RHODODENDRONS 1974
with
MAGNOLIAS and CAMELLIAS

The Royal Horticultural Society
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RHODODENDRONS 1974

with

Magnolias and Camellias

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The American Garden at Lower Coombe Royal, Kingsbridge

J. A. N. LOCK

The earliest description of this garden which I have been able to find is an article in the *Journal of Horticulture and Cottage Gardener* of 31 August, 1871. It was laid out soon after 1840 by John Luscombe, as an addition to the garden of Coombe Royal, and was only separated from it after the 1914-18 war when the present house was built. John Luscombe was one of the first hybridisers of rhododendrons, being responsible for Luscombei, Coombe Royal and 'Luscombe's Scarlet'. Several of Luscombe's original plants came to him from Sir William Hooker at Kew. He also exchanged plants with Veitch. The garden is again mentioned in J. G. Millais' books on *Rhododendrons and Magnolias*, published in 1924 and 1926.

In spite of several periods of neglect, it still contains many of its original plants in good health and of great size. There are several fine plants of *R. arboreum* in shades of red, pink and white; large specimens, probably the originals, of Luscombe's hybrids, as well as a number which I have been unable to identify. There are about twenty old camellias, the largest 31 inches in girth and about 30 ft high, in spite of having been severely lopped in the past. The most spectacular plant is an enormous *Magnolia denudata* 35 ft high and 53 ft across, with a girth of 5 ft 5 inches, the survivor of the two mentioned by Millais. The other, which was even taller, was blown down about eight years ago. One of its three main branches has layered and is still alive and there are some strong shoots coming from the stump at ground level.

The garden is of about two acres, long and narrow, occupying the bottom of a valley and therefore sheltered from wind, except to the south, but tending to be a frost pocket. Various established trees provide some top cover and others are being encouraged to extend this. After our arrival in 1962, we spent about three years clearing brambles and fallen trees before much replanting could be done. The effect of the clearing has been to create open spaces among the tall rhododendrons, and it is very noticeable that many of these which had bare trunks for their lower 12 or 15 ft have refurnished themselves to ground level (Fig. 1).

We realised at an early stage that there was a heavy infection with honey fungus (*Armillaria mellea*) in this old part of the garden. We have ignored it in our replanting and it has, as yet, affected very few of the many new plants we have introduced. In replanting we have had two main objects: firstly to build up a collection of hardy camellias

with some new rhododendrons, as it is clear that the conditions suit them; and secondly to extend the seasonal interest into summer and autumn, by the use of later flowering shrubs and of lilies grown from seed and planted out among the lower shrubs where they have flourished. We are also making a collection of hardy eucalypts, of which we have about thirty species.

Amongst camellias which have done well are the Jury hybrids from New Zealand, several Australian hybrids including 'E. G. Waterhouse', 'Sayonara' and 'Shocking Pink' and Americans including 'Francie L.', 'Guilio Nuccio', 'Hawaii', 'Reg Ragland' and 'R. L. Wheeler'. We have also planted "classics", such as 'Adolphe Audusson', 'Donckelarii' and 'Lady Clare', which we did not find here, and of course 'Donation'. We have also managed to flower in the open two of the Kunming reticulatas, 'Crimson Robe' and 'Lionhead'. We decided quite quickly that we should need more room for camellias and they have now overflowed into new areas, almost as large as the original, on the south slope of the valley. Some are partially shaded but several are in almost full sun. These flower profusely and seem to suffer no ill effects, although their leaves are paler in colour than those in shadier situations.

Although we propagate quite a number of camellias I have not tried hybridising, and I have not yet found viable seed on any of our plants. The rhododendrons, on the other hand, seed and germinate profusely on any undisturbed patch of moss, and we have several quite large and attractive plants which, from their situations on the tops of banks or on

Fig. 1

The American Garden at Lower Coombe Royal

old stumps, must be self-sown. One of the most attractive of these was unfortunately growing from among the roots of a very old *R. niveum*. When Dr Fletcher visited us some time ago he passed its death sentence, saying that the *niveum* must be preserved from competition, as it was undoubtedly one of Sir William Hooker's original plants. Who could but obey such authority.

I have been unable to find the reason for the name "American Garden". I have been told that there is another at Sandhurst. I should be most interested to hear from anyone who can suggest its origin.

The garden is opened twice a year, for Gardeners' Sunday and the National Gardens Scheme.

The High Beeches

EDWARD AND ANNE BOSCAWEN

We first saw The High Beeches in 1958, when we were lucky enough to be shown the Woodland Garden by its owner and creator, Colonel Giles Harold Loder. He had lived all his life in the house until it was burnt down during the war, and he then moved to Dencombe, close by. He planted the Woodland Garden or "Pleasure Grounds", between 1906 and 1966.

At the time we saw it our knowledge of plants was very limited, but we were both struck by the peaceful perfection of the small landscape, with its many streams and water-falls, tall oaks, noble beeches, and carefully placed shrubs. We visited the garden at intervals during the next eight years, and on the death of the owner were unexpectedly able to acquire it.

The property covers 100 acres of garden, woodland and farm land, and although only about twenty-nine acres are planted with shrubs, the whole area has now to be considered in relation to the new house. Included were the vast ruin of the old High Beeches house, the front and back drives, the stables, farm and clock tower, but no habitable dwelling.

The land lies on a south-facing slope, falling from 480 ft above sea-level, down to 325 ft at the lowest point. The ruins and farm are on a road at the top, and we have built our house lower down the slope, facing south and looking across the central meadow and over the Woodland Garden below. There, a whole series of small ponds and several streams run together into the lowest valley. The acid forest soil lies over sandstone in some places and clay in others, and the rainfall averages 33 inches in a year.

Above the new house, much of the ground had long ago been terraced, and this area, together with the ruins, has provided most of our problems. However, the remains of the old garden there include *Magnolia campbellii*, a big *Cedrus libani*, a white wisteria festooned 35 ft up over an Irish yew, a very fine form of *Camellia japonica* 'Alba Simplex', a clump of Rhododendron 'Michael Waterer', now 40 ft across, and a magnificently floriferous giant five-stemmed *Magnolia* × *veitchii*, whose size and vigour are probably due to having its roots in the dung-yard drain.

The Woodland Garden is a continuous delight, from January with the big groups of *Hamamelis* showing gold against the dark conifers; then come the Barbatum hybrids, rhododendrons 'Shilsonii' and 'Nestor'; *Camellia japonica* 'Lady Clare' whose deep rose flowers, five inches across, almost hide the large dark lustrous leaves, and with its

Fig. 2

Part of the garden at High Beeches

lax habit so well suiting the uneven ground: *Camellia* 'Donation', several large upright plants from the original stock at Borde Hill; *Camellia* 'Magnoliaeflora' with dainty shell-pink blooms in keeping with the spring woodland scene; and *Magnolias stellata*, *salicifolia*, and *sargentiana robusta* with its pink goblets sweeping almost to the ground.

Through May and June are the bluebells, with drifts of azalea 'Hinomayo'; the blue haze of *Rhododendron augustinii* with the yellow bells of *R. caloxanthum* and *campylocarpum*, Loderi, 'Sarita Loder', and 'Tally-Ho'. In July come the sweet-scented *Rhododendron auriculatum*, the eucryphias and the great creamy-white sprays of *Cornus kousa*. Then, wild flowers are everywhere and it is time to cut the grass. This done, the outlines can be seen again. The willow gentians fill a whole valley with blue, and the first *Disanthus* leaves are turning red, announcing the autumn display of *Nyssa sylvatica*, *Parrotia persica*, acers of many varieties, amelanchiers, *Cornus*, azaleas, and much more. When every leaf has fallen they are raked up, and the bright green mossy carpets, contrasting with the evergreen foliage can be appreciated while we wait the transformation of the first fall of snow, and search again for the witch hazel flowers at Christmas.

Thirty-two series of *Rhododendron* are represented in the garden, as are numerous hybrids, including many raised at The High Beeches and unregistered as yet. There are thirty different magnolias, twenty-one species of conifer, and much else, at first unknown to us. However, thanks to the patience of Eric Stockton, who has cared for the Woodland Garden since 1927 and planted most of it, and to the kindness of

Captain Simon Loder who preserved and gave to us the Colonel's garden notes, we are now at least acquainted with the greater part.

Notable among the *Rhododendron* species are big trees of *R. falconeri*, planted in 1915, and now 20 ft high, a group of *R. sinogrande*, two *hypoglaucum* now 22 ft high (probably Wilson 311), a fine form of *griersonianum*, two *insigne* (first flowered in 1965), a nice yellow *macabeanum* from Nymans, and a *mallotum* with a very bright indumentum. There are also large plants of *R. wightii*, *smithii*, *thomsonii*, *makinoi*, and *yunnanense*. There is a bank of *R. williamsianum*, 5 ft high by 25 ft long, a good yellow form of *campylocarpum* from Minterne, and *augustinii* from many sources. There are also many old-established clumps of *R. quinquefolium*, *vaseyii*, *reticulatum*, *kaempferi* and *mucronatum*; *R. schlippenbachii* does well here.

A moss-covered bank, once forming the boundary between wood and garden runs right across from north-west to south-east. This is closely planted with the smaller species of rhododendron, and it is possible that a number of them came from Forrest's seed from Yunnan in 1921-22. Here is *R. forrestii* var. *repens* from several sources, including Coolhurst, *chamae-thomsonii* var. *chamaethauma* (F 21916), *campylogynum* var. *myrtilloides*, and var. *charopoeum*, *russatum*, *leucaspis* and *pemakoense*. Taller plants are *glaucophyllum*, *tsangpoense* var. *pruniflorum*, *calostrotum*, *beanianum*, *roxieanum* var. *oreonastes*, *caloxanthum* and *tephropeplum*. Seedlings from these last two and *R. luteum* are really quite a nuisance. *R. edgeworthii*, growing as an epiphyte in a rotten oak-stump, produces blooms of a striking size, and in the background *R. eximium*, planted in 1930 and now 12 ft high and as much across, makes a lovely foliage plant at all times.

There are three groups of hybrids here; the old hardy hybrids, a small number of the later "thorough-breds" and some raised by Colonel Loder in the garden. Among the biggest are the old *arboreum*, and there are also big plants of 'Nobleanum Venustum'. We have a group of *R.* × *praecox* 10 ft high and 15 ft across, and *R.* 'Boddaertianum' is 26 ft high and 30 ft across. 'Cynthia' is equally grand; 'Doncaster' is here, and 'Joseph Whitworth' is 20 ft high and there are many more.

Of slightly later introduction, and showing the influence of *R. griffithianum*, we have 'George Hardy', 22 ft high and 20 ft across, in flower like a wall of white foam, 'Loder's White', 'Gauntlettii' and 'Manglesii' (25 ft high), and 'Gomer Waterer', spreading and very hardy.

The Dutch hybrids are represented by 'Queen Wilhelmina' and 'King George'; by 'Britannia' 16 ft high and clothed to the ground in foliage and flower, and by 'Unknown Warrior', 'Earl of Athlone', 'Langley Park' and 'Princess Juliana'.

We have 'Pink Pearl', though 'Alice', 30 ft high and 25 ft across, is here the more distinguished. 'Purple Splendour' does well, 'Corona', 'Lady de Rothschild' and many more of these wonderfully hardy rhododendrons.

Some hybridizing was done here in the 1930's. 'Tip-the-wink' received the F.C.C. in 1936 and 'Sarita Loder' the A.M. in 1934. The war then intervened and no more plants were shown. The Sarita Loder grex is very much a feature of the garden in early June.

Prompted by the Colonel's notes, we have shown several of his plants and so far 'Eric Stockton', 'Nestor', 'Margaret Falmouth' and 'Rosenoble' ('Mrs Henry Shilson') have received awards, while two more of his especial favourites are now on trial at Wisley.

Among the hybrids from other sources, the R. Loderi are many and magnificent. Two plants of 'Loderi King George' are 30 ft high and 'Loderi Pink Coral' 15 ft and 20 ft across. There is a very large plant of R. 'Elsae', a lovely bank of R. 'Tally-Ho', a fine Cornish Cross, a big 'Cinnkeys' from Minterne, and several plants of 'Lady Rosebery', and 'Lady Chamberlain'. 'May Day' and 'Elizabeth' are both very fine, and 'Bo-peep' and 'Cilpinense' delightful in the very early spring with *Magnolia stellata* and *M. salicifolia*.

We have given much thought to maintenance, as our resources are not large. Fortunately for us, Eric Stockton has remained in the garden, and he still keeps the pleasure grounds in perfect order. Len Burren came with us, and is achieving the domestication of the area round the new house and the driveway.

The Woodland Garden is gone through by hand, each bed in turn, once a year, and the grass is mown once a year, in July. Selective weedkiller is proving helpful where we cannot use the mechanical scythe, and we are getting more moss and primroses and less coarse grass and rushes. The ground is difficult, being steep and often boggy, and much divided by streams, over which we have built several substantial new bridges. We dead-head as much as we can, starting with the big-leaved rhododendrons and the Loderi, although this now requires tall fruit ladders and considerable agility! Every few years we hope to be able to employ tree surgeons to reduce our now too dense shade canopy. We try to remove all stumps and dead wood, and we have no honey fungus in the garden.

A vineyard tractor with several different implements is a great help. It has moved some very large rhododendrons using a lift and small hand winch.

We feel the Woodland Garden should be kept as far as possible as we now know it. We hope to maintain the unique proportion between open spaces and planting, which has up to now been so brilliantly and ruthlessly achieved (Fig. 2).

Around the new house, the climate and conditions are quite different, and we feel free to indulge all sorts of predilections. *Camellia reticulata* 'Captain Rawes' is flourishing on the west wall, and *Camellia* 'Nagasaki' blooms splendidly, but very late, in an almost sunless north corner. 'Canon Boscawen', 'Haku-Rakuten' and 'Mathotiana Rosea' are also doing well on the north side.

The rest of our planting here is so very varied, coming from so many countries and climates, and representing so many gardening friends, that it must be outside the scope of these notes. For us, this is only the beginning at The High Beeches.

Rhododendrons in a Northumberland Garden

AIDAN CUTHBERT

The garden is on a south facing slope between the 300 and 400 ft contours, just over 25 miles inland from the North Sea. Air and soil drainage are mostly quite good. but over 30°F of frost have been recorded several times in recent years and nearly every winter provides a few nights of more than 15°F. Severe frosts are a liability from the beginning of November to May. The soil is mostly a light loam, slightly acid, with an average rainfall of 29 inches per annum.

The first hybrid rhododendrons were planted here in 1904 in a mixed oak, beech and sycamore wood, and for about ten years from 1909, when the first species arrived, species and hybrids were planted from many sources including seed from E. H. Wilson in 1911 and 1919, seedlings of Wilson from Chenault in 1912 and 1913, of Forrest from Bees and Reuthe in 1913, and seeds and seedlings from Professor Bayley Balfour in 1917-18 and 1919. Unfortunately nearly all the records have been lost and the plants have suffered from periods of neglect.

Amongst the survivors are plants of *R. calophytum* (21 × 27 ft and 19 × 24 ft) setting flower every year. It seems to be sufficiently bud hardy to show off its large pink-flushed white trusses 4 years out of 5 in March and the red bud scales on its young growth are very decorative later. *R. sutchuenense* (24 × 33 ft), the deeper coloured var. *geraldii*, and *R. calophytum* all regenerate freely throughout the wood. Later on, in the same series, there is a plant of *R. fortunei* itself (23 × 23 ft) and several plants of *R. decorum*, of which the largest pink form is 24 ft high and the white form, slightly smaller, I consider to be the most attractive rhododendron here. It is completely reliably floriferous, late enough to escape any frost damage and has a delicious spicy scent. *R. discolor* is in several places somewhat larger than *R. fortunei* but seems to be shy of flowering, possibly due to insufficient sun. On the other hand *R. oreodoxa* and *R. fargesii*, both slightly smaller, seem to suffer from the usual tendency to flower themselves to death and are too big to dead-head without step-ladders. *R. auriculatum* does not seem to be affected by any of the same problems as *R. discolor*. There are several plants which flower most years in July or August and in 1963 were still flowering in October. On January 12 this year one plant of 24 × 25 ft was blown completely out of the ground. Unfortunately *R. griersonianum* has never thrived in any of a number of different positions. Not only does such flower as it does set

seem to be very frost tender here but the whole plant seems to dislike the climate heartily. Amongst its hybrids, 'Tally-Ho' behaves almost as badly and even 'May Day' sometimes loses not only its flower but its leaves as well, although it normally looks well and no plants have ever succumbed.

R. campanulatum is early enough to have its flowers damaged by the frost sometimes but seems prepared to thrive in almost any conditions. Even the larger leaved 'Knaphill' has been unaffected by winds which tatter the leathery leaves of *R. fulvum*. The variety *aeruginosum* is rather shy to flower and shows off its glaucousness noticeably better in full exposure. The contrast between the white indumentum of the young growth and the dark brown indumentum of the mature leaves is most effective, so the plant looks very well, viewed either from above or below. There is a plant here sited next to the enigmatic 'Sir Charles Lemon', also with dark rusty indumentum, and now 23 × 22 ft. 'Sir Charles Lemon's' flowers are also sometimes caught by the frost here, but the buds are fairly hardy and the avalanche of snow white flowers on such a fine rhododendron overwhelmingly compensates for the unlucky years. Nearby, and flowering at the same time as 'Sir Charles', is a plant of *R. niveum* with good indumentum, at first white then grey, and personally I like its rather muddy purple flowers in combination with others.

The Taliense series is particularly rewarding for less favoured gardens such as this. *R. bureavii* looks almost at its most striking in the snow when its beautiful rich brown suede leaves seem much more warmly clad than its less fortunate relations. Unfortunately the best plant here was recently cut down by an enthusiastic helper who explained that he thought it was dead as the leaves had gone brown. The large shiny leaves of *R. prattii* very handsomely complement its very pretty if unspectacular flowers. Its vigour and invariably enthusiastic appearance are always very satisfying. When crossed with *R. yakushimanum* it should preserve that appleblossom appearance which is such a charming feature of both species and add its own excellent qualities. Amongst others which testify to the attraction and good constitution of this series are *R. weldianum* and *R. wiltonii*, another rhododendron with the same delightful colouring in flower.

The early flowering members of the Thomsonii series are liable to be a disappointment here. *R. thomsonii* itself, now 23 ft high is not as splendid here as it is in so many places but still worth growing a grove for the trunks alone even if it never flowered. However the Souliei subseries appears to be as happy here as anywhere. Two bushy old plants of *R. souliei* next to each other, one measuring 16 × 25 ft, are highly decorative when the cherry coloured buds are seen against flowers fading from pink to white. There are no large plants of any other member of the subseries or of the Campylocarpum subseries although those that are now growing seem to be just as happy as *R. souliei*.

Those members of the Triflorum series which have a tendency towards being deciduous have plenty of encouragement here. I think the effect of clouds, or sometimes a light mist, of snowy white flowers on *R. hormophorum* when seen against an evergreen background are the

more effective on a plant which is itself deciduous. Unfortunately *R. zaleucum* and the desirable deeper blue forms of *R. augustinii* are also reluctant to remain evergreen and only the paler forms can be grown with any success. *R. lutescens* is wonderfully persistent in opening its flowerbuds of tremendous frost resistance over a very long period, so that somewhere between February and April it always manages to fit in at least a short period in flower followed by very attractive bronze tinted young growth. Somewhat later some plants of *R. ambiguum* are floriferous in some shade. Personally I do not usually like the almost obscene profusion of flower that some rhododendrons such as *R. oreotrephes* and some other members of the Triflorum and Cinnabarinum series habitually produce when planted in full sun, often to the detriment of their own health, but prefer the restraint of some shade, which also helps to preserve the depth of colour, delicacy and scale. It is a bit like having too many violet creams.

Very few of the original plantings of the Grande and Falconeri series have survived. Most of them come into growth and flower far too early not to be cut every year, and they need more rain for their proper development. There are some rather dull old plants of *R. galactinum*, a *R. watsonii* and some *R. fictolacteums*, of which the largest was about 40 ft high until it was recently destroyed by a falling tree, but other smaller ones flower and regenerate quite freely. *R. falconeri*, *R. basilicum* and *R. hodgsonii* are growing very slowly and have never flowered but *R. arizelum* after 25 years is now 15 × 17 ft and flowers quite well. *R. macabeanum* is the most satisfactory of the Grande series here. From seed sown in about 1955 a number of plants have been put in different places and flowered having reached up to 13 ft.

Some of the most valued rhododendrons are those which have been planted as windbreaks such as white flowered *R. hyperythrum* and *R. smirnowii* with its silver indumentum, from the Ponticum series, and the exceedingly tough and aromatic members of the Heliolepis series provide excellent shelter. *R. smirnowii* and *R. rubiginosum* regenerate themselves where conditions are at all congenial.

The only old plants in the Azalea series are some *R. luteum*, *R. kaempferi* and *R. mucronatum* with a scent like "Ambre Solaire" sun spray, not very powerful but rather seductive in quantity. *R. schlippenbachii* is far too easily encouraged into growth long before the end of the frosts and therefore irritatingly reluctant to thrive but many of the rest of the series are predictably happy.

In 1959 my father sowed some seed acquired from a number of different sources, the details of which have disappeared. Amongst these were *R. delavayi*, *R. zeylanicum*, *R. burmanicum*, *R. crassum*, *R. maddenii*, *R. lindleyi*, *R. megacalyx* and *R. taggianum*. Shortly afterwards the seedlings were put outside where they remained for four years including the winter of 1962-3. Rather unexpectedly the only casualties were *R. zeylanicum*. Since that time *R. delavayi*, *R. burmanicum* and *R. crassum* have survived outside but only *R. burmanicum* has flowered so far. The others were put into a cool glasshouse along with some other members of the Maddenii series including *R. brachysiphon*, with shell pink flowers somewhat reminiscent of *Camellia*

'Magnoliaeflora', *R. iteophyllum*, the willow-leaved *R. maddenii* and *R. headfortianum* with its rather sad looking leaves and pale apricot flowers. Two glasshouses are used for rhododendrons, neither of them heated or double-glazed. The larger one is an old lean-to peach house where the plants stand in pots and the smaller one is a $\frac{3}{4}$ span where the rhododendrons are in raised beds. The larger one seems to retain a higher temperature much more successfully than the smaller wider house, where 14°F or more of frost has been recorded on several occasions. Both *R. veitchianum* and *R. carneum* have been seriously damaged by this treatment and *R. supranubium*, *R. inaequale*, *R. lasiopodum*, *R. cuffeanum* and *R. sinonuttallii* have lost at least some of their flower. Nothing has ever been damaged in the lean-to glasshouse. The rhododendrons in pots are planted outside in the summer and repotted in November which means a great deal of trouble but ensures that the root system can be kept healthy. They are put into a loose friable mixture in the first dry spell after mid-May and then watered heavily, especially those that are late into growth such as *R. maddenii* and *R. crassum*, but the vigorous root development and heavy flowering mark their appreciation. Of course if a system closer to bonsai is not used a decision has to be taken from time to time on how to deal with the problem of expansion. There is a temptation to fill the choicest parts of the garden with emigrants from the glasshouse which can become rather pathetic. The larger members of the series such as *R. maddenii* and *R. sinonuttallii* are magnificent when in permanent beds but I think it is very nice to be able to move some

Fig. 3

Rhododendron brachysiphon and *R. sinonuttallii* at Beaufort Castle

of the scented species into the house, and for good constitution, floriferousness, even at an early age, and handiness *R. lindleyi* and the perhaps even more intensely scented *R. taggianum* are ideal. They may not be as stately as some of their larger relations but they have an even more exotic delicacy.

Amongst the old hybrids still in the garden are 'Sappho', 'Boddaertianum', 'Luscombei' and 'J. G. Millais' (25 × 36 ft) and very vigorous. 'Halopeanum' (*griffithianum* × *maximum*) is in a group about 25 yards square and two other rather similar hybrids 'Mrs E. C. Stirling' and 'George Hardy' are pretty enough every year to be well worth preserving. 'Praecox' has been planted in a group of about 50 which squeeze a period of flower between frosts about 3 years out of 5. Although it is completely bud hardy it normally bursts into flower all at once, unlike *R. lutescens*, so that there is either a solid bank or nothing.

In recent years very few hybrids have been planted, mostly Loderi as a substitute for *R. griffithianum* which has always failed. An attempt has been made to increase the representation of species and to improve those represented by poor forms. But an effort is being made to avoid the rather spotty effect that can sometimes result from a determined policy of wide representation. Groups of individual species which have proved to be the most successful from the decorative and cultural point of view are gradually being gathered together and increased in size to form larger blocks. I sometimes think that the most satisfying garden one could have would be all one species. For instance 25 acres of *R. cinnabarinum* var. *roylei*, or *R. lindleyi* in a kinder climate, would admittedly have a short period of flowering interest but during that time one could be confident that it was worth seeing. However my grandmother who created this garden with my grandfather, and is still extremely active, would soon put a stop to such an idea here.

Rhododendrons, Magnolias and Camellias of Knightshayes Gardens

MICHAEL HICKSON

Knightshayes Court and the gardens stand amongst the parkland near the top of rising ground that faces south over Tiverton and the Exe Valley on the North Devon and Somerset border country. With a back-cloth of woodland at the hill top behind, and the land rising to nearly 500 feet, the autumn and spring frosts tend to roll away. The woodland also provides protection for the garden from the cold easterly and northerly winds. The soil, on a base of the old red Devon sandstone, is quite heavy but fertile. A pH of 4.8 has been recorded in some parts of the garden, but other areas are mostly neutral.

Until 1946 the house, home of Sir John and Lady Heathcoat Amory, was at that time surrounded by trees, some formal bedding and rough grass. Close by the house to the west lies a natural dell which in spring-time is carpeted with snowdrops, daffodils and bluebells, shaded by oak, elm and beech. It was in this dell that Sir John's grandmother, some eighty to ninety years ago, planted an assortment of azaleas and a few, now large *Rhododendron arboreum* hybrids. With this nucleus for a garden, the war over, the new interest and enthusiasm of both Sir John and Lady Amory for plants and gardening, a shrubbery soon developed amid the virgin woodland to the east of the house. At first a more general planting of shrubs began to appear, the boundary being wired off as a protection against rabbits and deer. By 1952 six acres had been cleared, leaving a light canopy of beech, larch, Scots fir and a few birch. This theme has continued throughout the garden's development, moving the protective fence with every enlargement; the area of garden now covers some twenty-five acres. Advantage has been taken when replanting to use the wide range of ornamental trees and shrubs, bulbs, alpines and herbaceous plants available so that the garden now contains a very interesting collection.

It was during the early years of making the garden, that Sir John and Lady Amory visited many famous gardens including Branklyn and Keillour where an idea so greatly impressed the new gardeners that they soon introduced it into their own garden. This particular idea was the use of peat blocks to make raised beds for the smaller plants, and it was this new feature at Knightshayes that started the introduction of many dwarf rhododendrons, both species and hybrids. The flowering season now starts pleasantly early in these beds with the A.M. form of 'Bric-a-brac' and a deep pink form of *R. moupinense*.

The spring follows with examples of *R. calostrotum*, *campylogynum*, *fastigiatum*, *hanceanum nanum*, *keiskei*, *lepidostylum*, *sargentianum*, *williamsianum* and *pemakoense*, the latter occasionally losing buds in a late frost. Hybrid rhododendrons in these beds include R. 'Chikor', 'Phalarope', 'Ptarmigan', 'Sarled', 'Saint Breward', these being just some of the many plants of this genus grown over the peat walls.

Behind these beds amidst the trees and more open spaces, the family is enlarged by including a bed of Kurume azaleas, a group of *R. arboreum* hybrids ranging in colour from a good white flower, through shades of pink to a clean red blossom. These were collected from both Exbury and various Cornish gardens. Amongst other favourites in this area at Knightshayes are R. 'Cornish Cross', 'Snow Queen', 'Loderi King George', 'Loderi Sir Joseph Hooker', and its subsequent cross with *R. yakushimanum* – R. 'Seven Stars'. The various clones of 'Hawk' are greatly admired as are the pink and cream forms of 'Penjerrick'. Two hybrids 'Queen of Hearts' and 'Earl of Athlone' kept on their own enrich a corner of the garden. The large leaved series from the Himalayas thrive well under the light shade of the large trees. It is here that sizeable specimens of *R. falconeri*, *macabeanum*, *magnificum*, and *sinogrande* look happy both in flower and foliage. Most of what may be described as the larger rhododendrons, the Hawks, Loderi's and large leaf types are shown to best advantage by being grown as individual plants surrounded by mown lawns. The effect of being allowed to grow in such a way with skirts to the ground and an even growth rate makes each plant effective. In several places around the edge of the garden are bold groups from the Triflorum series, notably *R. augustinii* and *R. yunnanense* both of which vary in colour shades, and a soft pink form of *R. davidsonianum* all lightening up the dark background of the natural wood beyond. A large isolated bed of *R. cinnabarinum* hybrids ('Lady Berry', 'Lady Chamberlain', 'Cinnkeys') has been given plenty of space, as it is considered at Knightshayes that this group of rhododendrons has difficulty in blending with other members of the family. In recent years the use of herbicide as a weed control and, as many gardeners have found, an annual mulch of chaffed bracken has improved the growth and the healthy appearance of the plants.

Every care has always been taken by Sir John and Lady Amory to combine flower colour and foliage effect throughout, using not only rhododendrons to offset one another, but other genera as well. *Erica* × 'Veitchii' with its white blossom is grown as a back-cloth for R. 'Elizabeth'. The use of *Drimys*, *Camellia*, *Elaeagnus*, *Olearia*, conifers and other evergreens has also helped to display such varieties as R. 'Damaris', 'Yellow Hammer', *pseudochrysanthum*, *schlippenbachii*, *spiciferum* and *yakushimanum*.

In 1971, during an enlargement of the garden, a further collection of large leaved rhododendrons was added and included plants of *R. arizelum*, *fictolacteum*, *hodgsonii*, *mollyanum*, *praestans*, *preptum* and collectors' forms of *R. macabeanum* and *rex*. These have been planted with foliage effect and contrast very much in mind and the use of prostrate firs, junipers and acers has produced a rather unusual but striking effect in planting.

In the early 1950's tree magnolias were carefully planted so that today specimens of *M. dawsoniana*, *campbellii*, *mollicomata*, *kobus*, *salicifolia*, *sprengeri* and × *veitchii* are well established and flowering regularly. More recently as the garden has pushed into the woodland, room has been found for the white form of *M. campbellii* and the cultivar 'Charles Raffill', also *M. obovata* and *M. sargentiana robusta*. Introduced recently are free standing plants of *M. delavayi* and 'Maryland' and, although still small, are doing well. Of the smaller types of magnolia at Knightshayes the two regarded as most attractive are *M.* × *loebneri* 'Leonard Messel' for its delightful habit and star-like pink flowers which have appeared each year since a small plant. The second is *M. liliiflora* 'Nigra' which continues flowering for three months every year, a fact that often causes a certain amount of disbelief among gardeners.

The varieties of *M.* × *soulangiana* are represented, the most outstanding being the form, 'Brozzonii' with its flower buds like pure white candles and white flowers opening at the end of April.

Two promising plants lately added to the collection and just beginning to flower are *M. cylindrica* and the reputedly colchine-induced polyploid, 'Norman Gould'. Amongst the summer flowering series is the heavily scented *M.* × *watsonii* which keeps company with forms of *M. sinensis*, all established plants. The oldest magnolia at Knightshayes, *M. grandiflora* was planted probably eighty years ago against the wall of the house and has the habit of producing the occasional flower throughout the year.

Camellias have been planted in the garden but not to the same degree and only a certain number of varieties are grown including *C. japonica* 'Devonia', 'Adolphe Audusson', 'Lady Vansittart' and 'Lady de Saumarez'. The *C.* × *williamsii* group is also included and a few represented are 'Barbara Forwood', 'Donation', 'Francis Hanger', and 'J. C. Williams'. Like the rhododendrons and magnolias, the camellias grow amongst other trees and shrubs, and ground-cover in the setting of a mixed garden.

Sir John's hope before he died in 1972 was that the garden should continue and that others may enjoy it also. During 1973 his wish was fulfilled and the garden has been accepted and now belongs to the National Trust.

I wish to acknowledge the kindness and generous help I have received from Lady Heathcoat Amory in writing this contribution to the Yearbook.

