Tacoma, Wash., raised and introduced by Roy Hacanson of Puyallup, Wash.); fls. ball truss, 6 in. across, made up of 15 florets, 2¾ in. wide by 2 in. long, funnel-shaped. Overall colour Orange Group 28A, blotch Yellow Orange Group 23A; lvs. light green, heavily veined; fls. are fragrant; plant is upright, growing to 5 ft. in 10 years. Deciduous, with leaves having a good autumn colour. Parents are both Ilam (New Zealand) hybrids. Flowering in mid-May.

Buckland — cl. 'Vanessa' × *yakusimanum* (L. S. Fortescue, Buckland Monachorum, Yelverton, S. Devon); lvs. 3–3½ in. long and 1¼ in. broad, ovate to narrowly lanceolate, dark green; fls. 7–9 in loose open truss, openly

funnel-shaped, 3 in. in diameter, 2 in. long; Red-Purple Group 65D with darker markings of Red-Purple Group 62A along mid-ribs. P.C. (R.H.S.) May, 1970.

Caliente — cl. 'Addy Wery' × 'Salmon Elf' (W. L. Guttormsen, Canby, Oregon, U.S.A.); plant compact to 2 ft. Leaf 1¼ × ½ in. Fl. vivid red (Nickerson 5R5/13), hose-in-hose to 2 in. in clusters of 2–3. Flowering May 4.

Canadian Beauty — cl. 'Mrs. Horace Fogg' × 'Walloper' (John G. Lofthouse, Vancouver, B.C.); fls. openly funnel-shaped, length 3 in. width 4½ in., 5 lobed, Red-Purple Group 57C shading to centre through 73C to 73D with 2 yellow rays emanating from centre top lobe; truss 16 flowered; lvs. up to 7 in. long × 2¼ in. wide, elliptic.

Cloud Cap — cl. 'Helen Close' × 'Madrigal' (W. L. Guttormsen, Canby, Oregon, U.S.A.); plant compact; lvs. 1¾ in. × ¾ in. Fls. pure white with yellow blotch (Nickerson 10Y9/9); single with partially petaloid stamens to 2¾ in. in clusters of 2–4. Flowering May 19.

Coral Pink — cl. 'Barclayi' × 'Lacs' (Major-General E. G. W. W. Harrison, Tremeer, St. Tudy, Bodmin, Cornwall); fls. 7 lobed, 4 in. across and 3 in. long, up to 16 per truss; colour deep coral pink with lighter shading.

Dopey — cl. (*eriogynum* hybrid × 'Fabia') × (*yakusimanum* × 'Fabia Tangerine') (John Waterer, Sons & Crisp Ltd., The Nurseries, Bagshot, Surrey); plant of compact habit, free flowering; fls. Horticultural Colour Chart Currant Red 821/3 with brown spotting of the upper lobe.

a Dorian — cl. 'Louise Gable' × 'Helen Close' (W. L. Guttormsen, Canby, Oregon, U.S.A.); evergreen, compact habit; fls. single, in clusters of 1–2, light reddish purple (Nickerson 10P6/9). Flowering May 25.

a Dracula — cl. (Knaphill); parentage unknown; (raised and introduced by Hillier & Sons, Winchester, Hants.); fls. Orange-Red Group 32B overlaid Red Group 52A; petals frilled at margins. The flower buds are described as being almost black-red before opening.

Glendoick — cl. form of *racemosum* (Glendoick Gardens Ltd., Perth); fl. colour Red-Purple Group 62A.

Golden Anniversary — cl. *chlorops* × ('Golden West' × 'Mariloo') (raised by Ben Lancaster, 1963); habit medium; plant 32 in. high and 15 in. wide; lvs. elliptic, 5 in. long and 2½ in. wide. Truss globe-shaped; fls. open bell-shaped, 2½ in. across and 1½ in. long, Primrose Yellow (H.C.C. 601/2) with reddish flare in throat. Mid-season; introduced by Ben Lancaster 1970.

Golden Gift — cl. (*cinnabarinum* × *maddenii*) × *concatenans* (Major-General E. G. W. W. Harrison, Tremeer, St. Tudy, Cornwall); fls. campanulate, 5 lobed, 1¾ in. long and 2 in across, in trusses of 7 or 8. Colour Yellow-Orange Group 20A, faintly tinged outside with pale purple and darker yellow, the inner corolla showing some

pale olive green mottling of the upper throat; lvs. up to 5 in. long and 2 in. broad, narrowly elliptic to elliptic, apiculate, oblique. A.M. (R.H.S.) May 1970.