Rhododendrons and the Space Age

SYLVESTER CHRISTIE

"When you have seen two, you have seen the lot."

Though undoubtedly blasphemous, this remark made on the second day of a tour of established rhododendron gardens, was not utterly unprovoked. There does exist an undeniable predictability of layout and similarity of material in those gardens founded some two generations ago. It cannot be denied that they contain some magnificent features which anyone contemplating a rhododendron garden today must envy, but at the same time, they include warnings that present and future gardeners must recognise.

The prime fault is overcrowding. In mitigation it may be rightly argued that the originators had no reliable information on the ultimate proportions that these new species would assume. This may explain the consequent rumble-jumble but it makes it not one whit more acceptable. Rhododendrons are sociable plants which enjoy the mutual benefits of community growth but there is no satisfaction or beauty in seeing them battling for light and air while the weaker members succumb in the unequal struggle. Possibly this is the law of the jungle but it should not, as it so often is, be permitted to prevail in the garden.

The mistake of too close planting is still being made. It can only result in a total lack of growing material underneath and its replacement by ugly dead or dying trash. In the uncommon event of this being removed as it should be an unpretty and totally dull collection of tall, bare stems remain, to bloom perchance unseen and waste their sweetness on the desert air above.

By the second day of a tour the participants cannot see such flowers as they are no longer able to walk about with their heads permanently in such an unnatural position. They should not be asked to – they have a right to see a plant fully furnished – a thing of beauty in itself – growing with the vigour necessary almost to fill the space between itself and its neighbour. As a rough guide it may be assumed that a rhododendron will require as much in width as it will reach in height and that it is being planted in its life-long home. The theory that it can be shifted at a later date simply does not work out in practice. Of course, exceptions do exist. *R. auriculatum* will be wider than it is tall and *R. arboreum* taller than it will be wide but neither will suffer from extra space.

Some of the larger growing species will by nature shed their lower branches as they age, but if carefully chosen, this need be no drawback for advantage can be taken of their exceedingly beautiful stems. A fascinating grove will result from a planting of, say, *R. thomsonii*

(viridian green and fawn bark, renewed annually), *R. barbatum* (deep purple), *R. hodgsonii* (iridescent mauve shot green), *R. arboreum* (rough, tan shading to mauve) and others like them which cannot fail to please the eye as they reach maturity.

The founders of rhododendron gardens were also ignorant as to how long these, to them, new plants would take to reach maturity in cultivation or how long they could be expected to survive. They would, probably, have been greatly surprised at the life span of the seedlings they raised but quite prepared to admit that, after a time, they would have passed their best. The wood gets harder, the growth shorter and the leaves smaller as the root system fails to expand fast enough to feed the greatly increased superstructure. The plant begins to go back and, instead of a specimen in its prime, a tired veteran does no justice to its species. Too frequently in gardens planted half a century ago sentiment has prevented removal and replacement.

This second lesson stresses the importance of maintaining replacement stock in succeeding generations of plants and occupiers. This will ensure that the collection is kept in first class condition and presents the opportunity to introduce better forms. The early introductions were by no means the best; a point well illustrated by the wide range now available in types of *R. fictolacteum*. These younger plants inject a much needed source of liveliness into a landscape which has become unnatural and empty without them. Similarly, too many owners have been content to rest on their reputation and neglected to introduce new species or replace those which have become casualties over the years. The result is a garden which has lost its sparkle and become outdated, commonplace and dull. It is in need of rejuvenation and the inspiration of new items selected for their general interest.

All too often the reason advanced for inaction is that a wait of some years will be needed before new plants are seen to flower. Those who do not wish to publish their ignorance should never resort to this excuse. Foresight and patience will be more than rewarded over the years by the satisfaction experienced in watching beginners waxing great. To the cognisant, the flower is not of major importance; after all, it is perhaps enjoyed for a mere fortnight in the year. In many species other features such as foliage and young growth are much more exciting and enduring.

The best foliage plants are probably to be found in the Falconeri series where *R. arizelum*, with its large brown felted leaves, is outstanding. If silver-grey is preferred then *R. macabeanum* in the Grande series fills the bill throughout the year and from earliest youth. When conditions do not favour the cultivation of the larger leaved species, equally picturesque results are available from the use of *R. fulvum* with a tawny underside to every leaf or with *R. uvarifolium* var. *griseum*, in the same series, for the silver-grey result. Any of these, stirring in a breeze have an effect as magical as any flower. With the smaller growing types the choice is wide with several members of the Haematodes sub-series (*R. haematodes*, *coelicum*, *mallotum*) or of the hardy Caucasicum sub-series (*adenopodum*, *smirnowi*, *yakushimanum*) particularly desirable. As foliage plants alone, these and many more pay handsome dividends. *R. roxieanum* var. *oreonastes* is alleged to take

thirty years or more to flower, but no one would willingly forego its geometric symmetry on that account. The remarkable *R. insigne* is slow to produce a flower but who could fail to enthuse over its stiff spear-like leaves of burnished copper?

An equally good return is to be had from several species on account of the quality of the new growth. Supreme in this category is *R. campanulatum* var. *aeruginosum*, where the young shoots emerge wrapped in shining white and turn to a sheen of vivid blue unique among rhododendrons. Flower in this case is of so little consequence that it is not unusual to remove the buds before they can open. This compelling attraction of young growth comes in different guises. It may be in the young shoots as in the bronze of *R. williamsianum* or *R. moupinense*; it may be in the form of elegant striped candles as with *R. hookeri* or in collars of gold or scarlet scales as in the Grande or Fortunei series. Whatever the manner of its coming it is an attraction which adds interest over a period of six months – six months with never a dull moment – never that is, so long as the plants are there and can be seen without the aid of scaffolding.

There are also lessons for the designer to learn from these old gardens. He, too, must realise the potential of the plants he is to use. Frequently the layout has suffered drastically. What were once paths of reasonable width have become so narrowed by encroaching shrubs that they can accommodate visitors only in an uncomfortable Indian file. In this condition they have lost their original purpose and, in addition, can no longer be of use for convenient maintenance.

The designer has not only to insist on the adequate spacing of plants but also on sufficient space between plantings. "The Rhododendron Walk" which is unrelieved by breaks or diversions has become monotonous in the extreme. The diversions of yesteryear, cataracts, grottoes and temples, are no longer practical gardening. An expanse of open sky be it over grass lawn, a heath garden or water, as adequate and essential to relieve the awful sameness and claustrophobia that avenues of hybrid rhododendrons can produce. This canon applies equally to the whole and its component parts. These breathing points, large or small, must be dispersed throughout the garden to prevent depression or, at the worst, suffocation. Death can be just as painful in a rhododendron forest as in a cane jungle. Great willpower is essential to resist the almost overwhelming temptation to plant, because there is room. For enjoyment's sake these lungs must remain forever sacrosanct. The planner must eschew the usual gloomy supporting cast of yew, laurel or even palm tree. He must choose instead from the immense pool of oriental subjects now at his disposal which have some natural affinity with rhododendrons. From this he can provide the sheltering background as well as the leavening necessary to lighten the effect of massed hybrid rhododendrons. As an exception to the rule let *Picea omorika* be included for, although it has no association with rhododendrons in nature, its fastigiate habit makes it thoroughly economical in space.

Space, space and more space – or rather the lack of it – is a problem which confronts every grower of rhododendrons sooner rather than later. It is a commodity to be used up most sparingly and something, like rhododendrons, which must be readily visible to the eye to be appreciated by the beholder. Space is one of the most powerful weapons in the gardener's armoury if used with sensitivity. If the gardener can combine it with a show of selected species, chosen for the merit of foliage, habit or flower, in robust health, he can feel assured that anyone privileged to visit the resulting paradise, will depart refreshed, inspired and unaccompanied by a sense of *deja vu*.

A Scottish Tour

E. W. M. MAGOR

Three of us, rhododendron enthusiasts all, set off for Scotland immediately after the Rhododendron Show, on a tour that had been nearly a year in the planning, to see some of the best rhododendrons in Scotland. Our expectations were exceeded, and in eighteen days we visited twenty-three gardens, eighteen of which are notable rhododendron gardens. Everywhere we went, we met with hospitality and kindness from the owners or custodians of the gardens we visited, all of whom we found very knowledgeable. If anyone is to be particularly mentioned, it is Mr H. H. Davidian of the Royal Botanic Garden at Edinburgh, who helped us plan our tour, and had hoped to come some of the way with us, but was unfortunately prevented by illness.

The object of this article is to give a brief description of the gardens that we visited and the more notable plants in them. I was a day ahead of my companions, which I spent at the Gibsons' famous garden, Glenarn in Dunbartonshire. This is a relatively new garden, started in 1927, in a sheltered glen overlooking the Gare Loch, with an average rainfall of 75 inches. As might be expected, rhododendrons love it, and I must have seen it at about its peak, both as regards the season and the lifetime of the garden. Plants seemed to be mature, but not to have started to go back, though this I believe is due in great part to their owners' loving care. Most of the big-leaved species are well represented, a notable *falconeri*, a good *sidereum*, *macabeanum*, *sinogrande*, *grande* which we did not see in many other Scottish gardens, *magnificum* and a number of their hybrids, some of them flowering for the first time.

Other notable rhododendrons include a large patch of *glaucophyllum*, and two of its varieties, *baileyi*, *glischrum*, *rude*, *spinuliferum*, *wightii*, a large *insigne*, Sherriff's *griffithianum*, *chlorops*, *wiltonii*, blood red *arboreum*, and a big *ramsdenianum*. A particular feature of the garden perhaps is the tender rhododendrons: the numerous *lindleyi* were at their best, and in addition I saw *valentinianum*, *crassum*, *edgeworthii*, and a beautiful *burmanicum* hybrid in great quantity. Among some interesting trees, the magnolias are well represented and include *campbellii*, *mollicomata*, *kobus*, and *sargentiana robusta*.

Next day, I met my friends Edward and Anne Boscawen on the Ardrossan ferry, and we spent an afternoon and a morning in the Brodick Castle garden. This famous garden, made by the late Duchess of Montrose with the help of her son-in-law, Major Boscawen, has been

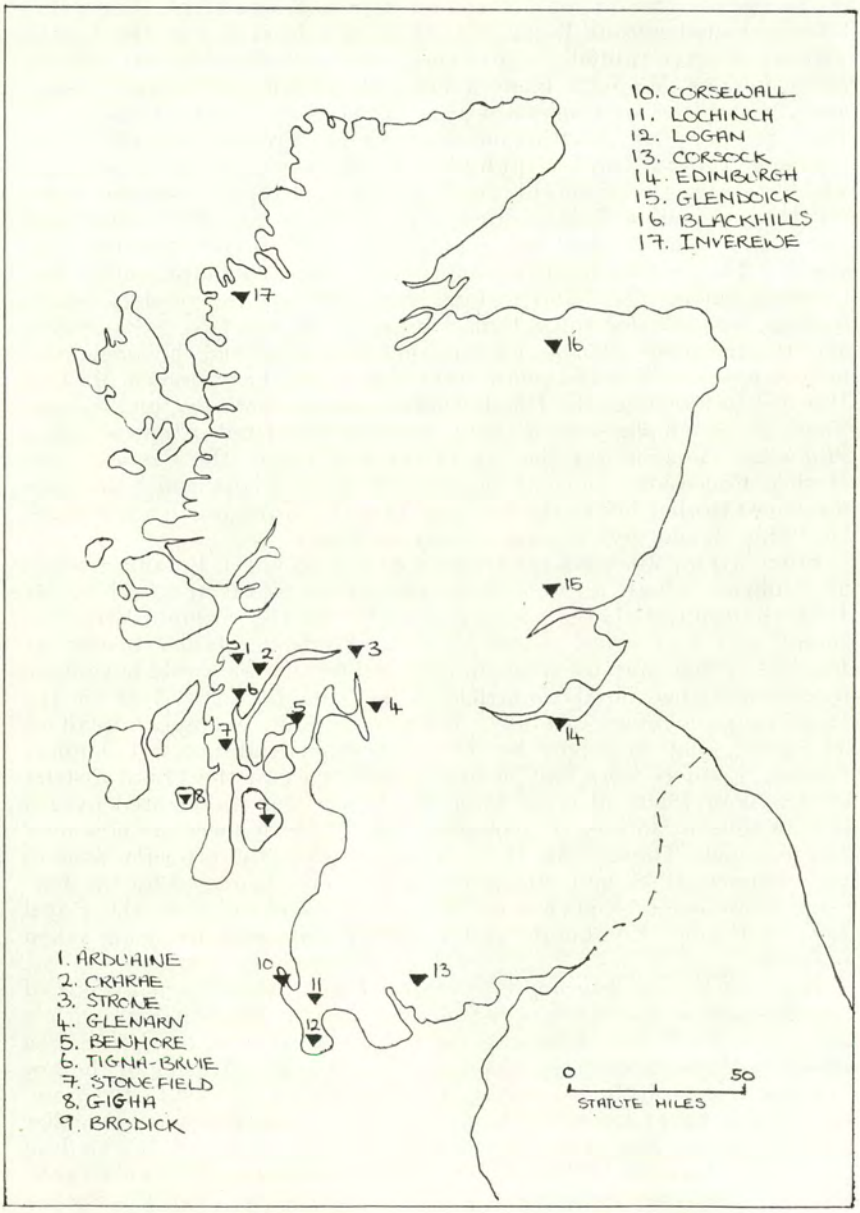


Fig. 4

Rhododendron Gardens in Scotland

in the care of the National Trust for Scotland since 1958. The large-leaved rhododendrons living almost at sea level below the Castle, with an average rainfall of 70 inches, are in ideal conditions and are justly famous; Mr John Basford brings beautiful specimens of *giganteum*, *magnificum* and *macabeanum* to London in March almost every year. This year at the Rhododendron Show, Brodick won the Loder Challenge Cup for the best hybrid with 'Fortune', a magnificent plant which we saw. Other notable rhododendrons in the large-leaved series are the original *mollyanum*, *praestans*, *protistum* a close relative of *giganteum*, and crosses between *macabeanum* and *sinogrande* and *grande*. The natural regeneration of these plants is quite remarkable. Growing among them and looking very well are the tender *cubittii*, *lindleyi*, *sinonuttallii*, and a hybrid between the last two, *burmanicum*, and the beautiful Glenarn *burmanicum* hybrid. Other rhododendrons not often seen include the yellow form of *zaleucum*, mentioned in Mr Alan Hardy's lecture after the Rhododendron Show, *serotinum*, and *erosum*. There are good plants of *delavayi* and the blood red *arboreum* and a *Magnolia* 'Lanarth'. At the top of the hill, nearer the Castle, is the Horlick Collection, some of the hybrids from Gigha which the late Sir James Horlick left to the National Trust for Scotland; in a few years' time this should give a good display of colour.

From Arran, we went via Dunoon to the Younger Botanic Garden at Benmore, where we were lucky enough to be taken round by Mr Hall, the Curator. Later, we were told by Sir Ilay Campbell that we should also have asked to see Mr John Younger's garden nearby at Eckford, which contains some notable plants; this we would have done if we had studied Sir Ilay's article on the "Giants of the West" in the 1964 *Yearbook* more carefully. Benmore has an average rainfall of 90 inches, and as might be expected rhododendrons and conifers flourish. Conifers were first planted in this part of the Cowal district of Argyll in 1820; 50 years later Mr James Duncan planted over 6 million trees in an area of 1600 acres, and some of these are now over 150 feet high. The late Mr H. G. Younger made the property over to the nation in 1928, and the greater part is now managed by the Forestry Commission. Eighty acres however are controlled by the Royal Botanic Garden Edinburgh, and a further 100 acres are being taken in hand.

Entering the garden, one is confronted by a magnificent avenue of *Sequoiadendron giganteum*, some of them nearly 150 feet high with a girth of over 20 feet. Climbing the hill to the east of the house, one passes a *Magnolia campbellii alba* and an extensive planting of the low growing Hobbie hybrids, notably hybrids between *forrestii* or *williamsianum* and hardy hybrids, which should have a great future in smaller gardens. Above, and to the west of the house, is the main rhododendron garden and here, as at Brodick, the natural regeneration is remarkable. For the most part, these are planted in their series as in the Species Collection at Windsor, and this is of great interest; there are over 250 species in the garden. The large-leaved species, as might be expected, are particularly fine, though not for the most part yet fully grown; most of the usual species are there, though curiously enough not apparently *grande*, one of the earliest introductions. Among the many

interesting rhododendrons that we saw were *lacteum*, *beesianum*, *phaeochrysum*, *sphaeroblastum*, *bureavii*, *hyperythrum*, *smirnowii*, *thomsonii* var. *pallidum*, a beautiful *bainbridgeanum*, large *charitopes* and *rubrolineatum*, and the new species *tamaense* (KW 21003) akin to *oreotrephes*, from the Triangle expedition.

Geographically, the next garden that we visited was Lord Strathkinglass's garden at Strone, near the head of Loch Fyne. Here, in the Pinetum, adjoining the Ardkinglass drive, are some fine specimen plants, notably *falconeri*, Loderi, *caloxanthum*, and some magnificent red hybrids from species of the Parishii sub-series. Up the hill, in the garden near the house, is a beautiful mass-planting of dwarf rhododendrons which is very effective.

Proceeding round Loch Fyne, we came next to Crarae, the famous garden made by the late Sir George Campbell of Succoth. The great feature of this is the inner garden, a steep narrow glen down which flows a narrow burn with deep clear pools, and rhododendrons hang down the banks between the trees in truly Himalayan fashion, a lovely spectacle. On the house there is a magnificent collection of exotic climbers, which obviously find conditions exactly to their liking. In the outer garden are most effective mass plantings of various rhododendrons, including *oreotrephes*, *schlippenbachii*, *vaseyi*, *triflorum* var. *mahogani* and *macabeanum*. There are also big hybrid nurseries, some of them Lord Strathkinglass's crosses, awaiting the selection of the best clones. 'Secretary of State' and 'Shadow Secretary' are among the good hybrids which have originated here. To me, the most interesting hybrid that I saw was *lacteum* × *macabeanum*, grown from seed of *lacteum* from the Edinburgh Botanic Garden from a plant growing next to a *macabeanum*, a clump of plants with a big yellow *macabeanum* truss and the *lacteum* leaf rosette. Another interesting plant was KW 21498 *macabeanum* aff. from the Triangle. Other good plants which Sir Ilay Campbell showed us were *gymnocarpum*, *detonsum*, a very good pink *zaleucum* and, appropriately, *succothii*.

We based ourselves on the very comfortable Lochgair Hotel for several days, and made trips from there to a number of famous or interesting rhododendron gardens in the neighbourhood, besides Crarae. One of these was an entirely new venture, jointly owned, cut out of the forest, facing south over a sea loch. Here we saw, in very good health, young plants of *hemsleyanum*, *sperabiloides*, *bainbridgeanum*, *hylaeum* aff. (C&H 418), *argyrophyllum* var. *nankingense*, *lanatum*, *exasperatum*, *roxieanum*, *recurvoides*, *bureavii*, *tephropeplum* var. *deleiense* and *camschaticum*, growing among a number of other ericaceous and other acid-loving shrubs and trees. An exciting project, which in another twenty years should be a marvellous garden.

Another garden which we visited from Lochgair was Stonefield Castle. The house is now a hotel, but, much of the garden has been saved, after years of neglect, largely due to the efforts of Mr David Hannah, whose achievement was most deservedly recognised by the Royal Horticultural Society's award to him of the A. J. Waley Medal in 1971. Here are some of the original plants raised from seed sent to John Campbell of Stonefield by his friend Sir William Hooker, Director of the Royal Botanic Gardens at Kew, and collected in Sikkim by his

son Joseph in 1850. Close to the house is a huge *niveum*, and elsewhere are a very fine blood red *arboreum*, *hodgsonii*, *eximium*, *falconeri*, *campylocarpum*, and *cinnabarinum* var. *roylei*. Of different origins are large plants of *zeylanicum* and *charitopes*, *chlorops*, *giganteum*, *sidereum*, a white *wardii*, the red *arizelum*, and what appeared to be a magnificent *rude*, though labelled F.25619 (*crinigerum* var. *euadenium*). Mr Hannah is very proud too of his *grande* hybrids with *thomsonii* and *niveum* ('Succoth Blue'). One can only hope that someone will care for the historic plants in this garden when Mr Hannah retires.

Near Ardrishaig, we were privileged to see Mrs K. L. Kenneth's garden, Tignabruie, a real connoisseur's garden, just above Loch Gilp, in which over the last 20 years in a relatively small space she has managed to collect some of the best forms of the most choice rhododendrons in cultivation. Here we saw beautiful plants of *mallotum*, *strigillosum*, *cerasinum*, *stewartianum*, *pseudochrysanthum*, *rude* (with hairs on the upper side of the leaf, and surely identical with the plant labelled *crinigerum* var. *euadenium* at Stonefield), *roxieanum* var. *oreonastes*, *yakushimanum*, *mollyanum*, *wasonii*, *lanatum*, *temenium* var. *chrysanthemum* 'Cruachan' F.C.C. and *bureavii* (R.25435). Other notable features of the garden were an avenue of white *decorum*, *johnstoneanum* 'Double Diamond', 'John Bull', and the hybrids *lacteum* × *macabeanum* and 'Succoth Blue', which we had seen previously at Crarae and Stonefield respectively.

Another day, we made a daytrip to the Isle of Gigha, taking the ferry from Tayinloan, and passing eider duck on our way. The island was bought by the late Sir James Horlick in 1944, and the original mixed woodland planted at the turn of the century has been used to provide cover for some 50 acres of garden at Achamore House, which include an old walled garden. The garden is divided up into fairly small sections by massive internal windbreaks of *R. ponticum*, *Senecio rotundifolius* and *Griselinia littoralis*, making a series of enclosures containing the choicest rhododendrons and other shrubs. In 1962, Sir James Horlick presented a valuable collection of his rhododendrons and other shrubs to the National Trust for Scotland, and these are now being planted in some of the Trust's other gardens on the west coast. Achamore House and garden are now the property of Mr Landale, and when we saw them they were in splendid shape and beautifully maintained, so there is every reason to hope that this unique garden will be preserved for posterity. The garden is normally open under Scotland's Gardens Scheme, and an excellent guide by Mr Peter Clough has been published by the National Trust for Scotland.

This was one of the very few gardens where we did not have the good fortune to have a conducted tour, and so we may well have missed some treasures. With an average annual rainfall of 45 inches, the large-leaved rhododendrons are not perhaps as vigorous as in such gardens as Brodick and Benmore, and they are possibly younger. We did however see fine specimens of most of the commoner species in the Falconeri and Grande series, as well as *mollyanum*, *preptum*, and *sidereum*. Among many other fine species and hybrids, we noticed a very good *elliottii*, and splendid plants of *prattii*, *wiltonii*, *concatenans*, *yakuinsulare*, and Loderi. Particularly notable are the collections of

dwarf rhododendrons and of tender rhododendrons. Among the former are several forms of *calostrotum*, *chryseum*, *uniflorum*, *prostratum*, *ludlowii*, *lowndesii* and different varieties of *campylogynum*. In the walled garden, we saw *dalhousiae*, *sinonuttallii*, *lyi*, *taggianum*, *lindleyi*, *formosum* and *cubittii*, as well as *brachysiphon*, *maddenii* and a number of the tender hybrids. Behind, on the hill, are some of the less tender members of the Maddenii series and their hybrids, including *burmanicum* and *polyandrum*.

Magnolias are not a feature of this garden, but *Camellias* × *williamsii* seem to do well, and we particularly noticed a large plant of the curious 'C. F. Coates' with an almost procumbent habit. The wild form of *C. reticulata* flowers in the walled garden.

From Lochgair, we went north up the lovely west coast towards Inverewe, staying a night on the way at Dornie, and stopping on our way at Arduaine at the head of Loch Melfort, like Stonefield another former Campbell garden. Like Stonefield too, there is an excellent hotel, the Loch Melfort Motor Inn, and the garden had been virtually abandoned after being cherished for many years by the Campbells' old Nanny. Here too, someone has come to the rescue, in the shape of Mr Wright, a nurseryman from Essex, and his brother a retired civil engineer, who are doing a truly remarkable job, without assistance, in clearing round the wonderful old rhododendrons which the late James Arthur Campbell of Arduaine started to plant about 75 years ago, and restoring the garden. Here, we saw the first plant of *R. giganteum* to have flowered in cultivation, in 1935; a huge *sinogrande*, an enormous *zeylanicum*, grown from seed said to have been sent home from Ceylon with the tea. Other notable plants were very large specimens of *campylocarpum* var. *elatiom*, *meddianum*, *griffithianum*, *rex* and *auriculatum*, most of the commoner big-leaved species, and such uncommon rhododendrons to see outside as *kyawii* and *taggianum*, as well as *flavorufum* and *leptothrium*.

Our most northern point was Inverewe in Wester Ross now, since the retirement of Miss Alice Maconochie, administered by Mr James Gibson whose parents and uncle have made the famous garden at Glenarn. The new head gardener is Mr Fulcher, and between them they have a most enviable task. This garden was made by the late Osgood Mackenzie between 1862 and 1922, and continued by his daughter Mrs Mairi Sawyer until she handed it over to the National Trust for Scotland in 1952, a year before her death. Like Sir James Horlick's garden nearly a century later, it was made on a site which originally had no shelter at all, and practically no soil either. Much of the soil had to be brought in in creels, and there is now good shelter. The National Trust have done their work well, and it is an easy garden to see, though we found it worth spending two whole days doing so. So famous has it become, that it now has 200,000 visitors a year, and sometimes as many as 17,000 in a day: to cater for all these visitors, it is laid out to provide colour and flowers for as long a season as possible, and it has a wealth of southern hemisphere plants, being particularly famous for its Chatham Island forget-me-nots, which thrive on a mulch of seaweed and herring fry, as a substitute for the rotting

sharks' carcases, to which they are accustomed in the wild. Rhododendrons are well represented, though not perhaps the main feature; almost all the Himalayan species are there, but not many of the Chinese, and legend has it that Mrs Sawyer would not have plants in the garden that her father had not had; during the six years of Dr Cowan's stewardship however efforts were clearly made to remedy this.

There are fine *R. thomsonii*, including a very deep crimson one, numerous *campylocarpum* including a white one but I did not see a *wardii*. There are however good *sinogrande*, and *sidereum*, *lanigerum*, *dryophyllum*, *callimorphum*, and a plant not often seen was *russotinctum*. A number of tender rhododendrons are also grown, including *griffithianum*, *megacalyx*, *taggianum*, *formosum* and *lindleyi*. There is a *Camellia japonica* said to be 200 years old, and several magnolias are grown, notably *campbellii alba*.

After Inverewe, we went east to Morayshire, and there we had the good fortune to be shown a pair of osprey on their nest. The purpose of our visit however was to see Blackhills, the home of Mr and Mrs S. F. Christie, and of many choice rhododendrons. Mr Christie's beautiful exhibits in the 8 species class at the Rhododendron Show every year are justly famous, as are his *R. lacteum* and *nakotiltum*. This garden was started in 1920 by Mr Christie's uncle, and consists of two sheltered glens, opening into each other. The average rainfall is low compared with the west coast, an average of only 30 inches, and in recent years less, but the complete shelter, good soil, small amount of frost, and superb attention have combined to produce very healthy plants with magnificent foliage. Among the large-leaved rhododendrons, we saw the true *sinogrande* var. *boreale*, a very good *macabeanum*, a very yellow *falconeri* with a rusty tomentum on the upper surface of the leaves as in *eximium*, *arizelum*, *basilicum*, *sidereum*, a big *rex* and a number of hybrids including 'Colonel Rogers', 'Lochinch' and 'Elizabethae' (*grande* × *falconeri* – grex Mansellii). The Lacteum series is well represented in this garden and, besides those mentioned, we saw plants of *phaeochrysum*, *traillianum* and *beesianum*. Another series better represented than in many gardens is Taliense, and notable plants that we saw included an 8-foot *roxieanum* var. *oreonastes* (R. 59205) which had flowered after 35 years, a good *sphaeroblastum*, *globigerum*, *wiltonii*, *recurvoides*, *clementinae*, and *glaucopeplum*. Other notable plants included the rare *vialii*, *houlstonii* and *hemsleyanum*, a big *insigne*, *hunnewellianum*, *fulgens*, Sherriff's white *campanulatum*, a small *sherriffii*, *wardii* (KW.4170), *martinianum*, *selense*, *fulvastrum*, an unusual and very good form of *haematodes*; *monosematum*, a good *glischrum*, a good form of *barbatum*, and a *crinigerum* with persistent bud scales and a brown indumentum labelled F.21762 (which is listed as *bainbridgeanum*). There are magnificent rhododendrons in this garden, which it is worth going a long way to see.

After Blackhills, the next rhododendron garden that we visited was Glendoick near Perth, the home of Mr E. H. M. Cox, and his son, Mr P. A. Cox. In the latter's absence in the U.S.A., we had the privilege of being taken round both the garden and the nursery by his father. Apart from lovely plants well laid out in a beautiful setting, a feature of Glendoick is the remarkably high standard of weed control. Among

other notable rhododendrons, we saw fine plants of Wilson's *calophytum*, *roxieanum* var. *oreonastes*, *recurvoides*, *clementinae*, the 'Cox's Uranium Green' clone of *decorum*, *lanatum*, *cerasinum*, *degronianum*, *souliei* and *mariesii*. We saw the plant of R. 'Hotei' which received an Award of Merit in April, a remarkably fine yellow, and the subject of a separate note in this *Annual*. Another fine hybrid of an earlier generation was 'Frill', of which there is such a fine plant at Trewithen in Cornwall. There is also a good specimen of *Camellia* × *williamsii* 'Brigadoon'.

Glendoick is justly famous for its dwarf rhododendrons, and among other notable plants are *ludlowii* and the various excellent hybrids which it has produced, including 'Chikor', 'Curlew' and a hybrid with *hanceanum*; the white form of *kiusianum*; and *sargentianum* × *kotschyi*.

From Perthshire, we went to Edinburgh and were privileged to spend an afternoon and a morning in the Royal Botanic Garden with Mr Davidian, as well as visiting the Herbarium. I had been to Edinburgh before, but in no garden had I seen so many interesting rhododendron species as we did on this occasion. These included *taliense* and *bureavii* in full flower, *roxieanum* var. *oreonastes*, *mimetes*, *clementinae*, *detonsum*, *prattii*, *sphaeroblastum*, and a new species close to *adenogynum*, all in the Taliense series. In the Thomsonii series *jucundum*, *myiagrum*, *cerasinum*, *stewartianum* and *cyanocarpum*. A number of uncommon species and sub-species in the Neriiflorum series were shown us, including *floccigerum*, *phaedropum*, *pocophorum*, *beanianum* var. *compactum*, *catacosmum*, *coelicum*, *citriniflorum* var. *horaeum*, *eudoxum*, and *temenium* var. *glaphyrum*. In the Ponticum series, we

saw *caucasicum*, both the Siberian and the Japanese forms of *chrysanthum*, *makinoi*, *hyperythrum* and *smirnowii*. We were shown very good forms of *thayerianum* and of *argyrophyllum* var. *nankingense* as well as of var. *cupulare* and *coryanum*. Of the Barbatum series, we saw *crinigerum*, *exasperatum*, *glischrum* and its variety *adenosum*, *glischroides*, *habrotrichum*, *spilotum* and *rude*. Among the species of the big-leaved series, we saw plants of the F.C.C. form of *mollyanum*, *macabeanum*, *puderosum* flowering after twenty years, *semnoides* and *watsonii*. Other notable plants were good forms of *lacteum* and *dryophyllum*; *cookeianum* flowering at Edinburgh for the first time; *eritimum* var. *gymnogynum*; *uvarifolium*; a good capitate *davidsonianum*, *augustinii* var. *rubrum*, a good *bauhiniiflorum*, *vilmorinianum*, and the varieties *benthamianum* and *pseudoyanthinum* of *concinnum*. Other interesting plants included a good form of *vernicosum*, and its varieties *rhantum* and *sheltonae*, and *houlstonii* in the Fortunei series; the very fine A.M. form of *campanulatum* 'Roland Cooper' and *sherriffii*; a good *cinnabarinum* var. *roylei*, a good *concatenans*, and the newly described, deciduous, *tamaense* which shows affinities with both *cinnabarinum* and *oreotrephes*; also of interest were *kotschyi* and *fletcherianum*.