Grumpy — cl. *yakusimanum* × unknown hybrid (John Waterer, Sons & Crisp Ltd., The Nurseries, Bagshot, Surrey); plant of compact habit; foliage dark green; flr. colour Naples Yellow (H.C.C. 29/4) with a slight tinge of Shell Pink (H.C.C. 516/3) edging the petals.

Hardijzer Beauty — cl. *racemosum* × Kurume Azalea (raised by W. H. Hardijzer, introduced by P. W. Hardijzer); plant 2¾ ft. high, 3¼ ft. spread, vigorous, compact and upright habit, very free-flowering; lvs. 1½–1¾ in. long, $\frac{9}{10}$ in. wide, light to medium dark glossy green tinged red; fl. truss 3¼ in. diameter, 3 to 3½ in. deep, very compact, dome-shaped, 50 to 60 fls. per truss; corolla $1\frac{1}{10}$ in. diameter, 1 in. long, fully expanded funnel-shaped, Red-Purple Group 67D lightly flushed Red-Purple Group 66C, spotting in throat Red-Purple Group 61B on upper segments. A.M. (Wisley Trials) May 1970.

Hussar — cl. (*eriogynum* × 'Fabia') × 'Mayday' (John Waterer, Sons & Crisp Ltd., The Nurseries, Bagshot, Surrey); plant of compact habit; free-flowering; Blood Red (H.C.C. 820/1) speckled brown on upper lobe.

Jim Drewry — cl. 'Betty Wormald' × *elliottii* (raised by John Druecker & Jim Drewry; introduced by John Druecker); plant size large; habit upright, medium open; fl. colour Chrysanthemum Crimson (H.C.C. 824) spotted Oxblood Red (H.C.C. 00823); flr. funnel shape; truss 24 to 27 florets; flowers in mid-season.

Katharine Fortescue — cl. 'Hawk' (Exbury A var.) × *griffithianum* (L. S. Fortescue, Buckland Monachorum, Yelverton, S. Devon); lvs. ovate-lanceolate, undulate, up to 5 in. long; fls. in trusses of 12, openly funnel-shaped, 5 lobed, up to 4½ in. across and 3 in. long. Outer corolla Yellow Group 2C, inner corolla Yellow Group 3C, paling to off-white with a slight blotch of Red Group 42B in upper throat. P.C. (R.H.S.) May 1970.

Laura Marie — cl. 'Countess of Athlone' × *ponticum* (raised by Ben Lancaster 1963); habit medium compact; plant 2½ ft. high in 6 years; lvs. 4 in. long and 1½ in. wide; trusses full, rounded; fls. open bell-shaped, ruffled, 3 in. across and 1½ in. long, Mauve (H.C.C. 622/3). Flowers mid-season.

Manda Sue — cl. 'Vulcan' × 'Elspeth' (Geo. L. Baker, Astoria, Oregon, U.S.A.); plant 2½ ft. tall in 8 years; habit compact; fls. Shell pink with red edge and yellow throat; truss upright, 12 to 14 flowered; lvs. 4 in. long and 1¾ in. wide, bright green. May flowering.

Margaret Knight — cl. 'Pink Dexter' × 'Purple Splendour' (raised by Clarence Loeb 1963); habit compact; 3½ ft. high and 4 ft wide; lvs. dark green, 5½ in. long; truss 14 flowered; fls. 3¼ in. across and 3½ in. long; Purple Group 76B with corolla edged Purple Group 77B and with blotch in throat Red Purple Group 59B to

Greyed-Purple Group 187A; very hardy. Mid-May flowering.

Mariko — cl. Form of *nakaharai* (Hydon Nurseries Ltd., Hydon Heath, Godalming, Surrey); fls. funnel campanulate, 5 lobed, up to 1½ in. long and 1 in. across, in 1 to 3 flowered clusters. Flower colour Red Group 43C with flush of Red Group 54A on upper throat; lvs. elliptic, persistent, dark green; up to 1 in. long and ⅜ in. across. A.M. (R.H.S.) July 1970.