From Edinburgh, we went back to the west, to the extreme south-west corner of Scotland, staying two nights at Corsock House in Kirkcudbrightshire, where Mr F. L. Ingall and his family are doing such a splendid job in restoring, maintaining and extending the garden made by General MacEwan, with the assistance of his brother-in-law, John C. Millais of Compton's Brow, Horsham. The latter was agent at Leonardslee, which must account for this garden containing probably more mature plants of rhododendron Loderi than there are in the whole of Cornwall. General MacEwan subscribed to Forrest's last expedition, and this is the reason for the wealth of good plants of the Lacteum and Taliense series, for which it is justly famous. In this respect, as well as in its general layout, this garden to some extent resembles Blackhills on the other side of Scotland, though it has a higher rainfall. Unlike the Blackhills form, the numerous plants of *R. lacteum* have a distinctive red blotch; one plant in particular, known as "the unveiled *lacteum*" is very fine indeed, a vigorous sturdy plant well over 20 feet high, quite unlike the typical *lacteum* habit. Other good plants in this series, well represented at Corsock, are *dryophyllum*, *phaeochrysum*, and *traillianum*. Outstanding perhaps is the Taliense series, with fine plants of *balfourianum* var. *aganniphoides*, *adenogynum*, *adenophorum*, *clementinae*, *doshongense*, *sphaeroblastum*, *wiltonii* and an enormous *prattii*. Other notable plants include fine specimens of *auriculatum*, *arizelum*, *fictolacteum*, *hodgsonii*, *sutchuenense*, *fargesii*, *orbiculare*, *argyrophyllum*, *smirnowii* and 'Shilsonii'.

A notable, though perhaps less well-known, garden is Corsewall in the north of the Wigtownshire peninsula facing east, where Colonel Carrick-Buchanan has perhaps the largest flowered form of *R. griffithianum* in cultivation. There are fine groups of *magnificum* and *sinogrande*, a very good *macabeanum* and a very big *falconeri*. Other notable rhododendrons are a very good *croceum* (*wardii*), *leptothrium*, a huge *williamsianum*, 'Tyermannii' and 'R. W. Rye'.

After Corsewall, we visited Logan in the south-west of the Wigtownshire peninsula. This garden, where the McDouall brothers started planting nearly 80 years ago, and which was later bought by the late Mr Olaf Hambro, has now been divided, the old walled garden with its wealth of, principally southern hemisphere, plants being maintained as an annex of the Edinburgh Botanic Garden, and the southern, mainly woodland garden and the house having been inherited by Sir Ninian Buchan-Hepburn. Sheltered by the south facing wall of the walled garden are a number of tender plants, notably *Magnolia globosa, sprengeri* and *wilsonii*; *Camellia macrocarpa* and *rosaeflora*; and *Rhododendron burmanicum, cubittii, ciliicalyx, dalhousiae, nuttallii, parryae, rhabdotum, supranubium, taggianum, vialii* and 'Harry Tagg'. Other notable rhododendrons include fine plants of *sinogrande, falconeri, barbatum, exasperatum* and *calophytum*.

In the adjoining, private garden are a wonderful *sinogrande*, and fine plants of *grande, mollyanum, falconeri, sidereum, arizelum, hodgsonii, rex* and the blood-red *arboreum*. Notable also are a huge *augustinii* and large plants of 'Oreocinn', 'Cinncrass' and the 'Logan Damaris'. In the old nursery, at the back, it was very interesting to see what appeared to be a line of the 'Dr Stocker' × *campylocarpum* hybrid, 12-15 feet high, from which the 'Logan Damaris' clone had been selected.

Our last visit was to Lord Stair's magnificent gardens at Lochinch and Castle Kennedy on the isthmus which joins the two halves of Wigtownshire, and which was so well described in the *Rhododendron Yearbook* by his late father twelve years ago. The gardens lie between the two castles, and cover an area of 70 acres, flanked by the Black and White Lochs. It was terraced 250 years ago, and planted with fine avenues of ornamental trees radiating from the old castle or the Round Pond 300 yards to the north. There are avenues of monkey puzzles, sitka spruce, silver fir, and evergreen oak, and some of these have been inter-planted with embothriums and *Eucryphia glutinosa*.

There are many fine old specimens of *Rhododendron arboreum*, including *campbelliae* and such now seldom seen forms as 'Batemanii' and 'Nobile', as well as original plants of *barbatum* and *thomsonii*. A feature of Lochinch gardens is the tender rhododendrons. In an old glasshouse close to the castle are old plants of the form of *maddenii* that used to be called *jenkinsii*, together with a very good *polyandrum, edgeworthii, burmanicum* and a blood red *arboreum*. The late Lord Stair made some fine tender hybrids, including 'R. W. Rye' (*chrysodoron* × *johnstoneanum*), a first class yellow named after his late head gardener for 38 years, who came from Gill's nursery at Falmouth; 'Lord Stair' (*lindleyi* × *taggianum*); and an unnamed cross between *jenkinsii* and *cinnabarinum* var. *roylei*. Other notable late-flowering hybrids which he made include 'Review Order', 'Violet Lady Stair' and 'Lady Jean'. Outstanding species in the garden include the famous *arizelum* var. *rubicosum* and *chlorops* (F.16463).

This concluded a memorable tour, and next day we drove back down the motorway to London with a car crammed with plants that our kind hosts had given us, getting back just in time for Chelsea.

The Naming of Rhododendron species from the viewpoint of a Horticulturist

P. A. COX

In this article, I make an attempt to bridge the gap between the botanist and the gardener in the naming of rhododendron species and the changes in their classification. For all too long, gardeners have criticised botanists for removing well known names and replacing them with ones they have never heard of; they are sometimes even accused of deliberately causing confusion. Botanists on the other hand frequently fail to see the gardeners' points of view. I must say here that many botanists are my friends and generally speaking I consider that they do excellent work.

The question arises, what is a species in the first place? Chambers Twentieth Century Dictionary states: (i) "A group of individuals having common characteristics" and (ii) "A group (sometimes rather arbitrarily defined) of closely allied mutually fertile individuals showing constant differences from allied groups." What common characteristics are classed as significant? Here the botanist and horticulturist hardly see eye to eye. The second definition, admitting how poor the rules are, looks at it also from the outside, the constant differences. Possibly the latter are more important than the similarities. In the future, where more widely differing former species will be merged, this will be accentuated.

Botanists themselves used to be classified into "lumpers" and "splitters". In extreme cases the lumpers would put many remotely related plants under one species, while the splitter would make a species out of almost every individual plant he found if there were the slightest botanical differences. Luckily most modern botanists seem to take the middle road.

Where do rhododendrons fit in here? Few people disagree with the fact that too many species were described at the time that the bulk of new material was coming in. This came about largely due to a lack of knowledge of the genus, but with plants discovered by George Forrest, a rather different state of affairs occurred, which by now is fairly well known by students of rhododendrons. Forrest was rather badly paid by his sponsors but he was to be given so much extra for every new species he found. Sir Isaac Bayley Balfour, then Regius Keeper in the Royal Botanic Garden, Edinburgh, knew that Forrest was underpaid so he described as many new species for Forrest as he could within reason. Hence the multitude of new species he was reputed to have found, especially in the Neriiflorum and Taliense series.

Anyone can describe a new species provided he or she obeys the following rules. A dried specimen must be placed in a recognised herbarium before a description is validly published. A comparatively new rule, brought out on January 1, 1935 was that all botanical species, varieties and so on must be described in Latin. This latter rule is a good one because it is obvious that only people in botanical establishments are able to write this rather queer form of Latin.

Edinburgh has for long been recognised in most quarters as the centre of the classification of rhododendrons and quite rightly so, owing to the very extensive collection of herbarium specimens and living plants. It is perhaps unfortunate that several species have recently been described elsewhere, sometimes in places where there is inadequate material to make comparisons for determinations.

Some mention must be made of the past failings of botanists classifying rhododendrons. Of course botanists are only human and no two are likely to deal with the problem on exactly similar lines. Previous workers on the genus, notably in *The Species of Rhododendron*, failed to make a key to determine the series and the descriptions were often inadequate, especially in the Lepidote (scaly) series. Other workers have had a lack of experience in the wild, or may have made a far from complete study of specimens in herbaria and cultivated plants in gardens. Some have been hidebound and unwilling to discuss or share knowledge with other students of the genus.

There is a possibility that more than one classification of the genus may be published in the next few years plus separate papers on individual series such as Lapponicum. There will also be the new R.H.S. Species Handbook. I foresee a definite danger that these publications may conflict with each other in such a way that the whole nomenclature of the genus falls into utter confusion. It is obvious that this state of affairs must be avoided at all costs.

The International Rules of Nomenclature are largely responsible for the removal of well known names and their replacement by ones often virtually unknown. When two species are merged, the first described name has officially to take precedence. It sounds a sensible enough rule but often leads to much annoyance on the part of gardeners deprived of a name they know. But the rule becomes ridiculous when it includes clonal garden forms in those names to be retained. The prime example of this occurs in the Obtusum subseries in such cases as *R. linearifolium* and *mucronatum* which were originally described from cultivated plants (see *Dwarf Rhododendrons*, footnote on page 227).

There is a new team in Edinburgh who are going to work on other genera of Ericaceae as well as rhododendrons. Every effort is going to be made to visit wild groups to make population studies and go carefully into specific variations. To be able to assess the problem fully, much research is essential. The most simple way to investigate a population fully is to collect seed from all over the given area of distribution or part distribution of a particular species and then compare the growth of the seedlings to maturity. This specific variation will be least noticeable if the seed is only collected off one plant or adjacent specimens. It will be greatly accentuated if collected from a wide area

in distance and different elevations. Some species may extend over 2,000 ft or more in altitude while others are only growing on a narrow band of a hundred or so feet. An obvious example of the former was seed of *R. cinnabarinum* I collected around Sandak Phu, in north India, in 1965. The seeds were gathered off many plants at two places a few miles apart and the variation in the seedlings is very noticeable with all sorts of differences in size, shape, colour and texture of leaves, habit, speed of growth and so on. They are just reaching flowering size. Likewise *R. formosum*: the seed was collected off many plants but only over an area of a few acres. The seedling variation has been remarkable, much more obvious than in the wild with an almost complete range from near the narrow leaved *R. iteophyllum* to the wider and larger leaved *R. inaequale*, both also endemic to the Khasi Hills. On the other hand, seedlings of *R. hylaeum* aff. (C&H.418), all gathered from one felled tree have turned out very uniform.

The existing multiform species such as *R. arboreum, cinnabarinum, occidentale, sanguineum* and *wardii* will have many others added to their numbers as well as having other species amalgamated with some of them. Some people even wonder if *R. occidentale* is a series of natural hybrids but when there is only one western American species of azalea, what can they be hybrids of? The extreme forms are now most unlikely to be accepted as separate species. Actually the variation in *R. occidentale* is probably not as wide as the rest of the species mentioned.

The procedure for going about naming a new species has changed in certain ways. Previously, a new specimen was checked against the type specimens (that recognised as being typical of the species) of related species. If it differed sufficiently, it was duly accorded specific rank and named. Now, botanists look at related populations as a whole before classifying.

Here is an imaginary example of how species differ and the muddles they cause. There are four parallel ridges of a similar altitude with deep river-cut valleys in between. Let us name these ridges A, B, C, and D. On these ridges grow certain red flowered rhododendrons. A plant collector visits ridge A, collects a specimen of the red rhododendron and then goes to ridge D where he collects another specimen. On a subsequent study being made at a herbarium, the two specimens are compared and various differences are found in such details as size of calyx, the thickness of indumentum and the number of hairs on the petiole and both are given specific names. A few years later, another collector visits ridges B and C. His specimens are compared with those from A and D and are found to be intermediate and eventually, someone revising the series, sinks the two species into one. Unfortunately, even this example vastly over-simplifies the whole problem, especially in the Neriiflorum and Taliense series.

Botanists and horticulturists are inclined to look at the characteristics which should be used for separating species from an entirely different angle. Botanists look on a species as a closely related group and often use or used to use microscopic details in their identification or such criteria as the length and shape of the style, the number of stamens, shape of infloresence and presence or absence of hairs, scales, indumentum and so on. Horticulturists often view species knowing

only one or a few clones. Hence if one clone differs greatly from another, the gardener says ah!, these two are different, surely each deserves specific status, while the botanist finds intermediaries linking the two and joins them under one specific heading. I have already referred to these amalgamated species as being multiform in contrast to very distinctive and hardly varying species such as *R. auriculatum*, *griersonianum* and *ludlowii* which I will call uniform. Horticulturists consider important characteristics as being hardiness, time of flowering and growth, flower colour, habit, growth rate and so on. Who is correct? I would say both. Botanists luckily now put less emphasis on such characters as the number of hairs on the calyx and glands on the ovary and more consideration is given to distribution in the wild. While botanists have facilities to study dried specimens and parts of growing plants in detail under microscopes, gardeners watch plants from the growing angle and by observing their seeds germinate and the plants grow from minute seedlings to maturity really get to know their subject in a way more intimately than the botanist. Many species similar on maturity may act quite differently in juvenile stage.

What is to be done to make everyone happy? It is certainly not easy to please everyone but surely most people will welcome a reduction in little known names such as many of the subspecies of *R. sanguineum* and *temenium* and obscure members of the Taliense series like *R. tritifolium* and *triplonaevium*. A relatively simple key to the series would be appreciated and better descriptions with which to identify one's plants will help those able to follow botanical language. What may not be so well accepted is the removal of many better known names, which are at present in common use. Botanists must be very careful not to make too many changes which will aggravate the gardening public. The danger is that if they do, few gardeners will use their new classifications and the majority will continue to use the present arrangement. Certain species collectors do not like their species lumped together as it reduces their total.

In those series where each existing species has multitudes of intermediate forms between them such as the Roxieanum and Haematodes subseries, many specific names will go. These intermediaries will then at last have a home under the multiform or umbrella specific names which are retained. A prime example of this is in the Sanguineum subseries. In the herbarium of the Royal Botanic Garden, Edinburgh, nearly one-third of the specimens placed in this subseries are so far undetermined. If only about six species are retained in the subseries (about the number I would suggest), these unplaced specimens will find a home much more readily. Personally, I do not like the term subspecies which is over-used in this subseries. It is a clumsy category for any plant, though it is useful when referring to geographical forms of a species.

The difficulty arises in what is to be done in a case where, from a botanical point of view, no subspecies or variety can be retained, yet the typical former species has a well known name and some fairly well defined horticultural characters. It may be possible to introduce a new status, perhaps in the form of a group cultivar as in hybrids, but where

it is unnecessary to have a clonal name attached, for example *R.* Loderi without 'King George' and *Camellia* × *williamsii* without 'Donation'. It will have to be written in a new way so that everyone knows what it means. We are dealing here with two types of former species. First a species that has no known wild type and was named from a cultivated plant. In some of these cases, only one or a very few clones exist, for example, *R. chlorops*, *microleucum*, *inopinum*, and *planetum*. Second, a species that is common in cultivation with many clones, where every plant cannot possibly be given a clonal name.

All too many nurserymen especially on the continent of Europe still use names long since out of official use. This is a pity because it causes more confusion than is necessary. To add to this, many nurseries lack knowledgeable plantsmen to check the authenticity of species in stock and being sold, resulting in many going out wrongly named. Some have even been known to replace something sold out with another variety. Even botanic gardens and well known gardens open to the public are far from innocent.

Luckily, a few people do really care. In the U.S.A., a species collection is being assembled which contains only authentic species gathered as scions and cuttings from many sources, especially Britain, and this bank of species will act as a nucleus which can be drawn on by nurserymen and keen private collectors.

So many species grown from open pollinated seed are hybridised but are still labelled as species. When Americans, Australians and New Zealanders in particular first became keen on species, their chief supply was from seed lists from Edinburgh Botanic Garden and the Royal Horticultural Society's garden at Wisley. People thought that seed coming from these meccas of horticulture must be true but how wrong they were. Big collections of rhododendrons all mixed up cheek by jowl are the worst possible source of open pollinated seed and these poor enthusiasts soon realised their mistake. Another undesirable source of plants is self-sown seedlings. Now, we have the excellent seed list of the American Rhododendron Society which states whether the seeds are hand pollinated, open pollinated or collected from the wild. Far too few people can be bothered to hand pollinate species, especially in Britain. It is a simple task and with the bigger species, large quantities of seed can be produced from a very few pollinated flowers (see *Dwarf Rhododendrons* page 249-50 for method of pollinating).

I often harp on about the importance of retaining collectors' numbers on plants from wild collected seed where there is a number on the packet, and those propagated vegetatively from numbered species. Open pollinated seedlings are sometimes distributed with numbers, which is very bad. It is so easy to lose these numbers and the only sure way of keeping them is to plot all the plants (once in their final positions) on a map or chart and as a cross reference, put little metal labels with numbers on every plant. Even large lead or plastic labels are liable to be moved or stolen. Unfortunately it is mainly botanical gardens who are likely to go to this trouble, so the result is that even ardent enthusiasts like myself gradually lose numbers over the years. People might question the value of collectors' numbers. They are one

of the few ways of being sure that a plant is an authentic species (or natural hybrid in a few cases) and if only the collecting areas in China, south-east Tibet and so on were opened up again (provided the exact location was given in the field notes), it should be possible to go back to the spot and re-collect. It would be interesting to plot these numbers in cultivation on a map.

One minor complaint gardeners have against botanists is in the choice of names used for some species. The names used fall into six categories. 1) After a person who has either collected or has worked among rhododendrons or some friend of the collector. Examples *wardii*, *forrestii*, *roxieanum*. 2) A place name where or near to where the plant was found, *kongboense*, *camtschaticum*. 3) Likeness to another plant, *fictolacteum*, *iteophyllum*. 4) The nature of its habitat; zonal or geographical position, *oreotrephes*, *occidentale*. 5) Name referring to some characteristic of the plant such as hairiness, flower colour or size, *ciliatum*, *giganteum*. 6) Some description of the species such as rare, beautiful or dull, *rarum*, *decorum*. 4, 5 and 6 are usually Latin or botanical names.

Whether a name sounds nice to the ear varies enormously from individual to individual. I particularly like the melodious names after places such as *moupinense*, *kongboense* and *pemakoense*. I must admit that *sphaeroblastum* (with rounded buds) and *vesiculiferum* (vesicle-bearing) go a bit far. It has been thought that perhaps a shade of favouritism or the reverse has crept in where species good and inferior have been named after people.

I strongly object to the American habit of trying to make popular names out of botanical ones. By all means use common names for native azaleas or wild flowers where they are already well used, but please do not cheapen the whole work of Linnaeus by pointedly misusing his system.

To sum up. Botanists and gardeners view their subjects from different angles and both are, in their own ways, often correct. What we want to see in the future is the getting together of both parties to their mutual advantage which we hope may ultimately lead to a classification of rhododendrons accepted and used by all.

The Rhododendron Species Foundation

P. H. BRYDON

In his search for more productive economic plants and more beautiful ornamentals, man has discovered that he must return to the primitive species in order to produce something different, or hopefully superior, to the original. To the purist, rhododendron species in themselves are self sufficient and as ornamentals, many of them provide all the necessary qualities one needs in the garden. Certainly, they are not going to be superseded within a few years, as is often the case with hybrids. But then, no two plants of a given species are identical. Genetic variation is an essential process of all living things, permitting life to survive in the face of a changing environment. From the gardener's viewpoint, variation can produce some mediocre plants, some average plants, and occasionally a superior form – one that has better colour quality, or more substance in the flower, or a greater degree of hardiness or resistance to disease and insect pests. Fortunately for us in America, experienced British gardeners had the discernment to select and preserve superior forms of species from the harvests of plant explorers. It is to their good taste and quick eye that the Rhododendron Species Foundation is indebted for the many fine forms now being propagated for distribution to American gardens.

After a modest beginning in the Pacific Northwest thirty years ago, the American Rhododendron Society grew rapidly and became a truly national organization with 37 chapters and 3500 members. It soon became apparent to the more sophisticated members of the Society that many species in the trade and in private collections were wrongly identified or, at best, inferior forms to those described in the *R.H.S. Year Books* or seen in British gardens. No doubt, much of the confusion resulted from the practice of growing species from seed which had been collected from open pollinated flowers. It is interesting to note at this point that a similar comment was made by the late Mrs Stevenson upon the occasion of a visit to her garden at Tower Court by Dr Carl Phetteplace. As a matter of fact, according to Dr Milton Walker, her observations on the importance of preserving the best forms by vegetative reproduction led to the formation of the American Rhododendron Society Species Project.

In 1963, Dr Walker was appointed Chairman of the Species Project and in this capacity, he made several trips to Britain at his own expense to visit notable collections of rhododendrons. While at Windsor Great Park, Sir Eric Savill was most sympathetic with the problem in the acquisition of authentic species and graciously offered to assist Dr Walker in his search and further encouraged him to examine other

collections with the hope of obtaining propagating material. The opportunity held great promise. Unfortunately, the American Rhododendron Society was not in a financial position to provide the necessary facilities to house and maintain such a collection. Furthermore, it was felt that frequent changes of officers in the national society might be conducive to a change in emphasis of the Society's activities and, since it would take years to establish a representative collection of species, the decision was made to form a separate but closely related group to administer the affairs of a Species Collection. Consequently, the Rhododendron Species Foundation was formed as a non-profit corporation in the State of Oregon in 1964, separate and distinct from the American Rhododendron Society, although all of the Directors were prominent members of the national society.

According to the by-laws of the Foundation "the objects and purposes of this corporation shall be as follows: to promote educational and scientific research in the field of horticulture, primarily species rhododendrons. The activities will include the study of species rhododendrons, the location, selection, propagation of the very best forms and to make said knowledge and selected forms available to all persons interested in the culture of species rhododendrons. The activities of the corporation may include the establishment, maintenance and operation of garden or gardens and other facilities for the propagation and growing of species rhododendrons and companion trees, shrubs, and plants".

The incipient collection was begun in Dr Walker's garden near Eugene, Oregon, with the hope that sufficient money would become

available to purchase the property and make it the permanent home for the Foundation. American growers, both amateur and commercial, responded generously and selected forms were donated, particularly from gardens in the Pacific Northwest. Through Dr Walker's efforts during his visits to British gardens, scions of selected forms were air-mailed from Britain to the University of British Columbia Botanic Gardens where they were rooted and established prior to being shipped to the U.S.A. In the initial stages of the Foundation's growth, it was found that plant material came into Canada with much less delay than when shipped through the United States Department of Agriculture channels. Hence the detour. However, we have now resolved this problem and material from Britain arrives in Seattle via Polar Flight in two days. The arrangement with our Canadian friends was not without benefit to both parties since it allowed the U.B.C. Botanical Garden to retain one plant of each accession for their own collection so that now there are two excellent representations of species on the West Coast of North America and with free reciprocity between them as stock becomes available. We shall always be indebted to the U.B.C. Botanical Garden, its Director, Dr Roy Taylor, and staff for their invaluable assistance in the early days of the Foundation. Their co-operation enabled us to acquire many fine forms which now have attained considerable size in the garden.

In 1971, Dr Walker found it necessary for health reasons to dispose of his beautiful garden. Regretfully, sufficient funds were not forthcoming to purchase the property. Consequently, the Directors of the Foundation asked me to assume responsibility for the plants and in May, 1971, over two thousand plants were dug and shipped north some 80 miles to their new home near Salem, Oregon. At the time of writing there are over six thousand plants on hand and, since 1971, we have distributed an additional 2000 plants to various contributors. The collection, as it now stands, includes over 600 accessions consisting of 330 species, 10 sub-species, 40 species varieties and 220 clonal forms.

My garden in the Willamette Valley is some five acres in extent. It is on an eastern slope with well drained, slightly acid soil and with a native tree cover of Garry oaks and Douglas firs. There is plenty of water and growing conditions are nearly ideal for all but the more tender species. The rapid growth of the collection, both in regard to size of plants and number of new acquisitions has posed a problem insofar as space is concerned and inasmuch as the balance of my land is in commercial cherry orchard which precludes expansion. Furthermore, the collection has become much too valuable to be entirely dependent upon the health of one man and his good wife (who does all the correspondence, record keeping, etc.). And so, looking to the future and the growth potential of the plants on hand (without considering new accessions which have been promised), the time has arrived to take a hard look at our situation and seek a really permanent home where continuity can be assured. With these thoughts in mind, a meeting was arranged between our President, Mr Fred Robbins, our Finance Chairman, Mr Corydon Wagner, and myself to discuss the situation with Mr George Weyerhaeuser, President of the Weyerhaeuser Corporation, in Tacoma, Washington, who incidentally

is also a keen collector of rhododendron species. The outcome of our conversations is that the Weyerhaeuser Corporation has agreed to provide a site of 24 acres adjacent to their corporate headquarters in Tacoma, Washington. In addition they will make available a propagating house, lath house, office, and nursery area and provide such necessary services as power, water, roads, and clear the planting area of unwanted trees and brush. The site is a lovely bit of native woodland, primarily Douglas fir with understory trees of vine maple and dogwood. The soil is a well drained shot clay with generous amounts of forest duff to make up an ideal growing medium for the rhododendrons.

The entire responsibility for the collection remains with the Rhododendron Species Foundation and they will provide and supervise skilled help to propagate and maintain the plants. They will also continue to acquire selected forms wherever they are to be found, attend to the labelling, correspondence, distribution of available plants to contributors, and direct the disposition of the species in their permanent locations. Perhaps an arrangement of the species, planted in their respective series according to their relationship would be ideal but, since the plants' welfare is of paramount importance, it is probable that they will be planted according to their cultural needs and where they will provide a pleasing display, without detracting from the natural appearance of the native woodland. However, it is not beyond the realm of possibility that a token planting of species could be arranged by using one or two prototypes from each of the forty-four series to demonstrate the probable course of evolution according to the phylogenetic tree diagram by Hutchinson in the *R.H.S. Rhododendron Year Book of* 1946.

The prospect of a permanent home for the collection with adequate facilities for maintenance and demonstration is very exciting and the generous offer of assistance from the Weyerhaeuser Corporation is beyond our greatest expectations. The future of the Rhododendron Species Foundation is indeed bright – but not assured. The potential for the development of the finest rhododendron species collection in western North America is now within our capabilities. But it needs the continued support of all members of the American Rhododendron Society, either as individuals or through their respective Chapters as a group effort. Last year, the Foundation invited the Chapters of the A.R.S. to participate in the distribution of available plants. The response was overwhelming, so much so that we were unable to fill more than 50% of the requests from members eager to acquire the various species forms which we had to offer at cost of production.

An unselfish handful of enthusiasts has borne the expense for the development of the Foundation during the past ten years. They have not received any special consideration for their contributions, nor have they expected any return other than the satisfaction of helping to establish this collection in America for the ultimate benefit of all who enjoy growing rhododendrons.

The Species Collection is a tribute to our benefactors who have made this possible, but most of all, we shall be forever grateful for the generous response of garden owners in the British Isles who have shared with us the treasures of their gardens.

Two New Rhododendrons

H. H. DAVIDIAN, B.SC.

Rhododendron hardyi Davidian, sp. nov.

Species *R. augustinii* Hemsl. affinis sed foliis deciduis, corolla alba differt.

Frutex 1.20-3 m. altus; ramuli lepidoti, puberuli vel glabri. Folia decidua, lamina lanceolata vel oblongo-lanceolata, 4.5-8.2 cm. longa, 1.8-2.9 cm. lata, apice acuta vel acuminata et mucronata, basi obtusa vel cuneata, supra lepidota, glabra, costa media puberula, infra squamis inaequalibus brunneis vel pallide brunneis inter se 3-6 diametris distantibus praedita, costa media pubescentia; petiolus 5-9 mm. longus, lepidotus, puberulus vel glaber. Inflorescentia terminalis, vel terminalis et foliis summis 1-2 axillaris, breviter racemosa 2-4-flora; rhachis 2-5 mm. longa, sparsim lepidota vel elepidota, puberula vel glabra; pedicelli 1.2-3 cm. longi lepidoti, puberuli vel glabri. Calyx 5-lobatus, 0.5-3 mm. longus, lobis ovatis vel triangularibus, extra lepidotis vel elepidotis, glabris vel raro pubescentibus, margine lepidotis vel elepidotis, ciliatis. Corolla late infundibuliformis zygomorpha, 2.3-3.3 cm. longa, 5-loba, alba basi flavidi-vel viridulo-maculata, extra lepidota, glabra vel tubi basim versus pubescens. Stamina 10 inaequalia longe exserta, 2.4-3 cm. longa; filamenta basim versus dense pubescentia. Ovarium oblongum vel conoideum, 3-4 mm. longum, 5-loculare, dense lepidotum, glabrum vel apice vel basi dense pubescens; stylus gracilis, elepidotus, glaber vel raro basi pubescens.

E. Tibet. Tsekou. 1895. J. A. Soulié No. 1010.

N.W. Yunnan. Shui-lu Shan, west of Wei-Hsi. Lat. 27° 12′ N. Long. 99° 12′ E. Shrub of 10 ft. Flowers greenish-white faintly washed lavender with olive-brown markings. In thickets. Altitude 11-12,000 ft. June 1924. G. Forrest No. 25482.

Yunnan-S.E. Tibet. Tsarung Border. Western range of Mekong on Kaakerpo, Dokerla and Tsarung. Shrub 4-5 feet. Flowers white. Spruce forest. Altitude 11,500 feet. May-June 1932. J. F. Rock No. 23010 (Holotype in Herb. Hort. Bot. Edin.).

This plant was first found by Soulié in 1895 in east Tibet. It was later collected by Forrest in north-west Yunnan in June 1924, and by Rock on the Tsarung Border, Yunnan-south-east Tibet in May-June 1932. It grows in thickets and in spruce forests, at elevations of 11,000-12,000 feet.

R. hardyi is a member of the Augustinii Subseries, Triflorum Series, and is easily recognised by the white flowers. It is allied to *R. augustinii* and *R. hirsuticostatum*, but is readily distinguished from both by the colour of the flowers and usually by the completely deciduous leaves; it also differs from the latter usually in the larger leaves and flowers, and longer pedicels.

The species was introduced into cultivation by Rock in 1949. It is hardy in a sheltered position, and is well worth a place in every collection of rhododendrons.

I have named this species after Major A. E. Hardy, as a tribute to his remarkable achievements in the cultivation of rhododendrons.

A shrub, 1.20-3 m. high; branchlets scaly, minutely puberulous or glabrous. Leaves completely deciduous or almost deciduous, lanceolate or oblong-lanceolate, lamina 4.5-8.2 cm. long, 1.8-2.9 cm. broad, apex acute or acuminate, mucronate, base obtuse or tapered; upper surface scaly, glabrous, midrib puberulous; under surface scaly, the scales unequal, medium-sized and large, brown or pale brown, 3-6 times their own diameter apart, glabrous, midrib hairy $\frac{2}{3}$ to its entire length; petiole 5-9 mm. long, scaly, minutely puberulous or glabrous. Inflorescence terminal, or terminal and axillary in the uppermost one or two leaves, shortly racemose, 2-4-flowered; rhachis 2-5 mm. long, sparsely scaly or not scaly, minutely puberulous or glabrous; pedicels 1.2-3 cm. long, scaly, minutely puberulous or glabrous. Calyx 5-lobed, 0.5-3 mm. long, lobes ovate or triangular, outside scaly or not scaly, glabrous or rarely hairy, margin scaly or not scaly, ciliate. Corolla widely funnel-shaped, zygomorphic, 2.3-3.3 cm. long, 5-lobed, white, or rarely greenish-white faintly tinged lavender, with yellowish or greenish spots at the base, outside scaly, glabrous or hairy towards the base of the tube. Stamens 10, unequal, long-exserted, 2.4-3 cm. long; filaments densely pubescent towards the base. Ovary oblong or conoid, 3-4 mm. long, 5-celled, densely scaly, glabrous, or densely pubescent at the apex or at the base; style slender, not scaly, glabrous or rarely pubescent at the base.

Rhododendron hillieri Davidian, sp. nov.

Species *R. chaetomallo* Balf. f. et Forrest affinis sed foliis minoribus infra indumento tenui, corolla minore recedens.

Frutex 30 cm.-1.80 m. altus; ramuli pilis fasciatis brunnei dense vel moderate setulosi, eglandulosi, sub inflorescentia 3-4 mm. diametro, perulis deciduis vel persistentibus. Folia sempervirentia, lamina coriacea, obovata vel oblongo-obovata, 3-6 cm. longa, 1.6-3.1 cm. lata, apice rotundata, basi obtusa, supra atroviridis nitens glabra, costa media sulcata, venis primariis 8-10 impressis, infra indumento tenui brunneo interrupto vel continuo, costa media prominente, venis primariis paulo elevatis; petiolus 4-6 mm. longus, supra sulcatus, pilis fasciatis brunneis dense vel moderate setulosus, eglandulosus. Inflorescentia racemoso-umbellata 2-7-flora; bracteae deciduae; rhachis 2-4 mm. longa floccosa eglandulosa; pedicelli 1-2 cm. longi dense vel moderate setulosi, eglandulosi. Calyx 5-lobatus, roseo-kermesina vel

kermesina, 2-5 mm. longus, lobis inaequalibus, ovatis vel triangularibus, extra glabris eglandulosis, margine setulo-ciliatis eglandulosis. Corolla campanulata carnosa, 2.8-4 cm. longa, roseo-kermesina vel kermesina, basi leviter 5-saccata; lobi 5, 1-1.3 cm. longi, 1.5-2 cm. lati, rotundati emarginati. Stamina 10 inaequalia, 1.2-2.3 cm. longa; filamenta glabra vel basi dense puberula. Gynoecium 2-2.7 cm. longum, corollae brevius; ovarium conoideum, 3-5 mm. longum, 5-6-loculare, pilis fasciatis brunneis dense tomentosum, eglandulosum; stylus glaber eglandulosus.

S.E. Tibet. Tsarong. Salwin-Kiu Chiang divide N.W. of Si-chi-to. Lat. 28° 40′ N. Long. 98° 18′ E. Dwarf shrub of 1 foot. Flowers bright rose-crimson. In moorland scrub. Alt. 13-14,000 ft. June 1922. G. Forrest No. 21736 (Holotype in Herb. Hort. Bot. Edin.).

S.E. Tibet. Tsarong. Salwin-Kiu Chiang divide N.W. of Si-chi-to. Lat. 28° 45′ N. Long. 98° 18′ E. Shrub of 1-2 ft. Flowers crimson-rose, margins palest. Amongst alpine scrub on rocky moorland. Alt. 14,000 ft. June 1922. G. Forrest No. 21742.

S.E. Tibet. Tsarong. Salwin-Kiu Chiang divide N.W. of Si-chi-to. Lat. 28° 45′ N. Long. 98° 18′ E. Shrub of 3 ft. Flowers light crimson. On open stony alpine meadows. Alt. 14,000 ft. June 1922. G. Forrest 21913.

Forrest discovered this plant in the Salwin-Kiu Chiang divide, south-eastern Tibet in June 1922. It is found in moorland, amongst alpine scrub, and in stony alpine meadows at elevations of 13,000-14,000 feet.

R. hillieri is a distinctive species belonging to the Haematodes Subseries, Neriiflorum Series. In some respects, it shows a resemblance to *R. chaetomallum*, from which it differs markedly in that the leaves are smaller, the indumentum on the lower surface of the leaves is thin, usually discontinuous, and the flowers are smaller.

In cultivation the plant is hardy, free-flowering, and is worthy of being widely grown.

The species is named after Mr H. G. Hillier, in recognition of his outstanding contributions to the cultivation of rhododendrons.

A shrub, 30 cm-1.80 m. high; branchlets rather densely or moderately bristly-hairy with branched, brown bristly hairs, eglandular, those below the inflorescences 3-4 mm. in diameter, leaf-bud scales deciduous or persistent. Leaves evergreen, obovate or oblong-obovate, lamina coriaceous, 3-6 cm. long, 1.6-3.1 cm. broad, apex rounded, base obtuse; upper surface dark green, shining, glabrous or with vestiges of hairs, midrib grooved, primary veins 8-10 on each side, deeply impressed; under surface with a thin or somewhat thin, discontinuous or continuous, brown indumentum of hairs, midrib prominent, primary veins slightly raised; petiole 4-6 mm. long, grooved above, rather densely or moderately bristly-hairy with branched, brown bristly hairs, eglandular. Inflorescence a racemose umbel of 2-7 flowers, flower-bud scales deciduous; rhachis 2-4 mm. long, floccose, eglandular; pedicels 1-2 cm. long, densely or moderately bristly-hairy, eglandular.

Calyx 5-lobed, crimson-rose or crimson, 2-5 mm. long, lobes unequal, ovate or triangular, outside glabrous, eglandular, margin hairy, eglandular. Corolla campanulate, fleshy, 2.8-4 cm. long, bright rose-crimson, crimson-rose, light crimson or crimson, 5-pouched at the base; lobes 5, 1-1.3 cm. long, 1.5-2 cm. broad, rounded, emarginate. Stamens 10, unequal, 1.2-2.3 cm. long; filaments glabrous or rather densely puberulous at the base. Gynoecium 2-2.7 cm. long, shorter than the corolla; ovary conoid, 3-5 mm. long, 5-6-celled, densely hairy with branched, brown hairs, eglandular; style glabrous, eglandular.

Rhododendron yakushimanum Cultivars

JIM VINCE

The first *yakushimanum* crosses were made in Waterer's nurseries in 1951, using *yakushimanum* as the seed parent. It was generally agreed that, with the coming of smaller gardens, a smaller less vigorous growing rhododendron was needed. Therefore, it was thought that in most cases by using *yakushimanum* as one parent and the smaller, more compact hardy hybrids as the other parent we could bring this about. The first set of these hybrids were, as expected, rather a mixed lot with a restricted colour range, mainly white and pink to rose. The habits were rather odd to say the least, from good compact plants to a somewhat loose untidy plant. It was with the second generation in-bred from these crosses some seven to eight years later that better results came, the plants being compact and nearer *yakushimanum* in shape, size and leaf formation, and with better colours.

In our first crosses we used plants such as: 'Corona', 'Britannia', 'Doncaster' and 'Fabia'. In 1957 came the use of crossing such plants as (*yakushimanum* × 'Britannia') × (*yakushimanum* × 'Fabia Tangerine'); (*yakushimanum* × 'Britannia)' × 'Britannia'. All the time, the object in mind was dwarf compact habit, good leaf formation and, of course, hardiness. At the same time we hoped that our colour breaks would be better and of a wider range. In 1958 we added to the range of plants to be crossed with *yakushimanum*, to include 'Jalisco', Loderi, *griersonianum*, 'Vega', 'Elizabeth', 'Vulcan', *eriogynum* and many others. Whilst using the taller growing cultivars and a few not so hardy hybrids we were able to extend the colour range and, by back crossing again with hardy hybrids and our newly raised compact *yakushimanum* hybrids, still keep the plants compact and hardy. With plants being crossed, reversed crosses and selfed, some twenty years of work has been put in to the raising of our *yakushimanum* hybrids. Mr Wiseman, who made the first crosses of *yakushimanum* at Waterers, was always looking for the perfect rhododendron and he came very close to this when he named one 'Percy Wiseman'.

In our first batch of crosses in 1959, we found three we thought very good and named:

Bambi	*yakushimanum* × 'Fabia Tangerine'. Compact habit, dark leaf with good indumentum. Soft pink tinge with yellow, almost red in bud, flowering early May.
Pink Cherub	*yakushimanum* × 'Doncaster'. Rounded habit, good leaf and close formation. Rose pink paling in centre. Flowering mid to end of May.

From these first crosses we also chose at a later date:

Shrimp Girl — *yakushimanum* × 'Fabia Tangerine'. Low spreading habit, buff indumentum, soft salmon pink. Flowering early May.

Then in 1960, we selected:

Bashful — *yakushimanum* × 'Doncaster'. Compact, slightly flat habit. Leaf slight silvery underneath. Light pink with bronze eye. Flowering early May.

Sneezy — *yakushimanum* × 'Doncaster'. Light green foliage, compact habit. Rose red with red eye. Flowering mid to late May.

In 1961 came:

Doc — *yakushimanum* × 'Corona'. Rounded habit, glossy green foliage with indumentum. Light pink passing to white, flowers slightly frilled in compact truss. Flowering late May.

In 1962:

Grumpy — *yakushimanum* × unnamed hybrid. Good low habit, dark green foliage with good indumentum. Pale pink and white. Flowering early May.

In 1964:

Percy Wiseman — *yakushimanum* × 'Fabia Tangerine' (selfed). Slightly upright growth good green foliage. Lovely mixture of pink and cream passing to creamy white. Flowering mid to late May.

Dopey — (*eriogynum* × 'Fabia') × (*yakushimanum* × 'Fabia Tangerine'). Very tight habit dark green foliage. Good dark red. Flowering mid to late May.

In 1965:

Golden Torch — 'Bambi' × ('Grosclaude' × *griersonianum*). Rounded tight habit, light green foliage. Salmon pink in bud to chrome yellow. Flowering late May.

In 1967:

Hoppy — (*yakushimanum* × unnamed hybrid). Wide spreading habit, good dark green foliage. Pale lilac passing to white with tinge lilac. Flowering in May.

In 1968:

Chelsea Seventy — *yakushimanum* × ('Jalisco Eclipse' × 'Fusilier'). Compact habit, good foliage. Salmon shaded carmine rose, trumpet-like flower. Flowering mid to late May.

Sparkler — (*eriogynum* × 'Fabia') × (*yakushimanum* × 'Britannia'). Compact habit, very good foliage. Light crimson red. Flowering in late May.

Starshine — (*yakushimanum* × 'Britannia') × (Loderi × *yakushimanum*). Compact habit, light green foliage. Clear soft pink. Flowering end of May.

In 1969:

Titian Beauty — (*eriogynum* × 'Fabia Tangerine') × (*yakushimanum* × 'Fabia Tangerine'). Good tight habit, smaller foliage dark green. Geranium Lake. Flowering early June.

In 1970:

Molly Miller — (*yakushimanum* × 'Fabia Tangerine'). Small tight habit good foliage. Cream flushed apricot. Flowering in May.

Sleepy — (*yakushimanum* × 'Doncaster' (selfed)). Slightly rounded habit, dark green foliage. Pale mauve, brown spot upper lobe. Flowering in May.

Venetian Chimes — (*eriogynum* × 'Fabia') × (*yakushimanum* × 'Fabia Tangerine'). Good habit, light green foliage. Scarlet. Flowering in late May.

Timothy James — (*yakushimanum* × 'Fabia Tangerine' (selfed)). Good compact habit, dark green foliage. Soft pink, yellow flash, touch of apricot. Flowering in May.

Sweet Sue — (*eriogynum* × 'Fabia') × (*yakushimanum* × 'Fabia Tangerine'). Good compact habit. Soft pink, deepening with open spotted red upper lobe. Flowering mid May.

Woodpecker — (*yakushimanum* × 'Britannia') × *griersonianum* × 'Jalisco'). Taller growing, good foliage. Primrose yellow. Flowering end of May.

With regard to the hardiness of these cultivars, we have moved these plants around the nursery and have had them on trial for seven years. If, during bad weather, any showed signs of damage they were

taken away from the trial area, and we were left with those that had proved their worth to us. The hardiest ones are 'Bashful', 'Grumpy', 'Doc' and 'Dopey', but in our conditions all selected plants have done very well. All these have been registered with the Royal Horticultural Society.

We are still working with *yakushimanum* and hope to produce a few more plants worthy of cultivation, still with the main thought in mind, i.e. colour range, hardiness, good compact habit and good foliage.

Glenarn, Rhu, Dunbartonshire

Notes on some big-leaved crosses made here.

A. C. GIBSON

1. *Sinogrande* × *grande*, 1934. This is intermediate in growth and appearance between the two parents, and so are the flowers. Two at least of our remaining plants put on chocolate coloured growth and flower buds, the rest are green. Slow to flower from seed and easily spoilt by a few degrees of mid-March frost. Not one to propagate. Tallest plant 25 ft.

2. *Sinogrande* × *hodgsonii*, 1934. 'Ronald' A.M. 1961. The *hodgsonii* blood makes this one somewhat more tough. The leaf is inclined to be brittle (like *sinogrande*) and it likes a modicum of big tree shelter. The flower is a corker, opening the deepest pink and fading to creamy pink as it ages, and there is nothing much to choose among the 4 plants still left here after give-aways at the prick-out stage. Tallest plant circa 20 ft.

3. *Lacteum* × *grande*, 1934. The offspring defied all colour bar anticipations, and one and all turned out a very fine pink. The leaf has the *lacteum* influence, but the few plants left here are vigorous growers, unlike *lacteum*. We cannot detect a hint of *grande* in any. The flower truss is bigger than *lacteum*, and is very compact. Nowhere is there that slightly corpsy look of *grande*, especially in the flower trusses, although a few of the originals tended to be very sparse in habit, and duly paid the penalty. One of our remaining plants was blown out in the 1968 hurricane. We cut 8 ft or so off its tops and winched it up. It has never looked back. Height – biggest plant 20 ft.

4. *Eximium* × ? *hodgsonii*, 1935. 'Essa'. A chance seedling which was spotted when the seedlings from one seed pod of *eximium*, were being pricked-out. It has paid a dividend. About twice the height of its contemporary brethren and most handsome. It has a more pointed leaf, but the new growth still has the furry indumentum on the top, so typical of *eximium*. It flowers vigorously and started to do so before its impeccable *eximium* class mates. A not unattractive pink. Height about 18 ft.

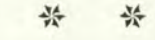
5. *Falconeri* × *sinogrande*, 1937. We made this cross here, independent of the famous Rothschild 'Fortune'. In this case we think of plants "of Majesty". This cross can almost rival the *sinogrande* parent in the sheer size of leaf. It is slow to flower from seed and, as is usual with these big leaved rhododendrons, one cannot expect continuity of flower every year. None of the plants here have that envied touch of yellow, but the trusses, always rather sparingly set, are near the size of soccer balls. Tallest plant perhaps 25 ft.

6. *Falconeri* × *macabeanum*, 1951. This one we think is among the *elite*. The parents were impeccable, our own yellowish *falconeri* × a very fine yellow *macabeanum* (given to us by the late Lionel de Rothschild at 3 ft high). No more justifications needed! Of the resulting seedlings (many found their homes in various gardens) we are now left with 5 only.

The leaf structure resembles *falconeri*. Two at least of the plants remaining here started to flower at a young age, and just won't stop. Dead-heading (we call it de-lousing!) and all. They persist on flowering again and again. The flower is rather like a very yellow *macabeanum*, with large *falconeri* leaves. Height 12 ft or more.

7. *Arizelum* × *macabeanum*, 1951. This is a very fine foliage affair with robust growth, kept down to ground level. There is not any obvious evidence of intervention by *macabeanum* either in leaf or flower. The flower is just a very good and large white form of *arizelum*. A fine piece of Victoriana! Height 15 ft.

8. *Sinogrande* × *macabeanum* (and vice versa), 1955. The best of these have superb leaves, but the flowers disappoint on two counts – little of the yellow of *macabeanum* has come through and the flowers are easily damaged by winter frost if this exceeds 10°. Several have not yet flowered. Biggest plant about 10 ft. Most have a plum pudding habit of growth, in contrast to the tree-like habit of both parents.



A Historical Note on *Rhododendron* 'Hotei'

PHILIP NELSON

The yellow rhododendron, 'Hotei', has attracted considerable attention in the Pacific Northwest of the United States, and more recently at the Rhododendron Show in London. A note concerning the origin of this plant is therefore appropriate.

The story begins with Fred Rose, head gardener to Lord Swaythling at Townhill. Writing in the 1949 *R.H.S. Yearbook* Mr Rose relates that in 1939 a number of well-thought-out crosses were made and the seed collected. Most of the seedlings from these crosses came to naught because of the subsequent preoccupation with the war effort and the inability to care for them. However, Mr Rose also said that a number of the seeds had been sent to a correspondent in Seattle, Washington.

That correspondent was Halfdan Lem, a nurseryman of considerable renown in Seattle. Among the hybrids that Mr Lem grew from the seeds supplied by Mr Rose, was a *wardii-souliei* cross which was subsequently acquired by Karl Sifferman.

Karl was intent on producing a deeper yellow. He reasoned that the best route to that goal would be to add some orange from *R. dichroanthum* to the best yellow that he had at the time, namely the *wardii-souliei* hybrid. 'Goldsworth Orange', with its parentage of *R. dichroanthum* and *R. discolor* seemed a logical choice for the other parent of the cross, first because of the colour factor, second because of the fine leaf structure of *souliei*, and lastly because of the large widely open flowers of *discolor*. This cross was made in 1953.

The seedling grew to the flowering stage in a patch of ground at the Gulch Gardens Nursery at Suquamish, Washington, owned by my father, the late Ben Nelson. During this growing time, the patch was guarded by the Japanese god, Hotei, who smiled benignly from his niche on the side of a nearby building. Karl gave the plant to my father who started to propagate it in 1962.

Ben Nelson passed away in 1969. 'Hotei' was introduced commercially in the Pacific Northwest in 1971.

Disorders of Rhododendrons and Camellias

AUDREY V. BROOKS
(*Plant Pathologist, R.H.S. Garden, Wisley*)

Many of the queries received by the Plant Pathology Department at Wisley concern troubles affecting rhododendrons and camellias. These are of three main types which can be grouped as (i) superficial growths, (ii) disorders and (iii) diseases. The first two groups cover troubles which can normally affect both rhododendrons and camellias but most of the diseases are specific to the type of host and those affecting rhododendrons will not harm camellias and *vice versa*. In this article these various troubles in the first two groups are described and some recommendations given for their prevention or control. Diseases will be covered in a later article.

1. SUPERFICIAL GROWTHS

a. *Algae*

Growths of green algae sometimes form such thick greenish deposits on the surface of rhododendron and camellia leaves that they look very unsightly. As the growths are superficial they do not really harm the leaves but of course they may have a smothering effect so that the leaves are unable to function in the normal manner. The green algae develop on leaves of shrubs growing in very humid or sheltered positions and unfortunately there is no treatment which can be carried out to check their growth on evergreen shrubs. Where only one or two small shrubs are affected it is often possible to wash off the algae with soapy water followed by rinsing with clear water, but this is not feasible in a large garden. Where the affected shrubs are overgrown or surrounded by dense trees, opening up of the area and judicious pruning of the shrubs so as to provide a good circulation of air around them, should prevent further development of green algae.

b. *Lichens and mosses*

The lichens which grow on trees and shrubs are of two types, the crustaceous ones which appear as thin crusts growing flat on the bark and the foliaceous types which are attached at the base and give the impression of leafy or bush-like plants. Both types can be seen in Fig. 5, though the latter are more prominent and could easily be confused with mosses which also colonise trunks and branches. Such mosses may form large loose dark or yellowish green coarse tufts or may be densely matted and finer. Others appear as compact green cushions.

Fig. 5

Lichen on a deciduous azalea twig.

Such growths develop on vigorous plants where the humidity is high, but in general, they are more inclined to grow on plants which are lacking in vigour, particularly those which are already beginning to die back. In these circumstances the growths are often unjustly blamed for the poor condition of an affected plant!

Lichens and mosses can be killed on deciduous azaleas by spraying during the dormant period in December or January with a solution of lime sulphur made at the rate of 1 pint in 2 gallons of water. Unfortunately there is no safe spray which can be used on evergreens to control these growths and the only worthwhile treatment is to try to encourage vigour in them by feeding, mulching and watering and applying a foliar feed. Once an affected plant has started to grow away well, it is usually possible to prune out badly affected shoots.

2. DISORDERS

a. *Frost damage*

Even the hardy types of rhododendrons and camellias can be affected by frost but the symptoms produced are not always recognized as such. Two types of symptoms may occur as follows:

(i) *Leaf distortion.* Young soft leaves may be injured by frost while still in the bud or just emerging from it. Usually only small areas of the leaves are damaged, but as these are then unable to grow at the same rate as those which are uninjured, the affected leaves become more and more distorted as they increase in size. They may be merely

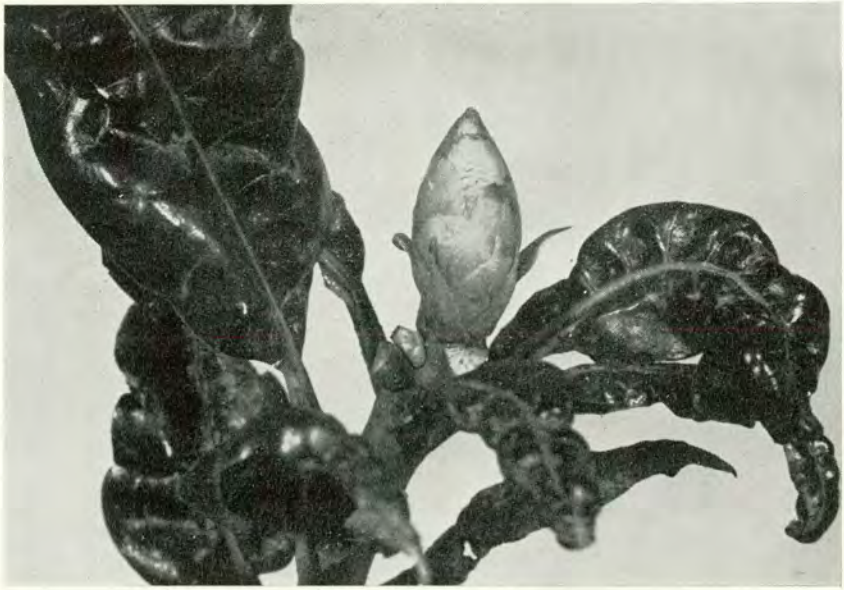


Fig. 6

The effect of autumn frost on a rhododendron leaf-bud.

wrinkled or curled or they may become narrow at the tips or have a one-sided appearance. Very occasionally holes also develop in the leaves, often showing as a line of small holes parallel to the main vein. When the affected leaves are clustered around the bud, as in Fig. 6, this indicates that the leaves were injured in the previous autumn, but if they are at the base of the current year's shoot, they would have been damaged in the spring. Obviously once the trouble has occurred, nothing can be done to improve the condition of the leaves, but they usually become less noticeable as new healthy leaves develop.

Very occasionally distortion of leaves is not due to frost damage but occurs as a result of irregular growth due to faulty root action, but in these circumstances, the affected leaves are usually distributed at random on a shoot.

(ii) *Bark Splitting.* Splitting of the bark may occur on fairly young shoots (Fig. 7) but more frequently the trouble develops towards ground level. This type of damage can cause serious trouble as it can lead to dieback of an affected shoot or the complete death of a plant when the damage occurs around the collar. Unfortunately the bark splitting may not be found until other symptoms such as discoloration of foliage and dieback of shoots are noticed which may be weeks or even months after the damage has occurred. By then the bark will have started to curl back and dry out and it may be too late to save the affected shoots. However, an application of a protective paint at this stage to prevent the entry of wound parasites is advisable, and if the wounds are not too large they may start to heal over naturally so that the shoots will recover.

Fig. 7

Bark-split on a young rhododendron shoot.

If dieback does occur, the shoots should be cut out to a point an inch or so below the split. If the splitting of the bark is noticed soon after the damage has occurred, the wound should heal if the affected area is bound round with grafting tape or even sticky tape.

b. *Faulty root action*

This term can cover a multitude of troubles, and it is best dealt with under the following four headings:

(i) *General neglect.* Discoloration of foliage, often accompanied by dieback of shoots, commonly occurs on shrubs which are neglected. In general, the unhealthy leaves which may be irregularly distributed over an affected plant, show brown or yellowish patches, before becoming completely discolored and falling prematurely. On rhododendrons purplish blotches may also develop and on an affected plant the leaves, whether green or discolored, are inclined to hang downwards as if wilting. Such symptoms can be due to too wet or too dry soil or to malnutrition, and the best treatment is to improve the soil conditions. A mulch of manure, compost, etc., should be applied to

conserve moisture and watering should be carried out both when there are cold drying winds and when the weather is hot, before the soil dries out completely. This treatment is just as important on heavy soils as on light sand as the former type can dry out into hard solid lumps in dry weather.

In wet weather, heavy soils tend to remain waterlogged for fairly long periods and in such circumstances it is advisable to lay a line or two of agricultural drains. If it is not possible to drain in this way, the texture of the soil should be improved over the whole bed and not just in the planting holes otherwise these will act as sumps.

With regard to malnutrition, a plant may be starved if the finer roots are killed by adverse soil conditions, but a mature shrub may suffer merely through a shortage of food materials in the soil. In very poor soils some form of feeding is usually necessary to maintain rhododendrons and camellias in good health and vigour. In addition to well decayed organic matter mixed thoroughly into the soil at planting time, it may prove beneficial to give a liquid feed when the shrubs are established satisfactorily. Mature shrubs may be fed with inorganic fertilizers (see *Modern Rhododendrons* by E. H. M. and P. A. Cox; 1956, Nelson, and the *R.H.S. Rhododendron and Camellia Year Book* 1967), but the soil should be moist before application and the fertilizer should be watered well in.

A shrub which has been neglected for several years or has suffered from severe drought may take some time to recover even after amelioration of the cultural conditions and in fact may show no signs of improvement until the following year. Recovery, however, may be hastened by applications of a foliar feed during the growing season as food materials applied in this form are absorbed fairly rapidly by the leaves thus giving the plants a quick boost in vigour. This in turn will encourage the development of new roots to replace those which have been injured or even killed by adverse soil conditions. Any dead wood in a shrub should, of course, be cut out back to clean living tissues and the larger wounds should be given a coat of a good wound paint.

(ii) *Oedema.* Apart from discoloration of foliage and dieback of shoots another symptom may develop on camellias affected by waterlogging. Pale brown corky patches or even ridges develop on the lower leaf surfaces of affected plants. This trouble is known as oedema and can also be caused by too humid an atmosphere so that plants under glass may show symptoms when the ventilation is poor.

Once oedema has occurred the affected leaves should not be removed as this will only make the trouble worse. No special treatment can be given and the remedy is to maintain drier conditions both in the air and the soil; with correct cultural treatment the affected plants should recover in due course, but the leaves with corky patches will remain in this condition for the rest of their life.

(iii) *Bud drop.* A common trouble of camellias is bud drop in the spring just when the flowers should begin to open, and in severe cases there may be a carpet of buds beneath an affected bush. This trouble is nearly always due to too dry soil conditions at the time when the flower buds are beginning to develop in late August or early September. It is essential, therefore, to mulch and water so that the soil does not

dry out in early autumn. Once the buds have started to fall there is nothing which can be done to stop the trouble and they may all fall off within a week or so.

In less severe cases or if a dry period occurs in early spring, the flowers may start to open but turn brown and fall when half open. In rhododendrons the buds or flowers are more likely to turn brown and fail to open than actually to fall.

(iv) *Chlorosis.* This trouble shows as yellowing between the veins and in severe cases the leaves at the tips of the shoots may be almost completely pale yellow. On acid soils chlorosis of the leaves can be due to a deficiency of magnesium, but in addition, older leaves often show orange or purplish blotches between the veins. It is usually possible to restore the green colour to the foliage by spraying affected shrubs with a solution of epsom salts (commercial magnesium sulphate) made at the rate of ½ lb. in 2½ gallons of water to which is added a spreader or even a few drops of a mild liquid detergent. Two or three applications can be given at fortnightly intervals when the plants are not in flower.

Unfortunately a deficiency of manganese can induce similar symptoms on shrubs growing in acid soils and it is not always possible to distinguish between the two, although orange or purple patches do not usually develop on the older leaves when it is manganese that is lacking. If treatment with epsom salts fails, affected plants can be sprayed two or three times at two-weekly intervals with manganese sulphate solution (2 oz. in 2½ gallons plus spreader).

Chlorosis, however, is usually associated with soil conditions that are too alkaline because the food material iron, and to a certain extent, also manganese and magnesium, become unavailable to plants growing in soils of a high pH. It is advisable to find out whether the soil is really suitable for acid-loving shrubs such as rhododendrons and camellias before planting them, and if the soil has a high pH it would be better not to grow this type of shrub. In a garden where the soil is acid, trouble can still arise if an old vegetable garden which has been limed, is taken over for a shrub border, and the soil adjacent to cemented walls or where buildings have been can also be alkaline.

Rhododendrons do best in soils with a pH between 5.0 and 5.5 whereas camellias thrive in even more acid soils. If the pH is higher than these optimum levels chlorosis of the foliage is likely to occur. In these circumstances, acidic materials such as peat or crushed bracken should be dug in to try to make the soil more acid or acidifying chemicals such as sulphur or aluminium sulphate should be raked in (a leaflet giving details of this type of treatment is available from Wisley). Even with these treatments in a soil of pH 7.5 or higher it is unlikely that it will be possible to reduce the pH to as low as 5.5, and it will then be necessary to apply annually a proprietary product containing chelated compounds or to use fritted trace elements. These chemicals contain the three food materials in a form in which they will remain available to plants in highly alkaline soils.

Camellias in a Cornish Garden

NIGEL HOLMAN

A criticism often made of Cornish gardens is that if you removed the rhododendrons, magnolias, and camellias, there would be little left! An exaggeration, but containing too much truth for comfort. In the fifteen years that I have been looking after the gardens at Chyverton, I have done my best to neutralise the acid of the critics by ever widening the range of genera in the garden but, despite this, it is still dominated by these three. I make no apology for this, as one of the basic laws of gardening is to grow that which you can grow well, and there is no doubt that Cornwall has both climate and soil suitable for these three genera.

In *Rhododendrons* 1973, I wrote how honey fungus led my father to plant magnolias, which appeared to him to be resistant to the fungus, in preference to rhododendrons, which are highly susceptible. However, magnolias are not totally immune, as over the past year or two, we have lost a number of *M. wilsonii* and a big *M. tripetala*, all of which showed all the symptoms of having been killed by honey fungus. A genus totally unaffected by honey fungus in this garden is *Camellia*.

This resistance should become a subject for research. I have lifted camellias in areas riddled by the fungus; the "bootlaces" were found running through the root system, but making no direct contact with the roots. I presume that the roots of camellias exude a chemical substance that make them unattractive to the mycelium: I have been told that honey fungus is not found in soils with a very low pH, so this substance could be an acid. This resistance is not found within some of the other genera that make up the family Theaceae, as honey fungus has appeared to kill plants of *Stewartia* and *Schima* in this garden.

This immunity is far from being the sole reason why camellias rank high in my future plans for the garden. Handsome foliage, happy in full sun or dense shade, and a flowering season that covers all the winter months. What more can you expect from a genus? Add a wide colour range, from white through all shades of pink and red, and the camellia becomes a paragon amongst all the trees and shrubs that we grow in our gardens. Sadly this is not always the case.

Before the last war camellias were not the popular plants that they are today. Nurserymen's lists were short, and most of the camellias included were those which had proved to be first class plants in the gardens of southern England. Now the situation has changed – camellias have become fashionable, not only here but in the United States and Australasia. Many new cultivars have been raised in California, and have poured across the Atlantic, each one with larger and more

exotic blooms than the one before. Many have been propagated and shown to the public, before their suitability for our climate has been tested.

The ordinary gardener looking for something really exotic that he can grow in his garden, buys a plant and puts it out in his garden in conditions very different from where it was raised. After a year or two of waiting he discovers that his swan has turned into a duck; either its half-size flowers are turned brown by a drop of rain, or all the flower buds drop at the first touch of frost in the autumn.

The result of this could lead eventually to the camellia returning to obscurity as a garden plant. When it was first introduced from Japan early in the 18th century, the camellia was considered as only suitable for a stove-house; over the next hundred years there was a gradual movement from the stove to the cold house, and then out from under glass to the sheltered wall, until eventually, circa 1860, a camellia was planted in the open at Tregothnan. It was then discovered that the camellia was a hardy plant, and that, as long as one planted the right cultivar, it would flower as freely in the open as under glass, and with perfect blooms.

The right cultivar! That is where the problem lies. Amongst the multitude that have come on to the market in the last twenty-five years, are some splendid garden plants, but there are also far too many that do not stand up to our weather, and if we are not careful, the camellia will regain its reputation as a greenhouse shrub.

To stop the rot, I would like to see the R.H.S. produce a booklet on camellias similar in form as their handbooks on rhododendrons, in which all the cultivars in cultivation in the U.K. would be listed. Each one would have an evaluation of its performance in our conditions; those that do as well in the open as under glass throughout the camellia areas of the country, would be classed as A, followed by a steady progression through various codes, as in the Rhododendron Handbooks, until you end up with those species and varieties that are a failure even in the balmy south-west, and are only suitable for the greenhouse. A new camellia untested in our climate would have a category of its own.