Martha Robbins — cl. *forrestii* var. *repens* × *sperabile* (Lester Brandt, Tacoma, Washington, U.S.A.); plant in 22 years is 3 ft. high and 6 to 7 ft. across; blooms on 75% of terminals each year. Trusses 4 flowered; corolla 2¼ in. across and 1½ in. long; Red Group 45A; lvs. dark green, slightly bullate, glossy, 2 in. long and 1 in. broad; plant free-flowering; mid-March to April.

Mirelle Vernimb — cl. form of *hemitrichotum* (raised by Bryan Vernimb, Glen Rock, New Jersey, U.S.A. in 1961); plant 1 ft. high and 1½ ft. across; fls. 5 lobed, ¾ in. in diameter, widely funnel-shaped, pink. Truss 24 flowered, compact, 2 in. by 2 in.; lvs. 1 in. long and ¼ in. wide, oblanceolate to narrowly elliptic; margins revolute. Flowers late April.

Mona Lisa — cl. 'Louise Gable' × 'Helen Close' (W. L. Guttormsen, Canby, Oregon, U.S.A.); plant medium to 2½ ft.; lvs. 1½ in. × ¾ in. fls. moderate purplish pink (Nickerson 2.5RP7/8), double (12–14 petals) to 3 in. in clusters of 1–2. May flowering.

Percy Wiseman — cl. *yakusimanum* × 'Fabia Tangerine' selfed (John Waterer, Sons & Crisp Ltd., The Nurseries, Bagshot, Surrey); plant of compact habit and good foliage; fls. Peach (H.C.C. 512/3) coloured with Naples Yellow (H.C.C. 403/3) fading to white.

Pipit — cl. *lowndesii* × *lepidotum*; a natural hybrid (collected by Stainton, Sykes and Williams 1954 Nepal Expedition) introduced by Glendoick Gardens Ltd., Perth. Fls. Purple Group 75C.

Point Defiance — cl. 'Anna' × 'Marinus Koster'; (crossed by Halfdan Lem, introduced by the Tacoma Metropolitan Park Department, Point Defiance Rhododendron Garden, Tacoma, Washington, U.S.A.) Plant upright and vigorous, 7 ft. tall by 4 ft. wide; lvs. 7¼ in. long, 3 in. wide, very thick and leathery, elliptical; dark matt green above, pale green below, midrib above impressed and pale yellow-green. Leaf tip mucronate, base rounded, margins of leaf recurved; tall compact truss of 15–17 flowers, 4½ in. in diameter, 2¼ in. in length. Red Group 53D in bud opening to white in centre, edged on all lobes with Red Group 54A, fading to nearly pure white, without blotch, thick and fleshy. Mid-May flowering.

Prima Donna — cl. 'Idealist' seedling × 'Jalisco' selfed (John Waterer, Sons & Crisp Ltd., The Nurseries, Bagshot, Surrey); plant of good foliage and compact habit; fls. Chartreuse Green (H.C.C. 663/1) with brown blotch in throat.

Red Rock — cl. 'Bibiani' × *elliottii* (cross made by Edmund de Rothschild); flowers widely funnel-campanulate, 5 lobed, 2 in. long and up to 3¾ in. across. Trusses full, rounded, up to 7 in. across, with up to 22–24 fls. per truss. Fl. colour close to Red Group 53A at outer edge of corolla, diffusing in throat with the brighter Red Group 50A; upper corolla lightly spotted with black; veins darkening in throat; lvs. narrowly elliptic to elliptic, up to 8 in. long and 3½ in. across, dark green. A.M. (R.H.S.) June 1970.

Reuthe's Reward — cl. *nuttalli* × *lindleyi* (raised by G. Reuthe Ltd., Fox Hill Nurseries, Keston, Kent); fls. large, cream-white with apricot blotch; lvs. characteristic of *lindleyi*.

Rock Rose — cl. form of *racemosum* (Rock No. 59578) (raised by J. B. Stevenson); fls. axillary, forming a many-flowered raceme, funnel-shaped, up to ¾ in. long and 1 in. across; fl. colour Red-Purple Group 68B fading to white in throat; some greenish-red and scarlet spotting in upper throat; lvs. aromatic, 1$\frac{9}{10}$ in. long and 1 in. across, oblong-elliptic, glaucous and scaly below. A.M. (R.H.S.) April 1970.