If such a booklet was produced, and the trade was to list the camellias in their catalogues under the various classes, the buyer would know whether he was taking a gamble, or betting on a certainty.

Over the past eleven years I have been making a study of the performance of various species, their varieties and hybrids, in my own garden, but as the climate of the south-west is as good as, if not better than any other area of the British Isles for growing camellias, my personal ratings are of little value to those that garden in the north.

What am I looking for in my camellias?

First, that they survive with no artificial overhead protection. Eliminated under this section is *C. hongkongensis*, very much a greenhouse species; killed by the '62/63 winter were *C. taliensis* and *C. tsaii*, but these had been recently planted, and well established plants in other Cornish gardens survived. I replanted *C. taliensis* six years ago, and it is looking well, but has yet to flower.

Killed in my father's day (pre-1959), were open ground plants of *C. reticulata* 'Captain Rawes', but a specimen planted by my father in 1935 on a sheltered wall, seems unaffected by our weather, and flowers freely. There are some magnificent open ground 'Captain Rawes' in some Cornish gardens, but these gardens lie to the south of Chyverton. I class this camellia as needing wall protection except in the mildest gardens of the south-west.

'Captain Rawes', introduced from China in 1820, is a form of *C. reticulata* that is not found in the wild, but is a garden form, developed over the centuries by the Chinese gardeners of Yunnan. Since the war, more of these have been introduced into cultivation in the west from Kunming, the capital of Yunnan. Many of these are now growing in Cornish gardens; I am growing in a sheltered part of the garden, 'Paochucha' ('Noble Pearl'), 'Tataochung' ('Crimson Robe'), 'Tzepao' ('Purple Gown'), 'Shitzetou' ('Lionhead'), 'Robert Fortune', and 'Professor Tsai'. Of these, the only real success has been with 'Paochucha'. Planted 8 years ago, this has flowered for the past four years; in 1973 it was magnificent, with one flower 7½ ins. across, compared to 7 ins. for the biggest flower ever measured on our 'Captain Rawes', and I see this cultivar as a splendid addition to the range for the milder gardens of the south-west. Of the remainder, 'Tataochung' flowers regularly now, and is certainly worth growing, which is more than can be said for the rest, at least in this garden. It may be that I have them in the wrong place; Colonel Durrant, writing on these Kunming *reticulatas* in New Zealand, stresses the importance of growing them in full sun. Here they are in shade, and this could be the cause of the 100% bud drop with some. For the past two years I have been intending to move them, but like so many tasks in the garden, it will be done tomorrow! The one that must be given a better home is 'Tzepao'. This managed to retain one bud in 1972, which resulted in the most beautiful flower, small, but of a depth of colour one only associates with roses, a black-purple velvet.

I have noticed that "bud drop" with these is related to the size of bud in the autumn. It is the smaller, less well developed bud that aborts. If one compares the various plants on September 1, 'Paochucha' will have the most mature, followed by 'Tataochung', but the others will have much smaller buds. Using this system, I can now tell whether any camellia, of any species, or hybrid, is liable to lose its buds. This past year, I purchased, at high cost, one of the new *reticulata* hybrids from the States. It arrived in October from the nursery covered in flower bud. By their development, I realised that I need not disbud it – it would do it itself; by December not one bud remained. This past year, another of these *reticulata* hybrids, 'Francie L.' set bud for the first time, but with this one the story was different. The early development of flower bud encouraged me, and sure enough, every bud remained to produce pink flowers of exceptional quality in April. An outstanding *reticulata* seedling from America is 'William Hertrich', which goes into the winter with great, fat buds glued to the branch.

This close relationship of the early development of flower bud with bud drop was well illustrated by the winter of 1962/63. This led to a

catastrophic bud drop, which, from records published by the R.H.S., was heavier at Chyverton than at Wisley. One of the few varieties that had no bud drop, was *C. japonica* 'Nobilissima'. In a normal season, this camellia starts flowering in December, so that the flower-buds were mature before the frost set in.

The 1972 season was poor for camellias. There was a light set of bud, followed by a heavy bud drop. This was caused by the poor growing season in the spring, leading to late growth and development of flower bud. Again, certain cultivars flowered normally, including all the *williamsiis*, and the early flowering *japonicas*. These can stand lower temperatures in the spring before growth is retarded. This is the reason why the *williamsiis* are proving to be outstanding in the north. *C. reticulata* develops earlier than *C. japonica*, and it is no surprise to me that 'Captain Rawes' is such a success at Crarae, in Argyll. I gather that *C. japonica* is a failure in the north, due, I suspect, to a critical lack of day-length in the spring. However, I think that some other early developers, such as 'Nobilissima' should be a success. I have noticed that most of the American cultivars of *C. japonica* are late developers, due, I presume, to the difference in climate between California, where the majority are raised, and the British Isles.

All this leads to the second criterion by which I judge my camellias; not only must they survive, but also flower. The third is that the flower should be good in form and size compared with its counterpart under glass. In this respect, the garden forms of *reticulata* fail, as one cannot expect to rival in our Cornish gardens the staggering effect that they have in the temperate house in the Savill Garden at Windsor. But despite this limitation, I hope that more and more of them will be planted in our milder gardens, so magnificent are their blooms when they do flower.

Very much more reliable is the wild form of *C. reticulata*, introduced by George Forrest from Yunnan in the 1920's. This is fully hardy in the south-west, being a strong grower and a free flowerer; unlike the semi-double to double flowers of the garden forms, this has single flowers, ranging from pale pink to deep carmine-rose.

Plants of the wild form in the open were undamaged here in our last severe winter, 1962-3, when the temperature fell to –10°C., and I have seen it looking well and flowering in the Valley Gardens at Windsor, so it appears that it can be grown successfully in the open throughout the south.

Other hardy species grown here include *C. cuspidata*, *saluenensis*, *sasanqua*, and the backbone of any collection of camellias, *C. japonica* and its cultivars.

C. cuspidata, with small, white flowers, is a delightful species that I would like to see more widely grown. At Caerhays it was crossed with *C. saluenensis* to produce 'Cornish Snow', an improvement on either of its parents. *C. saluenensis* has been eclipsed by its hybrids with *C. japonica* (× *williamsii*), so that I think it is only worth growing for botanical interest or for hybridizing.

C. sasanqua is poorly represented in this garden. Before the war, my father planted a number of this species, but unfortunately these were a non-flowering form; there is still one remaining, forty years old and

yet to produce a flower. Having seen them growing like weeds in Portugal, he considered that they needed a hotter sun than Cornwall could supply, and condemned the species. However, *C. sasanqua* 'Narumigata', with its sweetly scented, white flowers, produced in late autumn and early winter, is well worth growing, and there are now many others that appear to be a success, but I have yet to try them here. Flowering from October to January, the *sasanquas* are only suitable for the milder parts of the country.

C. japonica is a remarkable species – almost unrivalled in the plant kingdom for the number of its cultivated forms, now running into thousands. What I am looking for in my *japonicas* is freedom of flowering, and a resistance of the flowers to wind and rain.

There have been various classifications of flower types over the years. I think the simplest method is to split them into four:

1. Single. One row of up to nine petals; stamens prominent.
2. Semi-double. Two or more rows of petals; stamens prominent.
3. Anemone and paeony. One or more rows of petals; central mass of petaloids and stamens.
4. Doubles. Many layers of petals; stamens few or absent.

No classification is immovable, and there is likely to be some movement both ways between Classes 2 and 3, and 3 and 4 according to the numbers of stamens and petaloids produced. This is, I think, an effect of the amount of heat during flower bud initiation; more heat leads to less petals, with a corresponding increase in the number of stamens or petaloids. A result of this is that a flower grown outside may be in a different class from a greenhouse-grown flower of the same cultivar, and is also the reason why so many cultivars of *japonica* raised in California change their form when they cross the Atlantic.

Tastes differ, and with such a range of choice, one hesitates to recommend, but camellias that have proved outstanding over the years in this garden include:

Class 1 (*Singles*). 'Alba Simplex', exceptionally weather-resistant white; 'Spencer's Pink', an old Australian variety recently introduced into this country, pale rose (very much better than 'Furoan' here); 'Hatsu-zakura', rose-pink with petaloids; 'Yoibijin', very early pink, prostrate habit; 'Jupiter', carmine red, very similar to 'Sylva', but differing in the stamens having thick yellow filaments, compared with the thin, red-flushed filaments of 'Sylva'. The only one of the above of which I have doubts is 'Yoibijin', as the flowers have poor resistance to our weather, but it was outstanding in 1973.

Class 2 (*Semi-doubles*). My father's favourite camellia was 'Adolphe Audusson', and there must have been over twenty mature specimens in the garden when I took over in 1959. Introduced in 1877, I confirm my father's choice – the most reliable of all the *japonicas* in the garden. Another old-timer is 'Lady Clare'; despite the flowers having poor weather resistance, its semi-prostrate habit and freedom of flowering keep it in the top-rank. One of the earliest of the *japonicas* to flower is 'Gloire de Nantes', in December in some years; with soft pink flowers, this is one of my favourites.

All of these are old *japonicas* that are well established in the garden. I have a number of the newer cultivars coming on of which I have high hopes, but they have yet to prove themselves over the years. I have been looking for a reliable semi-double white; 'Grandiflora Alba' produces magnificent flowers inside the bush where they are well protected, but are too soon turned brown by a drop of rain if exposed; however, 'Auburn White', as seen at Trewithen, has flowers of equal quality, and a greatly increased weather resistance.

Class 3 (*Anemone and paeony flowered*). As with the semi-doubles, it is the old cultivars that dominate in the garden. Last year, an old plant of 'Nobilissima', was in flower continuously from December to April. 'Blackburniana', (a very old variety close to 'Altheaflora'), a deep red, is one of the freest flowerers, equalling the *williamsiis*. This past year it averaged three buds per growing point.

Of the newer introductions, 'R. L. Wheeler' is outstanding; very free flowering, with flowers of equal size and quality in the open and under glass. I dislike large flowers in *japonicas*, but I can live with this one. A cultivar becoming one of my favourites is 'Tomorrow'; although listed as a semi-double to paeony, it is one of those cultivars that can change form in the open, as I get paeony to double flowers. Of all of these new introductions, my number one is 'Marjorie Magnificent'; it could well be that it came here incorrectly named, as it bears no resemblance in any respect to the illustration of 'Marjorie Magnificent' in *Camellias in America*, (Harold Hume, 1955), but whatever it is, its small flowers, white flushed peach, have a charm of their own, for me.

Class 4 (*Doubles*). Here again, the newer varieties have yet to prove themselves. There are some really old trees of the Victorian era in the garden which, sadly, are only tentatively named. The most remarkable of these, which Charles Puddle thought could be 'Valtevaredo', has flowers for eight months of the year. Flowering as a double in this garden is 'Elegans' (normally a paeony form); this is because it is growing in dense shade under beech trees. These are remarkable for their lateness; in full flower in May and June, they still make a show well on into July.

My father imported a number of cultivars of *C. japonica* from Portugal. These took years to get started, and still look unhappy. I discussed them with one of Portugal's leading gardeners, Miss Tait. She suggested that my soil was too acid, the soil in Portugal being neutral. This could be a pointer for those trying to grow camellias on soils of high pH in this country – use a Portuguese rootstock.

All the *japonicas* that I have mentioned are good garden plants, but few are the equal of the hybrids raised from *C. japonica* × *saluenensis*. When this cross was first made at Caerhays in the 1920's, only a single form of *C. japonica* was used, and so all the original *williamsiis* are singles. Very free flowering, and with the added bonus of shedding the flowers as they go over, they are all first class garden plants; the only disadvantage that they have in this garden is that their flowers are meat and drink to the birds. In most springs, even on our largest plant, which is about 20 ft × 20 ft, it can be hard to find a perfect

flower. I am told that they are going for the nectaries, which are very rich in protein, and that the birds are building themselves up for the breeding season; the worst offender here is the long-tailed tit.

These single *williamsiis* are so well known that I will not say anything more about them except that it appears that they have an exciting future for breeding. I am thinking of 'Leonard Messel' (*C. reticulata* 'Captain Rawes' × *C.* × *williamsii* 'Mary Christian'), surely one of the finest camellia hybrids yet raised.

Up to a few years ago, the only semi-double *williamsii* in general cultivation was 'Donation'. To show how tastes differ, my father would not have 'Donation' in the garden – he disliked the colour. When Mr K. Wada from Japan visited the garden some years ago, he saw 'Donation', covered in flower, alongside 'Mildred Veitch'. There was no doubt in his mind which he preferred – dear 'Mildred'. What I find exciting is that there are now a lot more rivals threatening to knock 'Donation' off its perch. This is largely due to the work of Mr L. E. Jury in New Zealand. Two of his raising, 'Anticipation' and 'Debbie' are magnificent here, and I rate both of them above 'Donation'; they may not have the freedom of flowering, but their flowers are of a far better quality, and are much more resistant to weather. 1973 was a very poor camellia year, and it was difficult to find 12 good blooms from different cultivars for the big class at Truro Show. One of the 12 in my winning entry was a flower of 'Debbie' that had been fully out for five days, on three of which there had been heavy rain. I think it unfortunate that this cultivar was given the A.M. "as a flowering plant for the cool greenhouse", as its flowers have a greater resistance to weather than any other cultivar, to my knowledge. Other Jury hybrids doing well here are 'Elsie Jury' and 'Elegant Beauty'; this past year, I counted 17 flower buds on one inch of stem of 'Elegant Beauty', and you cannot expect more than that! Another outstanding Jury hybrid is 'Grand Jury' (*C. saluenensis* × *C.* 'Salutation'); still only a baby here, this past year it had some magnificent flowers. I rate these New Zealand camellias a good deal higher than the Waterhouse *williamsiis* from Australia, some of which are disappointing here. From America has come 'Brigadoon', another first class *williamsii*, that I hear is doing very well at Glendoick in Scotland. This is the great advantage with all this group – they flower freely in the north.

To return to English hybrids, 'Citation' has made a very fine bush. As a young plant it was disappointing, because the flowers tended to hide themselves, but over the past year it has really proved itself. 'Inspiration' is magnificent every year, and has the welcome habit of flowering in January when flowers are at a premium. Its flowers are very weather resistant, which is not the case with 'Salutation'; despite this, its flowers, in good weather, are so beautiful that it has a picked place in the garden, especially as it is one of my wife's favourite camellias.

It is these hybrids that I am going to concentrate on in the future. In any year, they pay their rent, and surely that is what we are all looking for amongst the plants that we grow in our gardens.

Devotions and Heresies - Camelliawise

GEORGE AYLING

In 1937, at which time we were ardent rose growers, my wife Dorothy and I went to the Ideal Homes Exhibition at Olympia. In those days nursery firms had gardens in a special section like a miniature Keukenhof. We knew camellias existed but we had never thought about them, very few people did. One of the firms had some plants which perhaps from instinct we recognised as camellias. We fell in love with them at once. Here was a plant which had flowers like roses when there were no roses in bloom and was evergreen into the bargain. We found out all we could about them from the gentleman on the stand and stockpiled this for future action. Then came the war and it was not until 1948 that we acquired our first plant, 'J. C. Williams', which was set under a 'Blenheim Orange' apple tree. Then we began to buy camellias for our small greenhouse where we were growing perpetual carnations but not very well. Our first *Camellia japonica* was 'Adolphe Audusson' and what better start could we have made? After that we brought home plants from R.H.S. shows, sent away for plants, perused catalogues avidly, swapped our greenhouse for a larger one and built two more and even then, as the plants grew, our space was full to bursting, but as Mr Brian Doe said of camellias when our menage was being discussed "They like company".

In the late nineteen forties and early nineteen fifties the camellia renaissance was in full swing. From being one of the most popular flowers at the beginning of the nineteenth century, cultivation of the plant had declined with almost startling rapidity. Various reasons have been put forward for this, such as economic reasons, the industrial revolution and the return of formal gardening. True, the camellia had been grown as a greenhouse plant and in pretty warm greenhouses at that, and it had many rivals in that sphere but we wonder if in fact the reason was that the camellia had become a bore. There were hundreds upon hundreds of varieties, all formal doubles, those with stripes being preferred and all with long and complicated names, but they all looked very much alike, so at the time of the rediscovery of the camellia, this time as a hardy plant, there were, in this country very few camellias to be had. In America they were importing from Japan and a little later a new race of *reticulatas* had been discovered in Yunnan, but over here we still had conditions of austerity, and so stocks had to be raised from survivors from earlier times. Names had in many cases been forgotten and it was not easy to identify cultivars from literature. Some nurseries offered plants in mixture only, others who offered names could not be sure that they were correct, and in many cases they were not.

We suffered from this of course but except in the case of some plants which refused to bloom at all we managed by either giving away the obvious "wrong 'uns" or planting them outside. Then we learnt our first hard lesson, that a camellia with roots frozen hard is a dead camellia. A large pane of glass blew out in a freezing gale and we lost about a third of our plants. We had decided to grow under glass and in pots because in that way we could grow more plants and the blooms would not be sullied by the weather, which often does its worst at camellia blooming time, and when one nursery offered American raised camellias with stronger growth and very large blooms we lost no time in buying 'Debutante' and 'Paulette Goddard', and after we made the acquaintance of Mr Geoffrey Wakefield we became infected with his enthusiasm, grew more and more cultivars from the U.S.A. and even imported them for ourselves.

So far as soils are concerned, all we were sure of was that camellias were calcifuge, liked acid soil and leaf mould and must not go dry. Our own soil is based on heavy clay so we have to buy suitable soil and the best we have ever obtained was some Bagshot sand. We mix one part by bulk of this with two parts of moist peat (whether the peat is sedge or moss does not seem to matter) and add about three-quarters of a part of sand. The sand is a mixture in equal parts of coarse Cornish white sand, coarse river sand and silver sand. For our first potting into six- or seven-inch pots this is all we use but for potting on, we add a handful or two of hoof and horn and possibly a handful of concentrated hop manure. Plants from U.S.A. are always sent bare-rooted to avoid transmission of disease and we start these in six- or seven-inch pots, re-pot after two or three years into eight- or nine-inch pots, after a similar interval into ten-, eleven- or twelve-inch and finally in the case of very favourite or worthy cultivars into fourteen-inch pots or tubs. This gives a plant of up to eight feet high. It can then be pruned back hard after flowering time, root pruned and re-potted in a smaller size. It will take a year or two before it flowers as freely as previously but will give fine flowers. Overpotting must always be avoided. Camellias seem to do well in either clay or plastic pots, perhaps the former gives the roots more air and it is easier to tell when they need water but in plastic pots they may need less water. It must be remembered that camellias in containers need to be always moist but never wet so good drainage is essential.

We usually order our plants from California so that they get here in early November before the bad weather sets in, and after growth has ceased. They always grow away in the following spring and sometimes bloom the next year. It is as well to keep them well shaded in this first year. When we receive plants from nurseries in Britain we like to get them into our own soil-mix as soon as we can, so we practise semi bare-rooting on these, it makes watering easier. If an older plant looks unhealthy and shows no sign of recovery after the usual treatment, we give more shade, less water and no feeding and then remove most of the old soil and give it fresh, and a smaller container. Last year 'Tomorrow's Dawn' in an eleven-inch pot looked as though it was only waiting for the funeral march, but it is now blooming happily in size eight. We have not tried potting in shredded fir bark which is used in

the U.S.A. Another interesting item used there is cotton seed meal, which seems to have a high nitrogen content, but so far as we know, is not obtainable here. We have, however, tried one unusual additive. We read an account in *Camellia Review*, a publication of the Southern California Camellia Society, of how an orange grower had restored his 'Lady in Red' to blooming health by mulching it with oranges. There was some scientific basis for this because citric acid, presumably found in citrus fruits eliminates chlorogenic acid in soil, and is also a mild chelating agent increasing acidity. Our 'Lady in Red' had never flowered so we saved our orange peel, put it through the mincer and applied it as a mulch. It turned into an evil looking blue paste but there was no other result, so orange peel is out. It seems, however, that there may be a case for investigation into the effect that the presence of chlorogenic acid in soil has on camellias.

We do not shade our plants by means of coating the glass or by blinds. We do have strategically placed trees and grow clematis into nets which cover the greenhouse roofs. We believe that camellias like sunshine more than is generally realized and do not suffer so long as they have moisture at the root, the very critical period being when they are making their new growth in the spring. White varieties seem to like sunshine least, but in general it is noticeable that when we do have a warm summer, the wood ripens much better and many more flower buds are produced – 1973 being a case in point. At one time we

tried passion flowers and plumbago inside the houses, but by mid-summer the interiors looked like a green tunnel making even less room for the camellias, so this idea was scrapped in favour of shading from outside.

In our novice days we mentioned very timidly to the manager of the nursery from which we bought most of our plants, that certain cultivars were growing but not flowering. His brows drew together. Someone was criticising his plants! Then he relented and said "You give them a dose of dried blood once a fortnight, not too much, about half a tea-spoonful, and they'll flower". We did and so did they, and we still think that for camellias in containers this treatment between April and October is the best method of artificial feeding.

Camellia diseases and troubles are few. The dreaded flower blight fungus (*Sclerotinia camelliae*), so rampant in southern U.S.A., which causes flowers to turn brown and drop prematurely has never reached these isles. We suffer occasionally from die-back, or root rot mostly on plants from cuttings, and this appears to be caused by overpotting and overwatering. We tolerate the virus which causes yellow streaks in the leaves and variegation of the flowers because this is not transmitted between growing plants, and so long as they are otherwise healthy there appears to be no ill effect.

Many theories have been put forward on the cause of the dropping of buds. We think that one cause may be the failure of the growth to ripen sufficiently for the proper formation of the reproductive organs, so that when daylight shortens and temperature falls and growth ceases, the plant rids itself of surplus material. Lack of water during summer would have the same effect, bearing in mind that in the flowering period the first indication of shortage of water is always the drooping of the blooms.

So far as insect pests are concerned, the occasional green aphis on young growth is little trouble, although the presence of this can be an indication that the plant is not in the best of condition. Scale is a problem under glass, but we find a thorough spraying with malathion in May and September eradicates this. The later spraying also seems to put an end to the browning of the bud scales. We have observed that this persists in odd corners where the spray does not penetrate. We wonder whether this is caused by the same insect responsible for bud blast on rhododendrons.

We do not go in for propagation in the ordinary way. We have neither the need nor the facilities, but sometimes a plant will make a lot of secondary growth round about August, which will never ripen or flower and moreover adds to the height of the plant for no purpose. This is particularly noticeable in the case of hybrids with *saluenensis* in their ancestry. Indeed, we look upon many of these as unsuitable for growing under glass because of this. Even 'Salutation' made foot long shoots with small and sparse foliage but now that it is placed outside, it is a mass of bloom every year. To return to the subject of propagation, our method is to take off this second growth in early November and cut it into suitable pieces which are tied into bundles of six or less. These bundles are then planted as firmly as possible in a

mixture of equal parts of camellia compost and silver sand in an unheated propagator. Depending on the cultivar, a proportion of the cuttings will callus or root. We would mention 'Kramer's Supreme' as the easiest. Quite early in our career we knocked off a half-ripened shoot of 'Souvenir de Bahuaud Litou', our favourite double. We pushed this into the soil near the rim of its parent's pot and rather to our surprise it rooted. We have since repeated this process deliberately and quite often these cuttings root. This leads us to believe that camellias put some sort of hormone or mycorrhiza into the soil in the same way as orchids and therefore we keep some of the soil taken from plants when re-potting, to be used on cuttings.

Now we feel we must mention some of our own ideas and idiosyncrasies. For instance, catalogues sometimes make much of the fact that "the flower drops clean". We think this is all very well so long as it delays its drop for a reasonable period. In the right surroundings a shrub with its spent flowers forming a carpet on the grass round about can be both beautiful and a subject for poetic melancholy on the transience of all things, but a quantity of rotting blooms on the greenhouse floor has little of this attraction. Consider; you are showing a lady round your camellias and she expresses great admiration for a semi-double flower which you suspect is only looking for a chance to descend. She lingers, that is for choice, so finally and reluctantly you cut it and give it to her, keeping it very carefully pointing upwards. Having gained her point, she then turns her attention elsewhere, turns the flower towards the ground, there is a dull plop and when she next looks at it she has a stem, two leaves and a stigma. And so a convert to camellias is lost.

We have been reading a daffodil catalogue where one of the products is described as being "pale whispered lemonade". Fascinating! Camellia catalogues are more conservative. In Britain descriptions are mostly of colour and shape only. In U.S.A. some indications of growing habits are given, and they seem to be wistfully reaching for blue and orange shadings which are, let us say, questionable, much the same as, for instance, the iris growers reached for pink and red shades which they now have. It is to be hoped that this will happen in the case of camellias, and that there may also be the blue and orange or yellow camellias which are averred to exist in inaccessible parts of the world. Another thing which annoys us is the use of the words "camellia pink" or "camellia shape" in describing other flowers. The pink of camellias can be anything from the, shall we say, "whispered pink" of 'Julia France' to the strident tones of 'R. L. Wheeler' and as for shape, as we know the shapes of camellias are manifold and almost endless. Perhaps it is good to know that the fact that there is something called a camellia is being brought to notice. We should be thankful that no pet name has been given to the camellia after the fashion of "Flame Flowers" bestowed on *Phlox decussata*, otherwise we might be reading in the gardening papers advertisements of "Chinese Mallows".

We deprecate the lists of cultivars to grow which appear in horticultural works because in general they come and go with such rapidity. Here we would only say that we would recommend the growing of *reticulatas* and hybrids of *reticulata* only in large greenhouses where

there is an available height of ten feet or more. The blooms are large and wonderful, although the same shade of deep pink is present rather too often, but the habit in general is sparse and so very often is the foliage, which in many cases lacks the waxy shine of *Camellia japonica*. It has to be remembered that *Camellia reticulata* is really a tree and is not its best as a small plant. The *reticulata* crosses with *saluenensis* or × *williamsii* are more compact but need cool conditions. Two we are impressed with are Mr Feather's 'Innovation' and 'Satan's Robe'.

The *williamsii* cultivars do not seem happy under glass but 'Anticipation', 'E. G. Waterhouse' and a newer one 'Jury No. 8' seem inclined to bloom well and grow normally.

Camellia sasanqua is said to require more sun than we get here, although we have noticed them and in particular a "hyemalis" variety 'Showa-no-sakae' making twiggy little bushes and flowering well in the annex to the Temperate House in Kew Gardens where sunburn would be hard to come by. We have grown 'Yuletide' which grew well with tiny leaves and gave very pretty little blooms in January and now attracts much attention each year at that time at a local nursery.

For the above reasons we feel that the mainstay under glass is *Camellia japonica* or more properly its cultivars. The flow of new varieties seems to have passed its peak in the U.S.A. now, and with very few exceptions the latest introductions appear to be an insufficient advance on their predecessors. One has to remember however, that these plants are not imported in quantity and a plant which does not settle down happily because of an unhealthy stock or delay in transit can cause that cultivar to be underrated. It is also a fact that some cultivars do not produce their best flowers until they are quite large plants. Then again plants untrue to name have been distributed in the country of origin, a case in point being the hybrid 'Howard Asper'. We, in common with others, acquired a plant that was alleged to be this, but the results were most disappointing. The true plant has now reached this country and even on a small plant the flowers are glorious. Climate also plays a large part. One autumn we received a plant of 'Finlandia Variegated'. This had a bud which in the following spring opened into a white flower heavily striped with crimson. The following year and succeeding years all the flowers came out a not very pleasing self pink. There was also 'Pink Clouds' which bore flowers in many shades varying from nearly white to maroon. We do not go in for sports very much for two reasons, one being that they often revert to the original or sport again, and the other, that the sport may lack the good qualities of the parent plant such as habit and foliage. The principal exception we make is in the case of the 'Elegans' family; under glass these are essential. So far we have not tried many Australian cultivars of *Camellia japonica*, but those we have, are more twiggy plants with smaller flowers which would probably make very good shrubs outdoors.

What is the future of the camellia in this country which to the rest of the world is apparently regarded as a non-camellia area? The initial burst of enthusiasm which followed its revival seems to have lost its momentum in America and Australia as well as here, although in

New Zealand wonderful hybrids are being produced. Economic considerations may be responsible for this decline but here at any rate the day of the large and even medium sized garden seems to be past. Plots of ground shrink in size and living conditions become more and more crowded causing people to satisfy their craving for growing things by means of window boxes, room plants and indoor gardens. These means do not really suit the camellia, although one must remember 'Adolphe Audusson' thriving on a diet of cigarette ends and plastic wrappers in the middle of Alexandra Palace. Another factor is that it takes ten years or more before a small camellia planted outside becomes spectacular or less prone to accidental damage and with the population so much more mobile, fewer people stay in one place for that period. Many camellia plants are offered for sale while they are much too small or in poor condition and lacking really skilled attention. They perish causing disappointment.

We had the doubtful pleasure of travelling up to London by train every day for many years and one thing we noticed especially was the increase in the number of small greenhouses erected in small gardens like ours. We also noticed that the great majority of these were completely empty for the winter and spring period. We would suggest that one or more camellias in containers could be accommodated in each of these, giving pleasure and interest through the year, and particularly when in bloom in spring; the containers could be moved outside later to make room for the usual tomatoes and chrysanthemums and moved back when these were over. We therefore hope that nurserymen and others will concentrate less on the growing of the camellia as an outdoor plant and give more encouragement to its being grown under glass. We think that this is the only way it can become grown generally by the gardening public.

To end on a lighter note, cats seem to have a respect for camellias. The lower bark of our lilacs, viburnums and other trees are clawed to shreds but our three graces and the visiting team all leave the camellias growing outside unscathed.

Yntra ty ha my

('Twixt thee and me' – Cornish)

DAVID TREHANE

The staging of one of our trade exhibits of camellia plants at a fortnightly show at Vincent Square begins the previous Tuesday. The condition of the flowers is paramount and it is virtually impossible to cart them eighty miles without protection, so from Tuesday to Friday each promising bud is wrapped in a square of foam plastic held in place by a rubber band. At the same time the leaves are sponged to remove the iron stain which our spring water deposits on them.

On the Saturday I travel by car from Cornwall to Dorset, quite the worst part of the whole business, and on Sunday I travel by train from Bournemouth to Waterloo, a fast comfortable ride, and arrive at the R.H.S. Hall. The van, loaded between 7 and 9 a.m. will be there and time remains to unload the plants and snip the rubber bands to release the flowers, many of which spring open immediately. One or two of the fattest buds, such as those on 'Lisa Gael' in March, alas, come off with the band and the plant goes into hiding under the staging.

On February 18 and 19 we showed many new camellias, including a plant of Felix Jury's new formal double *williamsii* hybrid, 'Water Lily', with one fully opened flower which excited some interest on its way by underground from Waterloo to St James Park.

Not yet having the facilities to grow large show plants we use whatever comes to hand from stock, putting them under cover three or four weeks before a show, and then arranging them on our stand in traditional English fashion which is more concerned with the interest of the individual plants and flowers than the spectacle of a formal display with gadgetry. Staging is finished by Monday evening. On Tuesday morning there is time to go round and check the labelling, for one or two always get missed as the plants are put up. There are the rims of pots to cover up, odd flowers which have dropped off, bruised flowers to pick off.

Working all day in a derelict garden of five acres hidden away in the hills between Tresillian and St Erme in Cornwall, people are scarce and conversation minimal. The occasional lorrydriver appears but, having mistaken Trehane for Trehane Barton or Trehane Vean, he is fairly speechless and, after re-direction, turns with difficulty and retreats up the hill. Tracking a particularly aggressive bootlace of honey fungus occasions vengeful imprecations as the fork eases up

the seventh foot still leading into the roots of a rhododendron. As Shenstone has it "With nature here high converse hold" but *Armillaria* in Cornwall is too busy to indulge in words.

By contrast conversation at an R.H.S. Show starts before the show opens and continues until it closes; lunch is a sandwich at half-past three. There are problems to discuss, troubles to diagnose and, charily, to prescribe for; triumphs to share; the choice of a first camellia and its welfare require some deliberation; the connoisseur's assessment of new hybrids; comparisons with the old varieties. There are gardens to visualize; plants to choose for special places; camellias with the right shape and foliage for formal gardens, more and more of them now in London since soot has diminished and healthy foliage has become a more natural asset. Camellias must be selected for greenhouses, for outdoors, for sun, for shade, for Kent which can surely not be as arctic as its inhabitants make out, for Essex hot and dry, for Hertfordshire where they are popular and well served. Nowadays there are camellias for Lancashire, Derby, the Midlands, and Yorkshire for which many of the *williamsii* hybrids such as 'Brigadoon', 'Donation' and 'Debbie' are admirable. People in chalky areas want compact upright camellias for tubs, such as 'Australis', 'Teringa', 'Cardinal's Cap', 'Laurie Bray', 'Janet Waterhouse', 'Anna M. Page' and 'Merrillees'.

To me all this traffic in experience, knowledge, wants and ideas is infinitely stimulating. The stimulus remains with me on my return to Cornwall and, after two days of visualizing other people's gardens, I look at my scene of decay and change with more critical eyes. With all the help of Richard Bisgrove's admirably lucid articles on design in the *Journal*, I still lack the assurance of that wise woman and great reforming gardener, Gertrude Jekyll, in placing plants to create pictures which convey an instant message of rightness. Partly there is such a plethora of varieties. Catalogues, and my own is not guiltless, give the, generally underestimated, height but rarely the more essential shape and spread. For instance nobody tells you that rhododendron 'Jalisco Eclipse' is upright and 'Elect' spreading, and so I have them back to front. I find myself shifting plants around two or three times to get them right. Returning from the February Show I realised that a plant of *Camellia* 'E. G. Waterhouse' placed to terminate a vista at the end of a long path was out of scale, too small to draw the eye. I took a spade forthwith and replanted it in a recess before a great mass of *Pieris japonica* and in the centre of a group of three azaleas 'Mme Pericat', a charming low spreader with double pink and white flowers. *Orchis elata* stands beside them. The flowering will be partly sequential, the *Pieris* white from January to the end of April, this camellia joining in from March to May and introducing a strictly vertical line above the azaleas which flower from mid-April to June when the *Orchis* complete the picture.

Do we tend too much to segregate camellias, allowing their spectacular flowers and powerful foliage to stand alone to dominate a whole area of park or garden in an awe-inspiring collection? Perhaps there is too much awe, a sentiment as unfashionable today as formality was to Gertrude Jekyll who, incidentally, did not mention camellias in her Hidden Garden or her plans for a Winter Garden. Had she done so I

cannot believe that she would have planted them en masse but rather she would have associated each variety with carefully chosen companions from other genera. I happen to have a lot of old dentarias and I have surrounded a plant of 'Gaytime', a new orchid pink paeony-flowered *williamsii* hybrid, with splits of one species. It does not quite come off. I had not then flowered the lovely pink and white 'Julia Hamiter', with which the cuckoo-flower of the *Dentaria* will harmonise better, its pinnate leaves then lasting through most of summer. I have tried, so far with little success, to lay a carpet of *Anemone apennina* in front of camellia 'Bowen Bryant', choicest of the soft clear pink *williamsii* hybrids.

If the *williamsii* camellias have extended the area in which camellias can be grown they have also created a surfeit of pinks. Somebody in Tamesis once parodied the words of the Blues, "I thought that what I'd bought were just the colour that she sought, I didn't think that they'd be oh so pink". Would it be heresy, were it not so long ago, to suggest that they were in more than one way a 'Donation'?!

However, most of the *williamsii* hybrids are so good that, taking also into account the choice between providing space for ultimate size and temporarily filling it, and the alternative of planting closely and later relieving overcrowding by transplanting or destruction, I would opt for wider spacing combined with the use of perennials and bulbs for infilling, so creating pictures with varying colours and forms. Such plants as pulmonarias, *Mertensia virginica*, *Uvularia*, *Polygonatum*, erythroniums, epimediums, gaultherias, vincas of all kinds, and

Philesia, come to mind. I am blessed with a bountiful legacy of *Scilla lilio-hyacinthus*, the soft blue of which blends admirably with pink.

One of my great pleasures on return from an R.H.S. show this year has been to see what camellias have opened into flower during my absence, not only new ones but many old ones brought over from Australia, of which there are probably no records of performance outdoors in this country. We have never had open land for trials in Dorset so that my garden partly fulfils a need for the provision of a place for testing an increasing number of new camellias for hardiness. By clearing an area of a few decaying trees and a mass of leap-frogged laurel we were able, in 1973, to plant one each of some 400 camellias. It is a cold spot sloping to the east and a bit of a frost pocket.

Dr Smart, in the last *Year Book*, mentioned one of the difficulties in exhibiting camellias that even a few days under cover enlarges the flowers or makes their form different from those grown and opened outdoors. This change in form works both ways. Most cultivars of *C. japonica* are smaller outdoors but not all. 'Guilio Nuccio', 'Elegans Supreme', 'R. L. Wheeler' measure 5 to 6 inches across in the open, as they do under glass. 'Mattie Cole' flowering outdoors from February to May is larger and develops a wide boss of honey-coloured petaloids, 'Thomas Cornelius Cole' is also larger outdoors but lacks the paeony centre which it has under glass. On the other hand 'Ardoch' becomes almost a miniature and 'High Wide 'n Handsome' is not so at all.

The outstanding discovery this season is 'Ada Pieper' which gave wispy petaloid flowers under glass and was due for the bonfire. Planted out it budded as freely as 'Gloire de Nantes' and the flowers, 4 inches across, were of much finer quality with five formal rows of rich rose-pink waved petals around a centre of rabbits' ears. 'Cheryl Lynn' in the nursery was small and quickly shattered: planted outdoors its 4 inch, shell pink formal double flowers have held well for ten days before shattering, and outdoors, of course, the disintegration of a spent camellia by shattering is a great advantage. 'Cheryl Lynn's' colour is a wanted one too.

The *williamsii* hybrids are better outdoors than in. 'Grand Jury', in spite of its 25% inheritance of *reticulata* blood from 'Salutation', is most noticeable in this respect. Indeed the first flowers in March are too heavy and hang down like 'Mrs D. W. Davis' but, as the bush fills up it supports innumerable 5 inch, apricot pink loose paeony flowers. 'Brigadoon' is a similar colour and soft and fluffy in texture indoors: outdoors, from March to May its 4½ inch flowers are deep pink and its twirled semi-double form is firm and definite. 'Elegant Beauty' has flatter flowers, almost identical in form and colour to those of 'Lady Clare' but larger and of better texture and, of course, unlike 'Lady Clare', it is virus-free.

Another success to emerge from this trial planting is 'Innovation'. This is a cross between 'Williams Lavender', raised in the U.S.A. from seed sent over from Caerhays, crossed with *reticulata* 'Crimson Robe'. Under glass it can, frankly, be a mess of twisted petals, rather muddy crushed strawberry in colour. Outdoors this spring it has proved more weather resistant and long-lasting even than 'Daintiness', carrying full

paeony flowers of even rounded form, 4½ inches by 2 inches deep, rose-crimson with dark veins and a few gold stamens. 'Innovation' represents a line of breeding by David Feathers in California which could well be taken further.

Perhaps the most exciting part of our trials is the performance of new *reticulata* varieties and hybrids. It needs a harder winter than the last two to test their hardiness in holding their buds but at least we begin to know their quality outdoors. 'William Hertrich', a straight *reticulata* seedling with its rich colour, is well established outdoors in Cornwall, 'Francie L', a hybrid, is known to be hardy and opens its 5¼ inch flowers in April. Coming home from the March camellia show I found 'Arch of Triumph' in flower, its first bloom 5½ by 2 inches glowing like a flame on the edge of our windswept woodland. It is semi-double with crimped petals, evenly raised, and broad metallic green *reticulata* leaves. It grows upright but branches freely. The flower weathers well. Not so the soft satin petals of 'Lila Naff', another *reticulata* hybrid with pendent slender growths and many beautiful pale pink flowers, lovely in a greenhouse but hopeless outdoors.

After the April show 'Royalty' was in flower. This is a hybrid between *C. japonica* 'Clarise Carleton', a prolific early red, and *C. reticulata* 'Cornelian'. We had already found that its bright colour and semi-double form was irresistible when exhibited. This was from a plastic tunnel and we wanted to know its value outdoors. Everyman's yardstick for *reticulata* camellias is 'Captain Rawes' and here in 'Royalty' is a flower equal in form and size and much more brilliant in colour, budding well on a spreading bush and flowering late when the risk of frost is least.

There is still a need for experiment to find out how much extra heat is needed for how long to ensure the heaviest crop of the best flowers the following spring. The research people would express this in degree days. It may well be that the old practice of keeping plants in pots under glass until the beginning of June when the risk of frost is over, and then plunging them outdoors, provides just what is needed during an advanced period of bud initiation between March and June. The corollary to this is that a cold late spring is liable to herald as poor a lot of outdoor camellias as we had in 1973 and the best we can hope for is a crisp cold winter followed by a warm and limpid spring.

Last year my trial plants were newly planted and many rushed into secondary growth right on into October instead of making flower buds. I am hoping that next spring I shall be able more definitely to record their hardiness and their ability to produce enough flowers of decent form to justify their cultivation outdoors in England.

Magnolias in Melbourne

ARTHUR W. HEADLAM

Melbourne is generally looked upon as the garden city of Australia, and magnolias are one of the most attractive and widely grown trees in many suburban gardens. The flowering season is at its peak in August, our last month of winter, and it extends into September with some of the later flowering varieties lasting well into October. One reads of the devastation to flowers in England and America caused by frosts, however, this presents no problem in Melbourne for frosts are not severe enough to cause any appreciable damage, consequently we enjoy a long and attractive flowering season.

Magnolias generally, are a hardy race, and withstand our climatic conditions extremely well, the worst damage being some occasional leaf burn in summer months, but as the leaves fall in the autumn, this is of minor consequence. Once established, magnolias are little troubled by the weather and seem to be immune to most pests. They flourish in sandy soils in the seaside suburbs as well as in heavier soils and clay, and seem quite tolerant of atmospheric pollution, a factor of considerable consequence in these times of so-called progress.

There is no doubt that the most popular magnolia is *M.* × *soulangiana*, and it may be seen in its glory in almost every suburb, and in all aspects, facing north, south, east or west. There are variations in form and colour and many cultivars are grown, 'Alba Superba', a fine white, 'Alexandrina', which is quite variable in colour, 'Brozzonii', a very late flowering and not so often seen magnolia which carries a profusion of large white flowers having a purple flush at the base, the outstanding 'Lennei' and 'Lennei Alba' with its magnificent creamy white flowers.

M. soulangiana does not appear to mind the secateurs being used with abandon in the flowering season, in fact, the more flowers one cuts, the more vigorous seems the following year's growth, and the more profuse the flowers (Fig. 8). Most magnolia cultivars in Melbourne seem to produce a number of flowers spasmodically throughout the summer months, but they are mainly hidden by the foliage, and lack the colour and size of the normal winter flowers.

Magnolias grow equally well in the Dandenong Ranges, some twenty-five miles from Melbourne, where some specimens of *M. campbellii* are thirty to forty feet high and present a magnificent sight with their large globe-shaped rose pink flowers which later open to reveal the paler pink within. Some trees in the Dandenongs have flowers mainly on the upper branches, whilst others are of a more spreading habit and flowers commence almost at ground level. Possibly the siting has

Fig. 8

Magnolia × *soulangiana* showing branches cut from tree for interior decoration

some influence on growth habit, *M. campbellii* in the Linden Gardens is growing amongst tall trees and against a background of mountain ash (*Eucalyptus regnans*), which are over two hundred feet in height, and may possibly have some influence on the tallness of growth and the flowers being so high up on the branches.

M. denudata, also in the Linden Gardens, has now reached above the roof of the house, and must be twenty-five feet high with a similar spread. Its profusion of white flowers in August may be seen from a bend in the road, and attracts many visitors to the gardens.

Magnolia hypoleuca (*obovata*), a native of Japan, where it may attain a height of one hundred feet, may also be seen in the Dandenong Ranges. Its large leaves, up to eighteen inches long, are particularly attractive with their glaucous undersurfaces, and its size makes it a fine specimen where it has been sited to allow sufficient space to grow unhindered by other trees. The heavily perfumed cream flowers with red stamens are somewhat reminiscent of water lilies. It is a tree highly valued in Japan for its soft smooth grained timber which is used extensively for lacquering.

M. sieboldii from Japan, and something akin to *M. wilsonii*, is also grown in the Dandenongs. It produces its white pendulous flowers with crimson stamens against a background of green leaves, and flowers over a relatively long period.

One of the most extensive collections of magnolias in Melbourne is undoubtedly at "Wayside", the garden of Mr W. J. Simpson of Oliver's Hill, Frankston, a bayside suburb of Melbourne. The garden, located between the Nepean Highway and the sea, slopes steeply to a line of cliffs which separate the garden from the beach. Facing the west, one would assume that the prevailing westerlies would play havoc with the numerous magnolias, camellias and other trees and shrubs; however, the winds strike the cliffs and to a great degree are deflected upwards and pass over the garden without causing any undue damage.

One's first introduction on entering the garden is a fine specimen of the popular evergreen *M. grandiflora* with large leaves, glossy above and reddish brown beneath, and it produces from summer to autumn large creamy white flowers up to ten inches across. This is the clone 'Cairo', and is a magnificent specimen (Fig. 9); the large green seed cones which later turn to brown are in themselves an attraction.

Fig. 9

Magnolia grandiflora 'Cairo' at Wayside, Oliver's Hill.

A walk around the garden in the flowering season is a breath-taking experience; behind the shelter of some pine trees, one suddenly comes upon a large specimen of *M. sprengeri diva*. Imported in 1963, and planted in its present site two years later, it is now twenty-five feet high with a spread of twenty feet. One near the entrance gate, although planted only two years later, has as yet, not produced the same vigorous growth, possibly due to its different siting and perhaps less favourable soil conditions.

M. sprengeri was introduced from China in 1901 by E. H. Wilson whilst he was collecting for the English firm of J. H. Veitch, and it was from this form that the well known *M. sprengeri diva* at Caerhays originated. *M. sprengeri diva* flowers in August, and the flowers instead of standing erect as with other Yulan magnolias, are carried attractively at an angle in opposite directions along the branches. Magnolias raised from seed from the original *M. sprengeri diva* at Caerhays have not been up to the standard of the original and quite disappointing, as a consequence all of the best forms at present in cultivation in many parts of the world have been vegetatively propagated from the original Caerhays *M. sprengeri diva*.

Nearby is a large pyramid-shaped *Michelia doltsopa* with its attractive cream perfumed flowers displayed against dark evergreen foliage. On turning into a wide sweeping drive, one is drawn to a large specimen of *M.* × *loebneri* 'Leonard Messel', a cross between *M. kobus* and the pink form of *M. stellata*. This one is a shapely shrub some twelve feet high and is covered with deep reddish purple buds which open to star shaped blooms some five inches across, creamy white inside and the outer surfaces heavily suffused with reddish purple. Its flowers which are early and persist over a long season must rank highly amongst the newer magnolias. *M.* × *loebneri* 'Merrill' is a vigorous growing tree with large white flowers, and is amongst the best of the early white flowering magnolias.

Next is *M.* × *thompsoniana*, a hybrid noticed by Mr Thompson in his nursery at Mile End, London, about 1808 (*M. virginiana* × *tripetala*). It produces creamy white flowers from a long narrow upright bud at the same time as the leaves, green above and glaucous below. This is followed by a large specimen of 'Brozzonii, another of the large group of hybrids between *M. denudata* and *M. liliflora*. It is not widely grown, and its very large white flowers shaded purple at the base are produced in profusion towards the end of the season.

A group of the new *M.* × *soulangiana* hybrid, 'Picture', makes an eye catching sight with its upright habit of growth, and producing at an early age very large rose-purple buds, which as they open, reveal the paler inner petals. The flowers are larger than any of the other *M.* × *soulangiana* cultivars, and in some way are reminiscent of *M. campbellii*. An attractive feature before leaf-fall are the enormous bright red seed cones.

A large tree of *M. kobus*, a native of Japan, makes an interesting study with its pyramidal habit of growth and profusion of six petalled flowers which are of particular beauty when viewed against a blue sky. It is a fast growing magnolia and due provision should be made in its siting to allow for its ultimate growth.

Close by is *M. wilsonii*, a spreading shrub with its pear shaped creamy white buds hanging point downwards, and eventually the pendent flowers with rose coloured stamens appear at the same time as the green leaves, which make an attractive background.

A walk through the camellia section of the garden leads down a steep slope to the lower garden, located near the top of the cliff. Here is a large area planted with *Camellia reticulata*, which are in flower at the same time as the magnolias. There are very large specimens of 'Buddha', 'Crimson Robe', 'Confucius', 'Tali Queen', 'Cornelian', 'Shot Silk', 'Captain Rawes', 'Chang's Temple' and finally the somewhat slower growing 'Purple Gown', which probably produces the deepest coloured flowers in the *Camellia reticulata* group.

Having been confronted with such an array of colour, it is a little while before one begins to take in the magnolias in this area. However, *M. campbellii* is soon the focus of attention, with its very large rose pink flowers showing paler pink within. Whilst *M. campbellii* is usually notoriously slow in producing its first flowers, a pink form at "Wayside" flowered for the first time eight years after planting! It seems to produce an abundance of flowers one year and they are somewhat sparse the next. It is a joy both aesthetically and photographically, as many of its flowers are borne on branches only some two or three feet above the ground, and close-up photographs of individual flowers are within easy reach. The early flowering habit of this *M. campbellii* seems somewhat of an exception, and one wonders if the deep sandy soil and siting in a very open position has any bearing on its early flowering habit. All of the garden at "Wayside" is heavily mulched with straw, to conserve moisture, and to help prevent soil erosion which is quite a difficult problem due to the very steep slopes and sandy soil.

As an indication of the ideal conditions for magnolias at "Wayside", which have been created at considerable effort, it is estimated that *M.* × *veitchii*, once established, put on growth of approximately six feet per annum. A large specimen of *M.* × *veitchii* (*M. campbellii* × *M. denudata*), a vigorous growing tree producing its large white flushed purple-pink flowers at an early age, makes an attractive sight from the path winding down the slope, with the clear blue sea in the background. During a severe storm which blew in from quite an unusual direction for this area, the benefit of the deflection of the wind by the cliffs was lost, and one *veitchii* finished up in an almost horizontal position, but after much patient trenching and pulling with ropes, it was eventually restored to its usual upright position. Shortly afterwards, more violent storms occurred, accompanied by torrential rains, which further loosened the sandy soil and the magnolia came to a rather ignominious end by sliding down the slope and over the edge of the cliff! Fortunately, it had been propagated and other plants of this magnolia are already established in the garden.

Rather than plant another magnolia in this exposed and precarious position, since some of the shelter trees on the cliff edge were also lost in the gale, the site has been levelled and a bushy low growing plant of *Rhododendron yakusimanum* now graces the spot – its dwarf habit of growth and hardy constitution, inherited from its forebears on the

island of Yakushima, where gales are the order of the day, should enable its survival until the *Pinus thunbergii*, which have already been planted, again provide welcome shelter from the elements. These are known as the "Black Pine" and are an important timber tree in Japan where it often occurs by the seashore. It is well known in Britain where it is used as a windbreak in maritime areas and for growing in poor sandy soils.

One of the features of the lower garden is the extensive collection of the *M.* × *soulangiana* cultivars which are planted fairly close to one another, thus enabling one to compare the difference in colour and form. Here are 'Alexandrina', 'Amabilis', 'Brozzonii', 'Lennei', 'Rustica Rubra', 'San Jose', 'Speciosa' and 'Verbanica', and in a prominent position, a magnificent specimen of 'Lennei Alba', with its attractive creamy white flowers, which to me appeal more than those of many of the other white magnolias.

A number of *M. liliiflora* make a welcome change because of their smaller growing and somewhat sprawling habit, and their deep purple sickle shaped flowers which do not open as widely as flowers of other magnolias.

Whenever visiting "Wayside", or for that matter, any other garden, I always endeavour to add to or improve upon my collection of colour slides, and when photographing *M. liliiflora*, it was noticed that the points of the sickle shaped flowers invariably leaned to the south, or away from the sun; further observations on a number of this species in other gardens confirmed this phenomenon. It was noticed, but not as

markedly with *M. liliiflora* 'Nigra', and one wonders if this is in some way attributable to the prevailing climatic conditions in Australia. It would be of interest to know if this occurs with *M. liliiflora* in England, but of course in the reverse direction.

M. stellata, a native of Japan, needs little comment, for it is well known and widely grown because of its compact bushy habit of growth, its profusion of white flowers with strap-like petals, and its suitability for smaller gardens as its growth may be restricted by judicious pruning during or after flowering. Amongst the most attractive clones of *M. stellata* are 'Water Lily', 'Rosea', 'Rubra' and 'Massey Rose', in some of which the strap-like tepals are longer and more numerous.

Magnolias generally resent root disturbance and present some problems in transplanting owing to their fleshy roots which are somewhat susceptible to damage, but with due care may be successfully moved.

It has been generally found that imported plants are somewhat difficult to get established as they invariably suffer some setback following fumigation by the Department of Agriculture, often taking two and sometimes as long as three years before they start to grow, whilst casualties, particularly with small plants which have not developed an adequate root system, are relatively high.

After a number of unsuccessful attempts, an imported plant of *M. nitida* has at last come through the fumigation and quarantine successfully and is now growing quite vigorously. It has been planted in a carefully prepared and selected position, and will be closely watched for its first flower with pleasurable anticipation. 'Kew's Surprise' and 'Charles Raffill' are two magnolias which also have not yet flowered.

M. sargentiana robusta, generally a vigorous growing magnolia when established in English gardens, has so far not made such growth at "Wayside". It is presently some seven feet in height, and as it becomes better established, perhaps it will develop the more striking characteristics usually associated with this distinguished magnolia.

In the autumn after the leaves have fallen, one notices numerous labels on branches of magnolias at "Wayside", denoting that many crosses have been made. It is hoped that in due course an outstanding new hybrid will be the reward of much patient work and thought by Mr Simpson, a dedicated gardener and lover of all plants, but in particular the genus *Magnolia*.

Dr Brian W. Doak - Obituary

The death of Dr Brian W. Doak on 26 April 1974 at the early age of 68 is a sad loss to the camellia world and a bitter blow to his many friends. Dr Doak was a distinguished soil scientist of international reputation, whose work with phosphatic fertilizers made a notable contribution to the economic prosperity of New Zealand and to the production of food for a hungry world. He had a life time interest in horticulture, was fascinated by plants and was a hybridist of great skill and patience. His success as a breeder of camellias brought him world wide horticultural fame but it should be remembered that he had also done very important work with lilies and other genera.

He was a pioneer in the use of *Camellia saluenensis* as a hybrid seed parent and produced a range of fine hybrids which are known wherever camellias are loved and grown. Brian, as he was known to all of us, was one of the people whose early work made the New Zealand Camellia Society possible. He was a Foundation Member of the Society and of its executive, on which he served from 1958-1964, being Vice-President from 1959-1963. He became convenor of the Auckland Branch on its formation on 16 April 1959 and held this post till his departure to take up an important scientific post in Australia in 1964. At the Annual General Meeting in that year he was elected an Honorary Life Member of the New Zealand Camellia Society in recognition of his distinguished service.

Brian Doak will be remembered as a great plantsman; as a kindly, modest, generous man who shared his knowledge and his plants with his innumerable friends; and who made a great contribution to the development of the modern camellia. His plants, growing and cherished in gardens throughout the camellia world, will be his best memorial.

T. D.

The Early Spring Rhododendron Competition, March 12-13, 1974

After a mild winter, the frost-free month of February gave the earliest flowering rhododendrons their longest period of uninterrupted glory for many years. Winter returned however, early in March, for just long enough to imperil blooms destined for the early Rhododendron Competition at Vincent Square and one cannot help thinking that, but for this cold snap, the names of several more exhibitors would have graced the showcards. Nevertheless, some fine trusses and well-flowered sprays completed long and hazardous journeys to arrive on the show-bench unscathed and reap their reward.

After two long, dry summers *R. macabeanum* proved its ability over fellow species of the Grande series, to withstand the droughty, dry-air conditions of these seasons by following them with a massive and triumphant cadenza of golden bells. *R. macabeanum*, featured in several exhibits, was most impressive as a spray of six perfect trusses which took first prize in class two – one spray, any species. The same exhibitor, the Countess of Rosse, also won the premier award in class one with an exhibit of considerable excellence which included a truss of *R. macabeanum* together with the deep rose *R. magnificum*, a vibrant pink *R. lanigerum* and *R. mollyanum* with crimson-veined, pink corollas. Yet again, in the class for 1 truss, any species, *R. macabeanum* took the prize with *R. magnificum* in second place, while a paler truss of the former species gained third prize.

In a class for species of the Arboreum series other than *R. arboreum*, a compact, rich pink *R. lanigerum* pipped the slightly tired but still dramatic truss of *R. rirei* with crimson-black tears glistening in the depths of blue-mauve to magenta corollas. While the sombreness of *R. rirei* is such that one is not totally surprised to find tears induced within the flower, the moist black eyes of the vibrant scarlet *R. strigillosum* are less expected. Lord Aberconway's truss of this species took first prize among the Barbatums which included, also from Bodnant, the blush white *R. pachytrichum* 'Sesame', *R. barbatum* and from Nymans, the dusty pink *R. exasperatum*.

Yet another form of *R. macabeanum*, from Lady Rosse won the class for one truss of the Grande series. The rich yellow corollas, streaked crimson at the base, were enhanced by an orange-brown stigma and black anthers. Mr A. N. Skinner's *R. hodgsonii*, with rich claret corollas encircled by a ruff of silver-backed leaves, came a close second.

R. pocophorum was a welcome addition to the entries in the Neriiflorum series class. With large, deep, black-red flowers and handsome leaves, this seemed to me a more worthy plant than the form of *R. beanianum* with similar coloured flowers but smaller and more lax truss. However, it was the *R. beanianum* which took second place over the former species while pride of place went to *R. hemidartum* from Lady Rosse, a compact, clear red truss with a tidy collar of leaves.

First prize for one truss of the Thomsonii series went to Lord Aberconway's fire-engine red *R. hookeri*, which was so conspicuous among the more subdued blood reds of the series that in passing on to the next class one was again looking for a highlight. None was to be found, however, in a disappointing clutch of entries of rhododendrons from several of the lepidote series, but one unplaced entry worthy of mention was the Hon. E. Boscawen's *R. tatsienense* F.20486, a dainty, blossomy species with a profusion of half-inch diameter, funnel-shaped, blush white flowers held against a well furnished background of foliage.

The last species class – any other species, truss or spray – was well supported. Lady Rosse provided the winning entry with a full-bodied truss of blush-pink splashed crimson *R. fulvoides* set against handsome leaves, dark green with a glimpse of rich cinnamon indumentum beneath. Sir Giles Loder's *R. anthosphaerum* var. *hylothreptum*, with deep rose touched magenta, compact, full truss, took second prize, while in third place the Hon. E. Boscawen's *R. uvarifolium*, blush with deep cut lobes and crimson throat and spotting on the upper lobe, caught the eye.

For four hybrids, one truss of each, Lord Aberconway showed, and triumphed with 'Maya'; 'Mrs Henry Shilson'; *arboreum* × *barbatum*, a perfect truss, and 'Choremia'. Noteworthy in the class for one spray of any hybrid was Sir Giles Loder's magnificent spray of eleven full, white faintly spotted trusses of *R.* 'Seagull' – Loderi × *sutchuenense* – each huge corolla containing a neat ring of brown anthers and pale brown, pin-head stigma. Were it not for the bruising on two or three of the trusses this entry must surely have been placed higher than third. Adjudged best in the next class was 'Pink Glory', a hybrid with beautifully carved, clear, pale pink petal lobes and well shaped truss, while of the nine entries in the class for hybrids of the Barbatum or Thomsonii series, 'Portia', from Lord Aberconway, was outstanding as a glowing scarlet beacon amidst the smouldering reds and flickering flames of the other entries.

It is disappointing that so few rhododendron enthusiasts support the class for one plant in bloom. Practical difficulties of transport, staging and collecting, by exhibitors from afar, can be understood, but surely here lies a golden opportunity for those of us who garden in the dry south-east, for here many of the dwarf species which are most suitable for a class of this nature, are more successful than the large-leaved woodlanders of moist west country gardens. Mrs K. Dryden, of Sawbridgeworth, Herts., demonstrated this by staging a fine plant of *R. glaucophyllum* var. *luteiflorum*, displaying an abundance of its clear yellow bells for a well earned first prize.

Finally, in the two classes for tender rhododendrons raised under glass, it was Lord Aberconway's 'Optimum' which left a deep and lasting impression on my mind. This old Javanicum hybrid, raised by Messrs Veitch before the turn of the century, was exhibited as a truss of ten 2½ inch long, 2 inch diameter, clear orange corollas with deeply cut lobes. Each had its complement of jet black anthers and conspicuous red stigma – a truly delightful picture. Major A. E. Hardy's 'Caerhays Lawrence', originating from the two closely related Himalayan species, *concatenans* and *cinnabarinum*, was almost as stunning. Its rich gold, exquisitely cut bells, ten to a truss, suspended by apple-green pedicels, were 2 inches in diameter and about 2 inches long. Third prize went to *R. scopulorum* KW 6354, with pure, crystalline white flowers brushed gold in the throat at first but with this marking fading to green in older flowers. In the last class, a spray of a tender species or hybrid, another Javanicum hybrid, 'Princess Alexandra' from Lord Aberconway, took first prize. This spray resembled a large, profusely flowered jasmine with white tubes and ice-pink lobes. Second place went to *R. cubittii* 'Ashcombe', with striking pelican-beak buds of dull rose and cream opening to enormous white, faintly flushed pink, corollas with deeply cut, frilled-edged lobes and gold brushed upper throat.

Of the trade stands, only Hilliers had more than a handful of rhododendrons. Once again they were showing the little known free-flowering *R. wongii*, a yellow species resembling a more robust *R. flavidum* in flower and habit and also *R. flavidum album* looking far more like a white form of *R. flavidum* than the larger flowered, more vigorous plant in general cultivation under that name. *R. hippophaeoides* 'Inshriach' bore small, deep violet blooms but lacked the grey-green upper leaf surface which so enhances the paler violet inflorescence of the A.M. form.

A rich rose-pink *arboreum* hybrid, 'Duchess of Cornwall', raised many years ago by R. Gill & Sons, of Penryn, and shown by Hilliers, received an A.M.

BARRY N. STARLING

The Magnolia Competition

April 2/3, 1974

Magnolias are among the most frequently planted of flowering trees and shrubs, and yet the Magnolia Competition has been blighted all too frequently by the weather. That for 1974 with 9 entries from 4 exhibitors was the largest we have seen, but in spite of its lack of size it was of considerable interest.

In Class 1 for one vase of a magnolia in bloom, the first prize was awarded to the Countess of Rosse and the National Trust, Nymans Gardens, for *M.* × *loebneri* 'Leonard Messel', the branchlets carrying innumerable soft mauve-pink, star-shaped flowers. At a time when gardens become smaller and smaller it is perhaps appropriate that this hybrid which is ideal for small gardens, should be in the first place. We would not wish to detract from an entry from Cornwall in the second place, that of Mr Nigel Holman, named 'Chyverton' after Mr Holman's garden. This is considered to be a seedling of *M. dawsoniana* which has the dimensions of a very large tree, and was originally raised at Caerhays. The narrow spoon-shaped tepals were rose-purple on the exterior and delicate lilac within, but the flowers only opened on the second day of the Show. The third prize was awarded to *M.* 'Kewensis' from Nymans, a vigorous hybrid of *M. salicifolia* with white sweet-scented flowers.

Two other entries in Class 1 attracted attention. The first was a seedling of *M. sprengeri* entered by the Crown Estate Commissioners and growing in the Savill Garden. The delicate pink of its cup-shaped flowers did not show up on the show-bench as they do against a blue sky. The second was *M. cylindrica* entered both by Mr Holman and the Crown Estate Commissioners. The flowers resembled in size and shape those of *M. denudata*. It was discovered in Anwhei, China as recently as 1925 and at present forms a small tree in cultivation.

The individual flowers in Class 2 for one flower each of three distinct magnolias added to the interest and extended the range of the exhibits.

The first was of *M.* 'Anne Rosse' with a large flower, purple on the exterior and almost pure white inside, included by Lady Rosse in her winning entry. The second, included by the Crown Estate Commissioners in their entry, was one of a rose-purple *M. dawsoniana*.