Saint Kew — cl. *augustinii* × 'St. Breward' (Major-General E. G. W. W. Harrison, Tremeer, St. Tudy, Bodmin, Cornwall); fls. widely funnel-shaped in clusters of 3–5 forming a round-headed 11–13 flowered truss up to 4 in. across. Individual fls. up to 1¼ in. long and 1¾ in. across, 5 lobed; colour Violet-Blue Group 92B with traces of darker blue along each joined-petal edge, the central part of each petal being flushed with Violet Group 84B. This colouring is repeated on the outer corolla paling to a silvery sheen where the corolla tube joins the calyx. The upper throat carries a few pale olive green markings; lvs. up to 2 in. long and ¾ in. across, narrowly elliptic to elliptic, mucronate, acute. P.C. (R.H.S.) May 1970.

Saint Merryn — cl. 'Saint Tudy' × *impeditum* (Major-General E. G. W. W. Harrison, Tremeer, St. Tudy, Bodmin, Cornwall); fls. in trusses of 2 to 4, widely funnel shape, ⅔ in. across, apiculate, obtuse. A.M. (R.H.S.) April 1970.

Scarlet Wonder — cl. 'Essex Scarlet' × *forrestii* var. *repens* (Herr Dietrich G. Hobbie, Linswege über Westerstede, Oldenburg, Germany); plant 2 ft. high, 4¼ ft. spread, vigorous, upright habit, very free-flowering; lvs. 2$\frac{1}{10}$ in. long, 1⅕ in. wide, medium dark dull green. Fl. truss 5 to 6 in. diameter, 4 in. deep, fairly compact, flattened globe-shaped, 5–7 fls. per truss; corolla 2⅛ in. diameter, 1¾ in. long; fully expanded funnel-shaped, a colour near Red Group 53B with some extremely faint brown spotting in throat. H.C. (Wisley Trials) May 1970.

Shrimp Girl — cl. *yakusimanum* × Fabia Tangerine' (John Waterer, Sons & Crisp Ltd., The Nurseries, Bagshot, Surrey); plant of compact habit and good foliage; fls. Neyron Rose (H.C.C. 623/1 to 623).

Sleepy — cl. *yakusimanum* × 'Doncaster' selfed (John Waterer, Sons & Crisp Ltd., The Nurseries, Bagshot, Surrey); plant of compact habit; fls. Phlox Purple (H.C.C. 632/3) with upper lobe blotched brown.

Sneezy — cl. *yakusimanum* × 'Doncaster' (John Waterer, Sons & Crisp Ltd., The Nurseries, Bagshot, Surrey); plant of compact habit; fls. Tyrian Rose (H.C.C. 24/3) darkening at lip of corolla to 24/2 and with a dark red blotch on upper lobe.

Sparkler — cl. (*eriogynum* hybrid × 'Fabia') × (*yakusimanum* × 'Britannia'); (John Waterer, Sons and Crisp Ltd., The Nurseries, Bagshot, Surrey); plant of compact habit, free-flowering; fls. Rose Opal (H.C.C. 022/1)

a Star Ruby — cl. 'Addy Wery' × 'Salmon Elf' (raised and introduced by W. L. Guttormsen, Canby, Oregon, U.S.A.); evergreen plant, habit medium; fls. hose-in-hose, in clusters of 2–3 dark red (Nickerson 5R3/7). Flowering early May.

Star Shine — cl. (*yakusimanum* × 'Britannia') × ('Loderi' × *yakusimanum*) (John Waterer, Sons & Crisp Ltd., The Nurseries, Bagshot, Surrey); plant of compact habit; fls. Amaranth Rose (H.C.C. 530/3) shaded Amaranth Rose (H.C.C. 530/2).

Sugar Daddy — cl. a *decorum* hybrid (John Waterer, Sons & Crisp Ltd., The Nurseries, Bagshot, Surrey); plant of stiff habit with compact rounded truss; fls. Amaranth Rose (H.C.C. 530/3) fading to white, with a green blotch in the throat.

Tiger — cl. *dichroanthum* × 'Cremorne' (G. Reuthe Ltd., Fox Hill Hardy Plant Nurseries, Keston, Kent, 1960); plant 2¼ ft. high, 2¼ ft. spread, vigorous, compact and upright habit, free-flowering; lvs. 3 in. long, 1¾ in. wide, medium dark dull green. Fl. truss 6 in. diameter, 3 in. deep, lax, flattened dome-shaped, 4 to 6 fls. per truss; corolla 2⅜ in. diameter, 2½ in. long, fully expanded funnel-shaped, two lower segments Yellow Group 8B, lightly flushed round margins Red Group 44D, three upper segments Yellow Group 10A flushed round margins Red Group 44D and lightly tinged with Orange-Red Group 35B, quite heavy spotting on upper segment of Greyed-Purple Group 185A. H.C. (Wisley Trials) May 1970.

Titian Beauty — cl. (*eriogynum* × 'Fabia Tangerine') × (*yakusimanum* × 'Fabia Tangerine') (John Waterer, Sons & Crisp Ltd., The Nurseries, Bagshot, Surrey); plant of small foliage and tight habit; fls. Turkey Red (H.C.C. 721/3).

Venetian Chimes — cl. (*eriogynum* × 'Fabia') × (*yakusimanum* × 'Britannia') (John Waterer, Sons & Crisp Ltd., The Nurseries, Bagshot, Surrey); plant of compact habit; fls. carmine with some brown markings on upper lobe.

Viking Lady — cl. parentage unknown (Clarence Loeb 1964); habit upright; plant 44 in. high and 30 in. across. Lvs. 3½ in.

long and 1¼ in. broad. Truss 13–15 flowered. Fls. funnel-shaped, 4 in. across and 4 in. long, cream, Yellow Group 12C, fading to Yellow Group 8D with a blotch of Yellow-Orange Group 23A to 15C. Flowering mid-May.

Wantage — cl. 'Fabia' × 'Dido' (Crown Estate Commissioners, Windsor Great Park, Windsor, Berks.); raised in 1955; this plant is now only 2 ft. high but is 6 ft. across and inclined to be procumbent. Fls widely funnel-campanulate, 5 lobed, 1¾ in. long and up to 2 in. across; carried loosely in 6–8 flowered trusses; colour Red Group 42A with some darkening of the veins; lvs. narrowly elliptic, acuminate, acute, up to 4½ in. long and 1¼ in. across, slightly reflex. P.C. (R.H.S.) June 1970.

Warfield — cl. 'Jalisco' × 'Crest' (Crown Estate Commissioners, Windsor Great Park, Windsor, Berks.); fls. widely funnel-campanulate, 7 lobed, 2 in. long and up to 3¾ in. across. Trusses rounded, up to 6 in. across with 10–12 fls. per truss; fl. colour Yellow Group 4D, deepening to Yellow Group 4C at the centre of each joined petal, particularly in the upper 3 petals; throat a deeper yellow heavily marked with Red Group 46A; lvs. up to 5½ in. long and 2½ in. across, elliptic, apiculate, sub-cordate. A.M. (R.H.S.) May 1970.

White Wedding — cl. *yakusimanum* × *makinoi* (John G. Lofthouse, 6649 Osler Avenue, Vancouver, B.C.); plant 10 in. high and 14 in. wide, completely covered by open truss in 2½ years; lvs. narrowly elliptic with heavy fawn indumentum; fls. up to 15 in compact truss and 3 trusses to each terminal growth; corolla openly funnel-shaped, 2½ in. diameter, 1½ in. deep, 5 lobed, frilled, upper lobe speckled, opening pink fading to white; flowered for first time in 1969.

a Windrush — cl. parentage unknown (raised 1951 at The Royal Horticultural Society's Garden, Wisley, Ripley, Woking, Surrey); plant 3¼ ft. high, 2¾ ft. spread, vigorous, compact and upright habit, very free-flowering; lvs. 4 to 5 in. long, 1½ in. wide, light glossy green heavily flushed and overlaid brownish-red. Fl. truss 6 to 7 in. diameter, 5 to 6 in. deep, compact, globular-shaped, 10 fls. per truss; corolla 3 to 3¼ in. diameter, 2½ to 2¾ in. long, fully expanded funnel-shaped, Red Group 55A flushed and veined on white with tinges of Red-Purple Group 61D, flushed at base of throat with Red Group 52B, some spotting of Yellow-Orange Group 17A on upper segment, buds Red Group 52B flushed Red Group 52A. A.M. (Wisley Trials) May 1970.

Woodpecker — cl. (*yakusimanum* × 'Britannia') × (*griersonianum* × 'Jalisco Elect') (John Waterer, Sons & Crisp Ltd., The Nurseries, Bagshot, Surrey); plant of rather stiff habit; fls. Primrose Yellow (H.C.C. 601) fading towards lip of corolla to (H.C.C. 601/1) and with brown blotch in upper throat.

Yaku Fairy — cl. form of *keiskei* (raised and exhibited by B. N.