JAMES PLATT

The Camellia Show, 1974

Owing to the Bank Holiday earlier in the week, the Show for Camellias grown in the Open was again held on the 17 and 18 April this year, and this time there was a really good display. Outstanding among the trade stands once again was that of James Trehane & Sons of Wimborne, which was awarded the Banksian silver-gilt medal. Particularly notable among the camellias which they showed were the *japonicas* 'Thomas Cornelius Cole', 'Grand Slam', 'King's Ransom', 'Jennifer Turnbull', 'Janet Waterhouse', 'Joseph Pfingstl', 'Seventh Heaven', 'Tomorrow', 'Waverley', 'White Tulip' and the *williamsii* camellias 'Elsie Jury' and 'Grand Jury'.

In a corner of the hall, was a most useful and interesting live display by the R.H.S. of the different camellia flower forms, which attracted considerable attention.

The competitive classes were well filled and there were some very fine exhibits. There were some 350 entries in the 69 classes, of which 41 were for the 18 spray classes. This is primarily a show for *Camellia japonica* cultivars, to which 43 of the classes are limited; this however is not to say that the *williamsii* classes were not well filled, the three classes for blooms attracting a total of 41 entries, as against an average of 6 entries in the specialised *japonica* classes. To see a balanced representation of the fine new hybrids however, one has to go to the Truro Show, which has twelve classes for blooms of *C.* × *williamsii*.

Outstanding among the exhibits were those from Leonardslee, the home of the chairman of the Rhododendron & Camellia Committee, Sir Giles Loder who, though he showed in nearly all the classes, was particularly successful in the miscellaneous and spray classes. Other very successful exhibitors were the Crown Estate Commissioners, Mr R. F. Winter from Ascot, the Hon. H. E. Boscawen of The High Beeches and Surgeon Captain J. A. N. Lock of Lower Coombe Royal.

Mr Boscawen won class 78 for six sprays with 'Alba Simplex', 'Alba Plena', 'Donation', 'Lady Clare', 'Nagasaki' and 'Tricolor'. Captain Lock brought off a notable double, winning class 49 for blooms of any four camellias other than cultivars of *japonica* with 'Anticipation', 'Debbie', 'Elegant Beauty', and 'Elsie Jury'; and also class 50 and the Leonardslee Bowl for any twelve blooms including these four and 'Adolphe Audusson', 'Dear Jenny', 'Grand Slam', 'Guilio Nuccio', 'R. L. Wheeler' and 'Tiffany'.

In section A for *C. japonica*, single-flowered cultivar blooms, there were 58 entries in the 8 classes, the Crown Estate Commissioners winning class 8 for any three with 'Jupiter', 'Rogetsu' and a red seedling, against five competitors.

In section B for semi-double cultivars, there were 85 entries in the 11 classes, Mr Winter winning class 19 for any three with 'Guilio Nuccio', 'Yours Truly' and 'Mercury', against eight competitors.

In section C for anemone- and paeony-formed cultivars, there were 50 entries in the 6 classes, Sir Giles Loder winning class 25 for any three with 'Mathotiana Supreme', 'Tomorrow' and 'R. L. Wheeler', against five competitors.

In section D for rose-formed and formal double cultivars, there were 55 entries in the eleven classes, Sir Giles Loder winning class 36 for any three with 'Augusto Pinto', 'Herme' and 'Mathotiana', against five competitors.

Class 37, for any six cultivars of *C. japonica*, attracted seven entries, and was won by the Crown Estate Commissioners with an exhibit which included 'Apollo', 'General Lamorcière' and 'Mercury'. Second prize was won by Mr Winter and third by General Harrison.

Class 38, the restricted class, only attracted two entries, and was won by Mr Pinney, with a fine bloom of 'R. L. Wheeler'.

Class 39 for *C. reticulata*, wild form, was won by Sir Giles Loder with 'Mary Williams'. Class 40, for a double or semi-double cultivar of *C. reticulata*, was won by Captain Lock with 'Crimson Robe'. Sir Giles Loder also won class 41 for *C. saluenensis*. There was no entry this year in class 42 for a bloom of any species other than *cuspidata*, *japonica*, *reticulata* or *saluenensis*.

Class 43, for a single-flowered cultivar of *C.* × *williamsii*, attracted 14 entries, and was won by Mrs Potter with a fine 'Parkside'. Class 44 for 'Donation' had eleven entries, and was won by the Hon. H. E. Boscawen. Class 45, for any other cultivar of *williamsii*, was a particularly good class and attracted 16 entries; first and second prizes were won by Mrs Eunson with 'Debbie' and 'Elegant Beauty'; Captain Lock was third with 'Elsie Jury'. The class would have merited an 'Highly Commended' award.

Class 46 for 'Salutation' had only two entries, and was won by General Harrison. Class 47 for 'Leonard Messel' attracted seven entries, and was won by Sir Giles Loder. Class 48, for any other hybrid, attracted two blooms of 'Francie L.', a hybrid of *C. saluenensis* and *C. reticulata* 'Buddha', which received an Award of Merit in 1972; the winning exhibit was shown by Mrs Eunson. It is rather curious that the Note at the end of the schedule gives the parentage of 'Barbara Hillier', 'Inspiration' and 'Salutation' for the purposes of the R.H.S. shows, but not that of 'Francie L.' and 'Leonard Messel'.

In the spray classes, there were six entries in class 62 for a single-flowered *C. japonica*, which was won by Mr Pinney with 'Jupiter', Mrs C. Benn being second with 'Gertrude Preston', and Mr Boscawen third with 'Alba Simplex'.

In class 63 for a semi-double, there were again six entries, Sir Giles Loder being first and second with 'Nagasaki' and 'Tricolor', and Mr Boscawen third with 'Adolphe Audusson'. In class 64, for an anemone- or paeony-formed, there were four entries, Sir Giles Loder winning with 'Mathotiana Supreme'. In class 65, for a rose-formed or formal double, there were again four entries and Sir Giles Loder won with 'Rubescens Major'.

In class 66 for 3 cultivars of *C. japonica*, there were three entries. Mr Strauss won with 'Nigra', 'Rubescens Major' and 'Guilio Nuccio'; Sir Giles Loder was second with 'Nagasaki', 'Furoan' and 'Jupiter'; and Mr Boscawen third with 'Nagasaki', 'Lady Clare' and 'Tricolor'.

There was only one entry in class 68 for a cultivar of *R. reticulata*, which was won by Sir Giles Loder with his fine 'Captain Rawes'. There were two entries in class 69 for *C. saluenensis*, which was won by Mr Strauss with the pale form. The three classes for *C. cuspidata*; *C. reticulata*, wild form; and any species other than *C. cuspidata*, *C. japonica*, *C. reticulata* and *C. saluenensis*, between them attracted one entry, Sir Giles Loder's *C. cuspidata* in class 61.

Class 71, for a spray of a single-flowered *williamsii*, had two entries, of which Sir Giles Loder's 'J. C. Williams' was the winner. Class 72 for 'Donation' had four entries, and was won by Mr Boscawen. There was only one entry in the two classes for any other *williamsii* spray, and this was an unnamed entry from Leonardslee in class 74. Sir Giles Loder also had the only entry in the class for 'Cornish Snow', and in class 76 for any other hybrid of *C. saluenensis*, which he won with 'Inspiration'.

In class 77 for any three camellia sprays, Sir Giles Loder was first and third with 'Alba Simplex', 'Donation' and 'Nagasaki' in one exhibited, and 'Berenice Boddy', 'Hatsu-Zakura' and a red *C. saluenensis* in the other. Mr Boscawen was second. In class 78, for six sprays, Sir Giles was second to Mr Boscawen whose exhibit has been mentioned earlier, and showed 'Donation', 'Francis Hanger', 'Jupiter', 'Mathotiana Supreme', 'Nagasaki' and 'R. L. Wheeler'. E. W. M. M.

The Rhododendron Show

April 30, 1974

The 1974 show was in many ways the most remarkable that many visitors could remember – remarkable for the quantity of exhibits – 1036 entries, 4 more than the previous record of 1962 –, for the quality of many of them, and for the extraordinarily wide seasonal gamut of plants shown. Among the species were several which are more usually seen in the early Competition, such as *leucaspis*, *calophytum* and *sutchuenense*; quite a few of the hybrids are usually out at the time of Chelsea.

As is tending to happen more and more in recent years, the competition was dominated by the "big four", the National Trust gardens of Bodnant and Nymans, the Crown Estate from Windsor, and Exbury; they entered the majority of classes and this year in this internal competition Bodnant took 19 first prizes, Nymans 6, Windsor 5 and Exbury 3; they all also had numerous second and third prizes, with Bodnant and Windsor leading. This left comparatively little room for amateur gardeners in the usual sense of the word. It is interesting to contrast the competitiveness of these four gardens with the discretion shown by the magnificent National Trust for Scotland garden, Brodick. In several past years, Brodick has staged a non-competitive exhibit, always of superb quality and great interest; when, as this year, they do enter the competitive classes, they restrict themselves to showing uncommon or tender plants and do not try to take prizes for the more commonly grown species or hybrids, as their very fine collection would enable them to do.

SPECIES

In the first class for eight species, the Lionel de Rothschild Challenge Cup was won by Bodnant; the exhibit included a very good *rex*, a pure white *calophytum*, and a rather poor *sinogrande*. Mr S. Christie was second with an exhibit which was rather monotonous in colouring, though a pure white *campanulatum* and a good *basilicum* were noteworthy. Exbury, who gained third place, had a very pink *rex* and a nice purple *arizelum*. Although the judges placed Windsor in fourth place, their eight species were extremely well balanced and contrasting; they showed an outstanding pink *vernicosum* Yu 15104, their beautiful *argyrophyllum* var. *nankingense* 'Chinese Silver' and a very large and late truss of *R. niveum*.

In the second class for three species, Wing Commander Ingall won first prize with three very good trusses, including a very late *sutchuenense* with superb foliage and a pure white *fictolacteum*. Lea Gardens

won the second prize; their *wightii* was characteristically lop-sided. Mr Christie was third with three very pretty trusses; his *recurvum* was as good as any of us could remember, and his *vernicosum* and *prattii* were both beautifully grown. In the restricted class 3, for 3 species from an exhibitor who had not won a first prize in the first two classes in 1970 or subsequently, much the most interesting exhibit, though the judges did not award it any prize, was Mr Spring Smyth's three plants of his own collection from Nepal: a beautiful white *lindleyi* (T.S.S. 57), a *campylocarpum* (T.S.S. 12), and a very pretty pink *arboreum* s.s. *campbelliae* (T.S.S. 58). Major Magor and his daughter Mrs J. D. Peter-Hoblyn included a very nice *inaequale* in their exhibit.

Exbury dominated Class 4, for any species and the McLaren Challenge Cup, with a really superb *sinogrande* with wonderful foliage. Mr Christie's *lacteum*, which came second, was rather anaemic in colour, compared with his entries in previous years. Brodick showed a very good form of *sidereum*, with a glowing silver indumentum on the underside of the leaf for third place.

Class 5, for a spray of any species and the Roza Stevenson Challenge Cup was won by Mr Christie with an outstanding branch of *sphaeroblastum*, with pure white flowers nicely placed on the branch and beautiful cinnamon indumentum on the underside of the leaves; this uncommon species has seldom been so beautifully shown. Bodnant came second with a branch of *argyrophyllum* a good deep pink, and Windsor third with *fictolacteum*, heavily spotted and with deep pink buds.

In classes 6 and 7 for *arboreum* or other species in the series, there was a very good pink forma *roseum* from Nymans; a beautiful blood red *delavayi* from Brodick with smaller trusses than in other years; Bodnant entered an oddly pointed truss of *cinnamomeum*.

The Barbatum series, class 8, was deservedly won by an outstanding truss of the plum-rose *habrotrichum* from Mr Christie. Also noteworthy in this class were a very pretty pink *rude* from Major Hardy and two trusses of *anwheiense*. This latter species is one of the most enchanting small shrubs in the garden and typically covered in flower; but the individual trusses are small and do not show to advantage on the bench.

In the Boothii series, class 9, Nymans won with a pale pink *tephropeplum*; Windsor showed the same species for third prize which contrasted strongly; it was a very deep rose with almost tubular flowers and was grown from KW 9565. Lea rhododendron gardens won class 10 with *campanulatum* 'Knaphill' with exceptionally good foliage; Bodnant's *lanatum*, placed third, had remarkable indumentum on the underside of its leaves.

In the Cinnabarinum series (class 11) Hydon nurseries won first prize with their *cinnabarinum* clone 'Nepal'; with its curious flowers divided between red and yellow it is almost a clown among plants.

Brodick was first in class 12 with *falconeri*, Mr and Mrs Boscawen second and Bodnant third; the standard in this class was very high and all the trusses showed much of a muchness. In class 13 (*fictolacteum* or *rex*) Mrs Potter was an easy winner with a quite outstanding head of *rex*; Mr Christie had a very white *fictolacteum* in the third place. In

class 14 (for the rest of the Falconeri series) Bodnant was first with a good head of *basilicum* with very rough foliage; Mr Christie was second with the seldom seen *galactinum* and third with *coriaceum* with rather patchy indumentum. It was interesting to compare this plant with the one shown by Bodnant in the same class, grown from Forrest 21817; this latter plant had much smaller individual blooms but much larger and more beautiful foliage.

The Fortunei series (class 15) was one of the most interesting in the show. Nymans won with an outstanding *orbiculare* and Mr Strauss was second with *cardiobasis*: Mr Gorer also showed this plant and it is interesting to note that it is now allowed to be a valid species, to my mind more elegant in growth and truss than its sister in the sub-series *orbiculare*. There were three good trusses of *griffithianum* in this class, though none of them was awarded a prize.

Sir Giles Loder won the first prize for class 16, the Fulvum series, with *uvarifolium*; in most years and in most gardens the plants in this series have finished flowering well before the Rhododendron Show. Class 18, Irroratum series, had some very interesting plants. Bodnant won first prize with the very rare *pogonostylum*, McLaren V 71, with a good solid truss of pink flowers and strikingly shiny pale green pointed leaves; Major Hardy came second with the very elegant white *laxiflorum*.

The two classes devoted to the Maddenii series (20 and 21) were dominated by Mr Peter Cox, showing flowers of his own collection (together with his wife and Mr Hutchinson) in India in 1965. He won both first prizes, with a superb *lindleyi* (CCH 399) and an equally good *inaequale* (CCH 301). I had always thought the scent of *inaequale* the sweetest and most pungent of any rhododendron, but it is surpassed by the lemon scent of *coxieanum* (CCH 475) which was exhibited for the first time ever; it did not get a prize, and as a flower it is not outstanding, rather like a thin *ciliicalyx* with very narrow leaves; but its perfume makes it highly desirable. There were several other *lindleyi* in class 20 (the Megacalyx subseries), including a very fine pure white one from Brodick, and a pink-tinged one from Mr Gorer grown outside in Sussex from the Ludlow and Sherriff collecting; this collecting, which is so superbly grown by the Messrs Gibson at Glenarn, Rhu, would seem to be considerably hardier than any of the numerous other collections of this most beautiful rhododendron.

The Ponticum series (class 25) exhibit was remarkable for having five trusses of the rather uncommon *metternichii*; Hydon Nurseries won first prize and Exbury second with this species. The third prize went to the Coxes' collection of *caucasicum* (CCH 114); the true plant of *caucasicum* is very rarely seen, but it is more interesting than beautiful, with a thin truss of pale yellow flowers.

The two classes devoted to the Taliense series and sub-series (26 and 27) were both won by Mr Cox, with a typical *wasonii*, and with a large pink-tinged white truss of *clementinae*. This species is abominably shy-flowering and consequently is hardly ever shown or grown, but its beautiful metallic foliage makes it worth a place in every garden, even if it never flowered, instead of hardly ever. Other interesting plants in these classes were a very pretty pink *wiltonii* from Exbury, a beautiful

truss of *sphaeroblastum*, tinged with pink on the outside from Mr Christie and the pink *doshongense*, another very uncommon plant, from Wing Commander Ingall.

It seems to be a general rule that the climatic conditions which produce good deep yellows produce rather dirty blues, and *vice versa*; and 1974 was certainly a "blue" year. There was nothing outstanding in class 28 for the Thomsonii series, Campylocarpum subseries. In the classes, devoted to the remaining sub-series of the Thomsonii series (30, 31, 33), Bodnant showed a very beautiful *dasycladum* which won first prize, and Nymans showed another plant of the same name which bore little resemblance to the Bodnant plant; Sir Giles Loder had a pretty *selense* which got third place. Colonel Colville won first prize for *thomsonii* itself.

Among the branches of deciduous azaleas (classes 34, 35, 36) Sir Giles Loder's selection of *schlippenbachii* 'Prince Charming' stood out. Windsor had a nicely contrasting selection of three species – *quinquefolium*, *albrechtii*, and *reticulatum*; and in these classes there were interesting variations of *vaseyi* though none was selected for a first prize.

In the section for dwarfer species, Colonel Colville won first prize in the Anthopogon series (class 37) with a very pretty pink *trichostomum* with a remarkably large head; the Coxes' *sargentianum* 'Whitebait', a well-known and lovely plant, was second. Class 38, Campylogynum, was won by Nymans with the sub-species *charopoeum*, of an unusual blue-mauve colour. For the Glaucophyllum series (class 40) Brodick won with an outstanding truss of the rare and tender chocolate-coloured *genestierianum* in first class condition; Sir Giles Loder was second with a charming old-rose coloured *glaucophyllum* and Nymans showed a mauve *tsangpoense* for third place. In class 42, the Lapponicum series, Bodnant won with *hippophaeoides* var. *roseum* which is certainly seldom seen, but is doubtfully as pretty as the more usual lavender-blue type; the Coxes' entry was a rather attractive mauve *dasypetalum*.

The Lepidotum and Uniflorum series (class 43) are not spectacular on the show-bench, though charming on a rockery; Windsor won with a yellow *lepidotum*; and Mr Spring-Smythe was given the second prize for his collection of the same species TSS 52. In the Saluenense series (class 44) Mr and Mrs Boscawen won first prize with a purple *calostrotum* with a remarkably big flower; the same species, in the form of the bright reddish clone 'Gigha' won third prize for the Coxes.

There was only one entry for class 39 (Edgeworthii series), a branch of the understandably seldom seen *pendulum* from Brodick; it is a rather dull little plant, though much hardier than its fellows in the series.

As has already been said, 1974 was a superb year for the blues, and the judges must have had a hard time choosing among the many first class *augustinii* (class 48); they gave the first prize to Bodnant and the second to Mr and Mrs Boscawen. The other classes for plants in the Triflorum and Rubiginosum series were also well supported and in very good condition; Sir Giles Loder got a first prize with a very big-trussed *rubiginosum* and also won with his *oreotrephes*; Colonel Colville had a good form of *bauhiniiflorum*. Exbury an unusual pinkish

yunnanense and Nymans a mauve *davidsonianum* with a very tight truss; this is not so attractive a garden plant as the pink form which was also shown but not given a first prize. Taken as a whole, the Triflorum and allied classes (41, 48, 49, 50, 51, 52) had as fine a collection of heavily flowered and well coloured branches as the competition has seen for many years.

In class 54 for any species grown under glass, the Coxes' showed a very interesting member of the Ovatum series, F 9341, probably *bachii* which is marked Q in the handbook; it had fairly small mauve flowers with a markedly red style. Mr Gorer got second prize with a yellow *macgregoriae* of Mr Black's collection, B 36.

HYBRIDS

With the hybrids came the rush of entries, and the difficulty of finding anything to say about them. The same cultivars turn up year after year; I only noted five which I had not seen before, to the best of my recollection. Mrs Potter produced a very handsome big-leafed hybrid 'Chinese Falcon' (probably a second generation cross of *falconeri* × *sinogrande*) with a beautifully shaped large truss of pure white flowers, a most desirable plant; Exbury had an unnamed cross between 'Naomi' and *litiense* which looked like a useful addition to the early yellow hybrids; and Bodnant showed 'Mikado' ('Cornish Cross' back crossed on to *griffithianum*) with curiously striped red and white flowers; 'Red Queen' ('Barclayi' × 'Gill's Crimson'), a really glowing scarlet, and a yellow clone of 'Lady Chamberlain' (in class 90) which did not seem an improvement on the many other yellows of this family.

But time and again, all or the vast majority of the entries in a class were represented by a single cultivar, even when the schedule did not so specify, for example 'Queen of Hearts' in class 77, 'Elizabeth' in class 86 and 'Matador' in class 78. One can puzzle about the criteria the judges employ to choose among these twins; but there is little more to say except that nearly all were well grown.

In the class for 8 hybrids Mrs Potter had a very fine selection, dominated by her 'Chinese Falcon', which won the first prize; Bodnant was second and fourth and Mr Kleinwort third. It was curious that Exbury, which had raised many, perhaps the majority, of prize-winning hybrids was merely Highly Commended. The class for three hybrids was won by Mr Cripps; and that for three hybrids from a competitor who had not won a first prize before 1970 by a newcomer, Mr H. P. Granlund, with an outstanding 'Marcia', 'Luscombei' and 'Cornish Cross'.

Bodnant dominated the hybrid classes, winning first prizes in class 64 (three sprays) with 'Colonel Rogers', 'Matador', and *augustinii* × 'Blue Bird', class 66 and the Crosfield Challenge Cup (6 hybrids raised by the exhibitor), class 67 (3 sprays of hybrids raised by the exhibitor), class 68 with 'Colonel Rogers', class 78 with 'Ruddigore', class 88 with an odd cross between *eximium* and *sinogrande*, and class 90 with their yellow clone of 'Lady Chamberlain'.

The Loder Challenge Cup, class 64, was won with an outstanding head of the golden 'Fortune' from Brodick; Hydon Nurseries were

second with 'Isabella Mangles', an old and beautiful pink *griffithianum* hybrid, and Mrs Potter third with her 'Chinese Falcon'. There were 29 entries.

One wonders why the schedule committee persists in having a separate class (69) for Loderi; these hybrids are notoriously bad at holding up their flowers when cut as just opening, and even more when forced open as is likely to happen at the end of April; as has been described in several earlier reports on the Rhododendron Show, all 22 entries had collapsed by the afternoon of the first day, and looked like so many face-flannels hung up to dry. It is also surprising that they keep a separate class (72) for Penjerrick. Thirty years ago it could be argued that this was a most beautiful cross, but with the new *lacteum* hybrids I do not think this is still true and both of these groups would find an appropriate place in the class of "any hybrid of which one parent is *griffithianum* and the other any species" (class 70) which is usually fairly empty. This year it was won by Mr Kleinwort with a very well preserved head of 'Cornish Cross'. The same competitor won class 71 for a cross between *griffithianum* and a hybrid with 'Yvonne'.

Mr Cripps won first prize for a *fortunei* hybrid (class 73) and also class 74 with 'Crest'. This class (one parent a species of the Campylocarpum or Souliei sub-series) was very well supported, with 22 entries of high quality; Windsor came second with a very elegant head of the yellow 'Roza Stevenson', a worthy memorial to this great rhododendron grower.

In class 75 (a hybrid of the Neriiflorum series) Mrs Potter won with 'David'; Bodnant was second and third with 'Phoebus' and 'Choremia' – the latter more usually seen in the March competition. In the other classes for predominantly red hybrids, Sir Giles Loder won first place for a *thomsonii* hybrid with 'Red Glow'; this class attracted 23 entries. Mr Kleinwort led the field of 8 'Queen of Hearts' (class 77); and Bodnant won the cross between *griersonianum* and a species (class 78) with 'Ruddigore'. Class 79, for a cross between *griersonianum* and a hybrid was won by Mr Gorer with 'Rosabel', possibly because the pink of this large truss was a welcome contrast to the prevailing reds; he also got third prize with 'Orestes' with its strikingly handsome foliage. Bodnant was second with the rather tender 'Laura Aberconway'.

Possibly because of the early season, the class (80) for a *lacteum* hybrid was poorly supported; General Harrison won with a quite good 'Lionel's Triumph'. In the new class 81 for a *yakushimanum* hybrid, Windsor won with its 'Seven Stars'. Considering the usual flowering time of *yakushimanum* at the end of May or beginning of June it seems unlikely that this class will ever attract many entries for the Rhododendron Show.

In the competition for *cinnabarinum* hybrids (class 82) there were several good entries; Windsor won with a very fine spray of the beautiful 'Trewithen Orange' whose colour, well described in its name, is still unique; Sir Giles Loder had a very strong-coloured 'Comely' for second prize.

In class 83 for tender hybrids, Brodick got first prize for a rather shabby branch of 'Countess of Haddington'. Their other entry, which

got second prize, seemed a much more attractive plant; it was an unnamed hybrid of *supranubium*, a white flower with cinnamon pink backing to the petals and good foliage, a discinct improvement on its identified parent. Bodnant was third with a good 'Tyermannii', which was also shown by Major Hardy.

Among the blue hybrids General Harrison won first prize in class 84 with his fine 'Saint Tudy', and Windsor first in class 85 with 'Electra' which is a cross between two varieties of *augustinii* and might be considered to have remained a species.

In the class for dwarfs (87) the Coxes got first prize for their 'Curlew' F.C.C., and second for a new and unnamed hybrid between *ludlowii* and *lutescens*; it is quite attractive but does not seem likely to be one of their winners.

In the class for a spray of any hybrid (91) Mr and Mrs Boscawen won first prize with an impressive pink clone of the Luscombei grex; and Sir Giles Loder again entered his 'Comely' for second prize. Windsor's 'Enborne' (an *aberconwayii* cross), though unplaced, caught the eye with its numerous tight trusses.

The evergreen azaleas were well shown, so heavily flowered that not a leaf was visible. Sir Giles Loder won both classes with long-established varieties.

It is a pity that the class for rhododendron leaves is so unimaginatively displayed; if it was not confined to two leaves of 6 species skewered on to a board, it could be both beautiful and educational. This year Exbury took first prize and Brodick second. A charming arrangement of *augustinii* and a pink form of the Gladys grex originating at High Beeches won a deserved first prize in class 106 for, by many years, our youngest competitor, Miss Jessica Boscawen.

GEOFFREY GORER

TRADE EXHIBITS

Three trade exhibits made bold splashes of colour, more tense than that provided by the trusses of the Competition. All these exhibitors showed many splendid hardy hybrids and the final choice for the award of The Rothschild Challenge Cup must have been reached with some difficulty.

The Cup as well as a Gold Medal was awarded to Messrs G. Reuthe Ltd., Fox Hill Nurseries, Keston, Kent for an exhibit to which a huge *R.* 'Loderi King George' and the bold foliage of *R. sinogrande* lent character. Other notable plants were *R.* 'Ightham Yellow' and *R.* 'Idealist', the soft yellow of which contrasted with a dark blue form of *R. augustinii*. Among dwarf species and hybrids they included *R. calostrotum* 'Gigha', *R.* 'Chikor' and their own cross between *R. keiskei* and *R. hanceanum*, recently named 'Princess Anne'.

Messrs Hillier and Sons of Winchester included, among many old favourites, complemented by deciduous and evergreen azaleas, the pinkish 'Loderi Patience' and the pale mauve 'Boddaertianum'. The delicate yellow of 'Letty Edwards' or of 'W. Leith' lent a cool note to

many other brilliant colours. Messrs Slocock Nurseries, Woking, Surrey received a Silver-gilt Flora Medal for their island exhibit to which a standard rhododendron in each corner gave a certain air of formality, the clone used being 'Elizabeth'. They showed a splendid 'Mrs G. W. Leak', their own handsome yellow 'China', another excellent yellow in 'Honey' and the shrimp-pink 'The Master' with individual flowers which must be among the largest in the family. Azaleas gave a pleasant finishing touch as was the case with the other two exhibits.

The Truro Show, 1974

The 1974 Truro Show was held after a remarkably mild winter, though not without its hazards. In this instance, we were subjected to the most appalling gale force winds during January – which in some gardens resulted in the loss of many valuable "wind break" trees. We were very lucky not to have to endure frosts just before the Show, which normally seems to happen: instead we had six weeks of virtually no rain. This resulted in some flower trusses never opening to their right proportions, and those of the Loderi hybrids were flopping on the plants.

The classes for trees and shrubs were of great interest, particularly the class for a 5-foot run, staged on 3 tiers, confined to eleven vases. The actual vases were not restricted to size, and there were large sprays of *R. arizelum* and *R.* Damaris and vases of *Michelia doltsopa* and *Embothrium coccineum*.

Magnolia classes were disappointing. This was certainly due to the lateness of the Show. The most outstanding was *Magnolia dawsoniana*, as exhibited by Mr Nigel Holman, a large pink flower becoming much deeper in colour towards the base of the petals.

This season has been a particularly good one for both rhododendrons and camellias. In the camellia classes the standard was extremely high and the competition very strong.

In the class for twelve different camellias Mr Holman won, showing 'R. L. Wheeler', 'C. M. Hovey', 'Tomorrow', 'Gauntlettii', 'Elsie Jury', 'Mildred Veitch', 'Debbie', 'Citation', 'Anticipation', 'Leonard Messel', 'Francie L', and 'Captain Rawes'. Also shown in this class were excellent blooms of 'White Nun', 'Frosty Morn', 'Auburn White', 'Grand Slam', 'Te Deum', and 'Julia France'. In the class for any 3 single flowers of *C. japonica* Colonel Colville won, showing 'Sylva' and 'Devonia'; 'Hatsu-Zakura' was also shown in this class. In the class for any 3 semi-double *japonicas* Mrs Johnstone of Trewithen won, showing 'R. L. Wheeler', 'Drama Girl' and 'Auburn White', which was also given a Cultural Award. In the class for any 3 anemone or paeony forms of *japonica*, there were twelve entries, and amongst the blooms being shown were 'Aaron's Ruby', 'C. M. Wilson', and 'Prof. Charles S. Sargent'. In the two classes for rose-formed or formal double *C. japonica* 'Augusto L. Gouveia Pinto', 'Te Deum', 'Montezuma', 'Eleanor Hagood' and 'Mathotiana' were amongst the cultivars exhibited. There were very few named cultivars of *Camellia reticulata* being shown in the single bloom classes, only 'Tali Queen' and 'Captain Rawes' and several forms of the single *reticulata*. Colonel Colville won the class for any 3 single flowered cultivars of *williamsii*, showing

'J. C. Williams', 'Mary Jobson', and 'J. C. Williams' × 'Alba Simplex'. 'Donation', 'Citation' and 'Bowen Bryant' were shown in the class for any 3 rose formed, formal double, anemone- or paeony-formed cultivars, which General Harrison won showing 'Debbie', 'Elegant Beauty' and 'Anticipation'. Mr Holman won the class for any 6 *williamsii* cultivars showing 'Anticipation', 'Elsie Jury', 'Debbie', 'Citation', 'Elegant Beauty' and 'Mildred Veitch'. 'Leonard Messel' was 1st, 2nd and 3rd when exhibited in the class for any hybrid of which *C. reticulata* is a parent. Mr Holman won the class for 6 sprays of different camellias, showing 'Mercury', 'R. L. Wheeler', 'Jupiter', 'Donation', 'Anticipation', 'Captain Rawes'. Major E. W. M. Magor won the class for a spray of any species other than *C. japonica* or *C. reticulata*, when he exhibited *Camellia cuspidata*.

In the rhododendron classes, the competition was very strong, particularly among the hybrids. Due perhaps to the lack of rain, rhododendrons seemed to be flowering out of sequence, which certainly made it difficult to decide which to show in certain classes. Mrs Johnstone won the class for six species showing *sinogrande*, a perfect truss of a rather pretty champagne hue, a very good form of *eximium*, and *delavayi*, as well as *griffithianum*, *niveum* and *thomsonii*. A nice form of *mollyanum* was also being exhibited. There were a large number of entries for the class of any species of the Falconeri or Grande series, and Mr Julian Williams' lovely pink form of *sinogrande* won. Also being shown were *coryphaeum* from Lamellen, *semnoides* from Tremeer, and a very good form of *falconeri*. A very nice blood-red *arboreum* from Trewithen won the class for any species of the Arboreum series.