Starling, Little Marles Cottage, Severs Green, Epping Upland, Essex) found only on Kuromi Peak on the island of Yaku, south of Japan. Differs only in height and habit from the type, being completely prostrate and, in nature, mat-forming flowers held clear of foliage in 2–5 bloom trusses; widely funnel-shaped, $1\frac{7}{10}$ in. across and $\frac{4}{5}$ in. long; colour Yellow Group 2D; lvs. lanceolate, up to $1\frac{1}{2}$ in. long and $\frac{3}{5}$ in. across. A.M. (R.H.S.) April 1970.

BOOK NOTES

"Rhododendrons in America". By Ted van Veen. 176 pp. Illus. 1970. (Published by Sweeney, Krist and Dimm. Inc., Portland, Oregon.) Price $20.

This book, measuring about twelve by nine inches, is a production of high quality and just invites one to pick it up and turn its pages. The coloured illustrations which in the main faithfully portray the rhododendrons named, cover a wide range of old and new cultivars, although the author prefers to call them varieties. Azaleas, which although they are botanically Rhododendrons, are not included, neither deciduous nor evergreen, and less than a dozen true species are shown. Most of the subjects selected are known in British gardens, but there are several American-bred plants such as 'Evening Glow' and 'Odee Wright' which invite introduction. The author is the head of the largest rhododendron firm in the United States, and it is clear that he is steeped in the lore of rhododendron hybrids. He has followed his father who was equally dedicated. He has divided the book into twelve chapters and among the headings are: "Let's Landscape with Rhododendrons", "What to look for when buying a Rhododendron" and "They thrive on Proper Feeding".

Although the work is primarily for American readers there is much of real interest to growers wherever they reside. It is clear the author had partly in mind those who find difficulty in interpreting catalogue descriptions, and the book is of great value to professional horticulturists faced with describing the flower colours of rhododendrons to amateurs desirous of planting these. The names of the Designer-Artist, Howard F. Somer and his photographer Stanley L. Andersen should be coupled with the author's in the preparation of this attractive work.

F. P. KNIGHT

"Rhododendrons (their history, geographical distribution, hybridisation and culture)". By Gerd Krussman. 96 pp. Illus. 1970. (Ward Lock Limited, London.) Price 50*s*.

The author is the Director of the Botanical Gardens in Dortmund-Brunninghausen, and during the past twenty years he has visited many of the gardens and parks in Europe including the U.K. where rhododendrons form an important feature. It would appear he still has to visit Exbury, Leonardslee and Wakehurst.

In this introduction he points out that he offers a "new approach" to rhododendrons, and there is no doubt that he presents his personal observations attractively.

The book contains nine maps portraying the geographical distribution of rhododendron species throughout the world, with statistics of the numbers so far found in such concentrated homes of the genus as in Asia. Twenty-three coloured illustrations are included but some of these could be better. There are seventy-eight black and white photographs, but again some of the reproductions are not as "sharp" as they could be and I feel do not convey to those new to rhododendrons an impression of the plants illustrated. Twenty-eight different species are illustrated by excellent line drawings by D. Holm Green, and taking that of *Rhododendron orbiculare* (Fig. 33) as an example, it is easier to visualise this species than by looking at either the coloured or black and white pictures which also appear. Dr. Krussman divides his subject into ten chapters, and these contain much valuable information for both professional and amateur gardeners. The serious student will be grateful for the background history of the genus so skilfully condensed. The amateur will benefit by not only reading deeply about rhododendrons, but also of other plants which can be associated with these to give good effect in the garden. In fact there are three plans to assist in this work. The selection of plants given for various purposes naturally apply more to Germany than the U.K. but are so presented that the lists can be adapted for wide usage.

It is inevitable that in translating a technical book, mistakes will occur, and no doubt the author has noted these so that corrections can appear if a second edition is presented.

There are several errors in the spelling of plant names, but I feel that the word "varieties" should not have been used where "species" is clearly correct. There is a discrepancy in the photographs opposite p. 81, figs 7 and 8 which portray damage caused by "weevil" and not by "bug". This should be consistent with the text on p. 43.

F. P. KNIGHT

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Figures in Clarendon type refer to illustrations.
(a) *denotes Azalea.*

In order to save space the rhododendrons listed in the Additions to the International Rhododendron Register, 1969–70, on pages 192–9 have not been included in the Index.