Colonel Colville's *thomsonii* won its class for any species of the Thomsonii series: this is I think a very fine form indeed. Major Magor's *lyi*, a rarity in cultivation, was the only entry in the class for any species of the Maddenii or Edgeworthii series. There were only two entries for a species of a series not mentioned in the foregoing classes, and this was won by Lamellen's very pink *balfourianum* var. *agganiphoides*; also being shown was *aberconwayi*. Mr Holman won the class for three species, one spray of each, showing *sinogrande*, *arizelum* and *falconeri*. In the class for a spray of a species of the Triflorum or Heliolepis series, two very deep pink forms of *davidsonianum* were shown, differing from each other in that one had the flowers in tight clusters. *Burmanicum*, *iteophyllum* and *johnstoneanum* were shown in the class for a spray of the Maddenii or Edgeworthii series. *Vaseyi* was exhibited in the class for a deciduous azalea.

Having won both the Camellia and Magnolia Cups, Mr Holman then went on to win the Rhododendron Cup for his six hybrids, showing 'Yvonne', 'Mariloo', 'J. G. Millais', 'Letty Edwards', 'Mrs E. C. Pearson' and an un-named *houlstonii* hybrid. Tremeer was second, showing 'Lionel's Triumph', 'Loderi Fairyland', 'Naomi', 'John Barr Stevenson' and 'Robert Keir'. An un-named hybrid between *griffithianum* and *eriogynum*, a beautiful dark red, and also the very attractive 'Johnnie Johnstone' were amongst the hybrids being shown in the class for 3 hybrids. 'Lionel's Triumph' won the class for any hybrid, with a very nice yellow *macabeanum* cross second. In the class for three hybrids raised in the garden of the exhibitor, Major Magor won

with his very attractive orange 'Dicharb', 'Hermione' and 'Merope'. 'George Johnstone' won the class for any one hybrid raised in the garden of the exhibitor; this appropriately was shown from Trewithen. 'Zyxya' was second. In the spray classes Caerhays, with a lovely 'Royal Flush', won the class for any hybrid of which one parent is a species of the Cinnabarinum series. 'Trewithen Orange', shown by Mr Holman was second.

The National Trust Gardens of Cornwall had a very good exhibit in the centre of the floor; amongst the many rhododendron hybrids being shown were large vases of 'Lady Chamberlain', 'Alison Johnstone' and 'Damaris'. There was also a vase of *Davidia involucrata* – very early I thought, as none of the plants I had seen in gardens around Truro and north of it showed any signs of flowering for six weeks or so. A note on the labels saying from which gardens the plants came would prove extremely interesting.

South Down Nursery, Redruth and Treseder's of Truro both exhibited a wide range of rhododendrons and camellias that were of interest. Trehanes of Wimborne, once again were able to introduce us to one or two new varieties of camellias, and a large stand from Messrs Veitch provided a marvellous spectacle.

ANN MAGOR

Awards to Magnolias, 1973

Magnolia 'Princess Margaret', *F.C.C.* April 17, 1973, as a hardy flowering tree. This tree, now 20 feet in height, was raised from seed taken in 1957 from *M. campbellii alba*, but the flowers show the result of other parentage by their colour, outside shading from Red Purple Group 57B to C to D and inside cream tinged with Red Purple Group 68D. Each flower, formed before the leaves, is up to 11 inches across, has 11 obovate tepals from 3½ to 5 inches long by 2¼ to 3 inches wide, numerous stamens tinged Red Purple Group 70C outside. The scales of the flower bud are very hairy, with long silky hairs. In comparison with 'Charles Raffill' (F.C.C. 1966), the result of a cross between the two varieties of *M. campbellii* (var. *campbellii* × var. *mollicomata*) 'Princess Margaret' has a slightly deeper flower colour and the tepals are larger but less rounded. Specimen in Herb. Hort. Wisley. Exhibited by the Crown Estate Commissioners, The Great Park, Windsor, Berkshire.

Magnolia 'Charles Coates', *A.M.* June 12, 1973 as a hardy flowering shrub. This magnolia is a hybrid between the North American species *M. tripetala* and the Japanese *M. sieboldii* raised from seedlings first noticed by Mr Charles Coates at the Royal Botanic Gardens, Kew, about 1946. This plant flowered in 1958 and appears intermediate in its characteristics between the two parents. It forms a large, loosely branching shrub with ovate leaves similar in shape but smaller than those of *M. tripetala*, to 10 inches long by 5 inches across, covered with short white hairs on the lower surface, with an acute apex and cuneate base. The flowers resembling *M. sieboldii* formed at the same time as the leaves are terminal, about 4 inches across, erect, fragrant and cream coloured, the outer 3 tepals slightly tinged with green and the 6 to 8 inner tepals large, to 2½ inches long by 1½ inches wide with a slightly crumpled appearance, contrasting with the bright reddish-purple stamens. Specimen in Herb. Hort. Wisley. Exhibited by the Crown Estate Commissioners, The Great Park, Windsor, Berkshire.

Magnolia 'Caerhays Surprise', *A.M.* April 17, 1973 as a hardy flowering tree. This cross was made originally in 1959 between *M. campbellii* var. *mollicomata* and *M. lilliiflora* 'Nigra' and it first flowered in 1967, but is now only 15 feet high, 12 feet across, forming a bushy, deciduous shrub, being more suitable for a smaller garden than many other, larger magnolias. The flowers, produced before the leaves, of a size approaching *M. campbellii* var. *mollicomata*, but nearer in colour to the second parent, are held erect, 9 inches across, with 12 narrow tepals, the inner 3½ by 1¼ inches and the outer 4½ by 1¾ inches. The outside colour of the tepals shades from deep red purple (Red Purple Group 71A) at the base to 70B to C and inside is somewhat paler nearer

Red Purple Group 74C, sometimes with a creamy coloured centre stripe. The stamens are also tinged (Red Purple 71B) on the outside and the ovary is red. Specimens in Herb. Hort. Wisley. Exhibited by F. J. Williams, Caerhays Castle, Gorran, St. Austell, Cornwall.

Magnolia '*Anne Rosse*', *A.M.* April 17, 1973, as a hardy flowering tree. This plant, raised in 1963 from seed collected from *M. denudata*, has now reached 13 feet in height and 9 feet in width and first flowered in 1971. The erectly-held scented flowers of 7 to 8½ inches diameter, somewhat larger than those of the seed parent, having 9 rather narrow oblong to obovate tepals, the outer of 4 to 4½ inches long by 1½ to 1¾ inches wide and the inner somewhat smaller, 3 to 3½ inches by 1 to 1¼ inches. Although the inside of the flower is creamy-white, unlike *M. denudata*, the outside of the tepals is coloured, nearest to Red Purple Group 74D, shading to white at the edges and the stamens also are darker, nearest Red Purple Group 71B. Specimen in Herb. Hort. Wisley. Exhibited by The Countess of Rosse and the National Trust, Nymans Gardens, Handcross, Haywards Heath, Sussex.

Awards to Rhododendrons, 1974

Rhododendron arboreum var. *roseum* '*Tony Schilling*'. *F.C.C.* April 2, 1974. as a hardy flowering plant. Collector not recorded, raised and exhibited by the Director, Royal Botanic Gardens, Kew, from Wakehurst Place, Ardingly, Sussex.

Rhododendron diaprepes '*Gargantua*', *F.C.C.* July 11, 1974, as a hardy flowering plant. Collected by George Forrest, raised and exhibited by Crown Estate Commissioners, The Great Park, Windsor, Berks. (see description R.H.S. Journal Vol LXXVIII 1953. p. 393: Rhododendron & Camellia Year Book, 1953. p. 145).

Rhododendron '*Lionel's Triumph*' (*R. lacteum* × *R.* 'Naomi'), *F.C.C.* April 17, 1974, as a hardy flowering plant. For description see *R.* 'Lionel's Triumph' A.M. 4th May 1954. R.H.S. Journal, Vol. LXXIX 1954 p. 415.

Rhododendron '*Queen Elizabeth II*' (*R.* 'Idealist' × *R.* 'Crest'), *F.C.C.* April 30, 1974, as a hardy flowering plant. For description see *R.* 'Queen Elizabeth II' A.M. R.H.S. Journal, Vol. XCII (1967) p. 366.

Rhododendron '*Titness Park*' (*R. barbatum* × *R. calophytum*), *F.C.C.* February 19, 1974, as a hardy flowering plant. Crossed by Sir James Horlick, raised and exhibited by the Crown Estate Commissioners. For description see R.H.S. Journal, Vol. LXXIX, 1954, p. 416; Rhododendron and Camellia Year Book 1955, p. 89.

Rhododendron '*Beatrice Keir*' (*R. lacteum* × *R.* 'Logan Damaris'), *A.M.* April 17, 1974, as a hardy flowering plant. Trusses firm, rounded, up to 14 cm across, 18-20 flowered. Flowers openly campanulate. Green-Yellow Group 1C. Corolla 5-lobed 4.5 cm long by 7 cm across. Stamens 10, variable in length, held within corolla, or of equal length. Style of equal length. Stigma green. Calyx 5-lobed, glandular-fringed, yellow, 6 cm across, dark green above, undersurface free from indumentum. Crossed, raised and exhibited by Crown Estate Commissioners.

Rhododendron degronianum '*Gerald Loder*', *A.M.* April 2, 1974, as a hardy flowering plant. Flowers held firmly erect in 10-12 flowered terminal trusses. Corolla widely funnel-campanulate 4 cm long by 5 cm across, 5-lobed, white overlaid with shades of Red-Purple Group 68 and with darker lines along the centre of each petal: upper throat spotted with Red Purple Group 66A. Calyx yellowish, rudimentary, scaly. Stamens 10, irregular, included or held free, anthers creamy white with brown markings. Style held free; stigma greenish-yellow. pedicels stout, red, lightly scaly. Leaves up to 13 cm long by 4 cm wide, narrowly elliptic, acute, oblique, dark green, undersurface heavily plastered with fawn indumentum. Collector not recorded, exhibited by the Director, Royal Botanic Gardens, Kew, from Wakehurst Place.

Rhododendron '*Duchess of Cornwall*' (parentage unknown), *A.M.* March 12, 1974 as a hardy flowering plant. Trusses rounded, compact, up to 13 cm across, 18-20 flowered. Flowers widely funnel-campanulate, up to 4.6 cm long and 5.6 cm across, Red Group 55A with upper corolla sparingly spotted dark red, stamens 12-14, brown anthered, irregular in length, held within corolla, style red, held free of corolla. Calyx rudimentary. Pedicels up to 5 mm long. Leaves narrowly elliptic, up to 14 cm long and 5.5 cm across, undersurface covered with silvery plastered indumentum. Petioles up to 3 cm long. One of the hardy hybrids raised and introduced by R. Gill & Sons of Cornwall, probably circa 1910. Exhibited by Hillier & Sons, Winchester, Hants.

Rhododendron '*Hotei*' (*R.* 'Goldsworth Orange' × (*R. souliei* × *R. wardii*)), *A.M.* April 30, 1974, as a hardy flowering plant. Truss round, 10 to 12 flowered, up to 12 cm across; flowers openly-campanulate. Corolla 5-lobed, 5 cm long by 6 cm across, Yellow Group 12C with deeper shading of 12B. Calyx yellow, 6 irregular joined lobes up to 2 cm long. Stamens 12 to 14, irregular in length, held within corolla; stigma green. Leaves narrowly elliptic, up to 12 cm long by 4.5 cm across, dark green above, pale green below, free from indumentum. Crossed by Sifferman (U.S.A.), raised and exhibited by Glendoick Gardens, Ltd. (E. H. M. and P. A. Cox), Glendoick, Perth, PH2 7NS.

Rhododendron '*Hullaballoo*' (*R. fortunei* × *R. thomsonii*), *A.M.* April 30, 1974, as a hardy flowering plant. Truss 10 to 12 flowered, loose, up to 16 cm across. Corolla 5-lobed, openly campanulate, 6 cm long by 8 cm across, Red-Purple Group 61 paling towards lip of corolla with the darker staining of 61C centrally on the reverse of each segment and a small blotch of Red Group 53A in the upper throat. Stamens 10, irregular in length, held within corolla; filaments white, anthers dark brown. Style of equal length, pale green; stigma green. Calyx 5 irregular joined lobes, up to 8 mm long, yellowish-green, faintly flushed red-purple, hair fringed. Leaves elliptic, up to 11.5 cm long by 6 cm across, dark green above, paler beneath and free of indumentum. Crossed by Sir Edmund Loder, raised and exhibited by the Hon. H. E. Boscawen, The High Beeches, Handcross, Sussex.

Rhododendron hypenanthum '*Annapurna*' *S.S. & W.* 9090, *A.M.* April 30, 1974, as a hardy flowering plant. Truss compact, 8 or 9 flowered; flowers narrowly tubular. Corolla 5 deeply divided frilled lobes, up to 15 mm long by 16 mm across, Yellow Group 4D with darker

staining of 4c. Calyx 5 deeply divided lobes, up to 5 mm long, green, hair-fringed and lightly covered with colourless scaly indumentum. Stigma green. All held within densely hair throat of corolla. Leaves elliptic, up to 2 cm long by 1 cm across, dark green and glossy above, densely covered below with dark brown scaly indumentum. Collectors Stainton, Sykes and Williams, in Nepal, raised and exhibited by Glendoick Gardens Ltd.

Rhododendron '*Manor Hill*' ((*R.* 'Dido' × (*R.* 'Jalisco' × *R. yakushimanum*)), *A.M.* April 30, 1974, as a hardy flowering plant. A shrub of very dwarf compact habit, truss 8 or 9 flowered: flowers openly campanulate. Corolla 5-lobed, 4 cm long by 4.5 cm across, Yellow-Orange Group 16B, paling at lip to 16D with some darker staining of Yellow-Orange Group 16A and some flushing of Red Group 37A. Calyx yellow-orange, 5 deeply divided irregular lobes up to 2.8 cm long, fringed with pale hairs. Stamens 10 or 11, irregular, held within; filaments yellow, anthers brown. Style of equal length. Style and stigma greenish yellow. Leaves narrowly obovate, 9 cm long by 4 cm across, dark green above, paler below and sparsely covered with brown indumentum. Crossed, raised and exhibited by Crown Estate Commissioners.

Rhododendron racemosum '*White Lace*', *A.M.* April 30, 1974, as a hardy flowering plant. Flowers axillary funnel-shaped in clusters of 3 or 4, forming terminal racemes. Corolla 5-lobed up to 13 mm long by 12 mm across, White Group 55G. Outer corolla lightly scaly. Calyx rudimentary, green. Stamens 10, irregular, held free, filaments white, anthers yellowish-white. Style white, held free; stigma red. Leaves elliptic, up to 3.5 cm long by 1.7 cm across, dark green above, glaucous and scaly beneath. Collector not known, raised and exhibited by Glendoick Gardens Ltd.

Rhododendron '*Red Rum*' (*R.* 'Barclayi' × *R. forrestii* var. *repens*), *A.M.* April 2, 1974, as a hardy flowering plant. Flowers terminal in 4 or 5 flowered loosely held trusses. Corolla 5-lobed widely funnel-campanulate, 4.5 cm long by 5 cm across. Red Group 46B. Calyx 5 irregular joined lobes, up to 6 mm long, red, sparingly hairy, glandular-ciliate at apex. Stamens 10, included, irregular in length, filaments white, anthers dark brown. Style red, included. Leaves narrowly oblong to oblong, 8.5 cm long by 3.3 cm across, upper surface mid-green, lower surface paler, free from indumentum. Crossed raised and exhibited by Crown Estate Commissioners.

Rhododendron '*Sarled*' (*R. sargentianum* × *R. trichostomum* var. *ledoides*), *A.M.* May 20, 1974, as a hardy flowering plant. Crossed, raised and exhibited by Capt. Collingwood Ingram, F.L.S., V.M.H., The Grange, Benenden, Cranbrook, Kent.

Rhododendron maximum '*Summertime*', *A.M.* July 9, 1974, as a hardy flowering plant. Truss up to 10 cm across, compact, rounded, 22-24 flowered. Corolla broad funnel-shaped, comprising 5 deeply divided lobes, white, suffused towards lip with shades of Red-Purple Group 68. Upper throat heavily spotted yellow-green. Calyx 5-lobed, greenish, glandular-hairy. Stamens 10, irregular in length, held within or of equal length with corolla; anthers close to Greyed-Purple 186D. Style held within, stigma red. Leaves oblanceolate, up to 14 cm long

and 4-5 cm across, dark green above, undersurface lightly covered with brown plastered indumentum. Collector not recorded, raised and exhibited by Crown Estate Commissioners.

Rhododendron spinuliferum '*Jack Hext*' *A.M.* April 2, 1971, as a hardy flowering plant. Flowers axillary in threes and fours, occurring towards the ends of shoots and forming loosely held terminal clusters. Corolla tubular-campanulate, 2 cm long by 1.5 cm across, Red Group 47B paling a little towards base, with 5 rounded, deeply divided lobes. Calyx green rudimentary, scaly. Stamens held free, 10, irregular in length. Filaments up to 2.8 cm long, reddish; anthers black. Style 3 cm long reddish, with greenish-yellow stigma. Leaves elliptic, 7 cm long by 3.5 cm wide; acute, obtuse, undersurface pale green, sparsely scaly. Younger shoots softly pubescent. Collector not recorded, raised and exhibited by Nigel T. Holman, Chyverton, Zelah, Truro, Cornwall.

Rhododendron '*Snowy River*' (*R. ririei* × *R. niveum*), *A.M.* April 2, 1974, as a hardy flowering plant. Flowers in a rounded truss of usually 13 to 15 flowers. Corolla 5-lobed widely funnel-campanulate, 4.5 cm long by 4.5 cm across. Purple Group 76B with deeper veining and suffusing of Purple Group 77A. Calyx purplish-red rudimentary. Stamens 10, included, irregular in length. Filaments purple, anthers brown. Style of equal length. Style and stigma reddish-purple; pedicels pubescent. Leaves narrowly obovate, 15 cm long by 5.5 cm across, mid-green above, undersurface thinly plastered with pale fawn indumentum. Crossed and raised by the 2nd Lord Aberconway, exhibited by Lord Aberconway and the National Trust, Bodnant, Tal-y-cafn, Denbighshire.

Rhododendron '*Bishopsgate*' (*R.* 'Jalisco' × *R.* 'Crest'), *P.C.* April 30, 1974, as a hardy flowering plant. Truss rounded, full, 10 to 12 flowered; flowers openly campanulate. Corolla 7-lobed, up to 5.5 cm long by 9.5 cm across. Yellow Group 5D variably flushed Red Group 37 and with blotching of Red Group 53A in upper throat. Calyx 7 deeply divided irregular lobes, yellow, fringed with glandular hairs, upper segments edged and stained with Red Group 53A. Stamens 15, irregular, held within; filaments yellow, anthers brown. Style of equal length, reddish-green and glandular hairy; stigma black. Leaves elliptic, up to 13 cm long by 6 cm across, dark green above, paler below; free of indumentum. Crossed, raised and exhibited by Crown Estate Commissioners.

Rhododendron '*Hope Findlay*' (('Loderi' × 'Earl of Athlone') × 'Creeping Jenny')), *P.C.* April 2, 1974. Crossed, raised and exhibited by Crown Estate Commissioners.

Rhododendron '*Janet Ward*' (sport of 'Cynthia'), *P.C.* May 20, 1974, as a hardy flowering plant. Raised and exhibited by Slocock Nurseries, Goldsworth, Woking, Surrey.

Rhododendron '*Lamellen Dante*' (*R. dichroanthum* × *R. eriogynum*), *P.C.* June 11, 1974. Crossed by the late Mr E. J. P. Magor, raised and exhibited by Major E. W. M. Magor, Lamellen, St. Tudy, Bodmin, Cornwall.

Rhododendron ludlowii, *P.C.* May 20, 1974, as a hardy flowering plant. Collector not recorded, raised and exhibited by Capt. Collingwood Ingram.

Rhododendron 'Margaret Findlay' (*R. griersonianum* × *R. wardii*), *P.C.* May 20, 1974, as a hardy flowering plant. Crossed by Sir James Horlick, raised and exhibited by Crown Estate Commissioners.

Rhododendron 'Princess Sonya' (parentage not recorded), *P.C.* May 20, 1974 as a hardy flowering plant. Crossed, raised and exhibited by G. Taylor, Burbank Seed Farms, Pacific Highway, Wyong 2259, New South Wales, Australia.

Rhododendron 'Wonder Girl' (parentage not recorded), *P.C.* May 20, 1974, as a hardy flowering plant. Crossed, raised and exhibited by G. Taylor, Burbank Seed Farms.

ADDITIONS TO THE INTERNATIONAL RHODODENDRON REGISTER 1974

The following list contains names registered up to June 30, 1974.

(Colour references, except where otherwise stated, are to the R.H.S. Colour Chart)

Abe Arnott ('Marchioness of Lansdowne' × 'Lee's Dark Purple'). Truss 16 flowered. Flowers H.C.C. Orchid Purple 31/2 with heavy blotch Dahlia Purple 931/1 on upper lobe, into throat and on two side lobes. Crossed, raised and introduced (1973) by Edwin O. Weber, Seattle, Washington, U.S.A.

Amigo (*aberconwayi* × 'Witch Doctor'). Truss 12-15 flowered. Buds deep pink. Corolla: Edge R.H.S. Red Group 55B, shading to yellow Group 10A in centre; heavily spotted Red Group 51A. Crossed, raised and introduced by Dr David Goheen, P.O. Box 826, Camas, Wa. 98607, U.S.A. (1973).

Annapurna (form of *hypenanthum* (S.S.&W. 9090)). Corolla pale yellow. Collected by Stainton, Sykes and Williams, raised and introduced (1974) by Glendoick Gardens Ltd., Perth, Scotland.

Annelies van de Ven ('Marion' × 'Mrs Henry Shilson'). Truss 15 flowered. Red-Purple Group 63C, lighter centre. Crossed, raised and introduced (1973) by K. Van de Ven, Olinda, Victoria, Australia.

Beatrice Keir ('Logan Damaris' × *lacteum*). Truss 18-20 flowered. Green-Yellow Group 1C. Crossed by D. B. Stevenson, raised and introduced (1974) by Crown Estate Commissioners, Windsor, U.K. A.M. 1974.

Bellvale (*carolinianum* × *dauricum* (white form)). Truss 10-12 flowered. Light pink with mauve flare. Crossed, raised and introduced by Warren Baldsiefen, Box 88, Bellvale, N.Y. 10912, U.S.A. (1973).

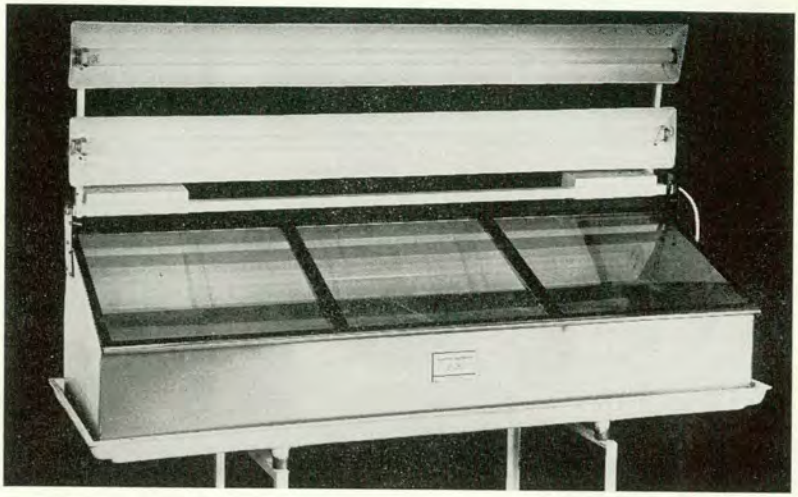
Bishopsgate ('Jalisco Elect' × 'Crest'). Corolla pink. Crossed, raised and introduced (1974) by Crown Estate Commissioners, Windsor, U.K.

Bravo (*R. catawbiense* var. *album* × (*fortunei* × *arboreum* × *griffithianum*)). Truss 11 to 12 flowered; light purplish pink. Nickerson 4 RP 7.5/6 shading to lighter in centre with sparse dorsal brown spotting. Crossed, raised and introduced (1970) by Dr David G. Leach, N. Madison, Ohio, U.S.A.

Bruce Brechtbill (bud sport of 'Unique' × *campylocarpum*). Truss 10-12 flowered. Corolla pale pink with some yellow in throat. Breeder not recorded, raised and introduced (1970) by Brechtbills Nursery, Eugene, Oregon, U.S.A.

Callight (*R. calophytum* × 'Neon Light'). Truss 22 flowered: Red-Purple Group 63D becoming lighter with age: maroon eye. Crossed, raised and introduced (1973) by K. Van de Ven, Olinda, Victoria, Australia.

The Dewpoint Cabinet



THE DEWPOINT CABINET was described in the R.H.S. Journal of June 1973. A patented system is used to create ideal conditions for propagation and growth. It needs a little electricity and a space 5 ft 6 ins by 2 feet where the temperature does not fluctuate too much, maybe the garage but certainly not in the greenhouse. The tedium of spraying and ventilating can be forgotten, it is only necessary to replace the water used once a fortnight.

Warm water warms the rooting medium. A stream of air is bubbled through the warm water and released into the cabinet. As it cools it becomes over-saturated and so prevents cuttings drying out. Lighting is by fluorescent lamps. Most of the metal is stainless steel.

Results with rhododendrons are remarkable. The seedling illustrated (of Rh. auriculatum) shows three 'years' of growth but it is only nine months old. The percentage 'strike' is so good that one horticultural college puts cuttings into peat pots to avoid root disturbance. Under natural conditions rhododendrons are probably not in active growth for many hours in any day. In the cabinet they probably do not grow any faster per hour but they grow several times as many hours every day, including winter.

The cabinet holds 8 standard seed trays. The maximum height is 15 inches.

This photo shows a 9 month old Rhododendron seedling raised in the cabinet.

A leaflet with details and price (about £275) may be obtained from
RICHARDS DEWPOINT LTD SEASCALE CUMBRIA CA20 1QA
phone Seascale 323

Canadian Sunset (*yakushimanum* × 'Gipsy King'). Truss1 3fl owered. Red Group 52A in bud. Corolla Red Group 52A to 52B fading in centre to Orange Group 27D with yellow cast. Obtained as seedling from R. Henny, raised and introduced (1974) by Mr and Mrs E. J. Linington, Vancouver, B.C.

Caroline de Zoote ('Bow Bells' × ('Socrianum' × 'Rima')). Truss 10 flowered. Flowers white. Crossed and raised by A. F. George, introduced (1974) by Hydon Nurseries Ltd., Godalming, Surrey, U.K.

Cary's Red (unknown × unknown). Truss 20-22 flowered. Dark Red (same colour as 'America'). Crossed, raised and introduced by Edward A. Cary, 246 Boston Turnpike, Shrewsbury, Mass. 01545, U.S.A. (1973).

Crimson Glow ('Marion' × 'Shilsonii'). Truss 20 flowered; Red Group 53C, lighter centre, slightly spotted on all lobes. Crossed, raised and introduced (1973) by K. Van de Ven, Olinda, Victoria, Australia.

Edwin O. Weber ('Purpureum Elegans' × 'Madame Albert Moser'). Truss 28 flowered, H.C.C. Imperial Purple 33/1 with large blotch Uranium Green 63 on upper lobes and spot on side lobes. Crossed, raised and introduced (1973) by Edwin O. Weber, Seattle, Washington, U.S.A.

Ethel V. Cary ((*metternichii* × 'Mrs Chas. S. Sargent') × self). Truss 18-20 flowered, corolla colour with orchid edge shading to white in centre; reverse solid orchid. Crossed, raised and introduced by Edward A. Carey, 246 Boston Turnpike, Shrewsbury, Mass. 01545, U.S.A. (1973).

Eulalie Wagner ('J. H. Van Nes' × 'Loderi King George'). Truss 12 flowered full. H.C.C. Fuchsine Pink 627/2 to 627/1, with darker veins. Crossed and raised by Halfdan Lem, and introduced (1962) by Carl P. Fawcett, Tacoma, Washington, U.S.A.

Fairweather (('Fabia' × *yakusimanum*) × 'Hello Dolly'). Truss 15-16 flowered. Red Group 41D, fading to Yellow-Orange 18D. Crossed, raised and introduced (1971) by Dr E. C. Brockenbrough, Bellevue, Washington, U.S.A.

Finlandia (*catawbiense* var. *album* 'Catalgla' × ('Adriaan Koster' × *williamsianum*)). Truss 12 flowered. White, buds pale pink. Nickerson 2.5 R 9/3. Crossed, raised and introduced (1972) by Dr David G. Leach, N. Madison, Ohio, U.S.A.

Flair (*catawbiense* var. *album* 'Catalgla' × ('Adriaan Koster' × *williamsianum*)). Truss 11-12 flowered; bud colour light to strong purplish pink Nickerson 5 RP 7.5/8, corolla white with faint ivory shading on dorsal lobe. Crossed, raised and introduced (1970) by Dr David G. Leach, N. Madison, Ohio, U.S.A.

Fragrant Gold (unknown Knap Hill azalea × unknown). Truss 15-20 flowered; fragrant; light orange yellow Ridgeway 111 Md, spotted deep chrome 111 17b reverse deep chrome. Seed, from unknown English source, grown by de Wilde Nursery, Shiloh, N.J., plant raised and introduced by Dr Roy Magruder, Washington, D.C., U.S.A.

Gerald Loder (form of *degronianum*). Truss 10-12 flowered; white overlaid with shades of Red-Purple Group 68 and with darker lines along the centre of each petal. Upper throat spotted with Red-Purple Group 66A.

Goldendale (((('Loderi' × *wardii*) × *campylocarpum*) × 'Skipper'). Truss 8-14 flowered. Opening flower buds Dark Red. Corolla colour: butter yellow (darker than 'Crest') with dark red centre in throat. Crossed, raised and introduced (1973) by Charles McNew, 2710 Mt. Brynion Road, Kelso, Wa. 98626, U.S.A.

Guardian — (('Albatross' × *discolor*) × 'Tally Ho'). Truss 8-10 flowered, light coral pink or peach pink, shading light golden apricot on upper 3 lobes, with small red throat. Corolla Nickerson 5 R 8/6 or 2.5 R 8/5 upper lobes 2.5 YR 9/3, throat 5 R 4/13, minimal speckling on corolla. Corolla reverse slightly deeper colour. Crossed by Halfdan Lem, raised and introduced (1971) by Merlin and Founta Butler, Bothel, Washington, U.S.A.

Gwerfyl Moss — ('Purple Splendour' × 'Romany Chai'). Truss 15-17 flowered; Red-Purple Group 74A with flash of 71A. Crossed, raised and introduced (1974) by William Moss, Afonwen, Flint, Wales.

Halesite Maiden — (parentage unknown). Truss 12 flowered; Red-Purple Group 57C. Crossed and raised by Charles Dexter and introduced (1973) by Dorothy Schlaikjer, Long Island, N.Y., U.S.A.

Halfdan Lem — ('The Hon. Jean Marie de Montague' × 'Red Loderi'). Truss 11-13 flowered. Red Group 53B with spotting on upper lobe. Crossed and raised by Halfdan Lem, introduced (1972) by A. R. S. Seattle Chapter.

Hello Dolly — ('Fabia' × *smirnowii*). Truss 10 flowered. Corolla porcelain Rose H.C.C. 620/1 blending to Naples Yellow 403 (Yellow Group 11A) in throat. Fades to light yellow with age. Crossed, raised and introduced by Halfdan Lem, Seattle, Washington, U.S.A. (Reg. 1974 by J. A. Elliott).

Herbert Mitchell — (form of *R. cerasinum*). Collected by F. Kingdon-Ward (No. 6923), raised and introduced (1973) by the Countess of Rosse and the National Trust, Nymans Garden, Handcross, Sussex, U.K. A.M. 1973.

Hullaballoo — (*R. fortunei* × *R. thomsonii*). Truss 10 to 12 flowered: Red-Purple Group 61D. paling towards lip of corolla, with darker staining of 61C centrally on reverse of each segment and small blotch of Red Group 53A in upper throat. Crossed by Sir Edmund Loder, raised by the Hon. H. E. Boscawen, Handcross, Sussex, U.K. A.M. 1974.

James Comber — (form of *R. sanguineum* subsp. *haemaleum*). Collector not recorded, raised and introduced (1973) by the Countess of Rosse, and the National Trust, Nymans Garden, Handcross, Sussex, U.K. A.M. 1973.

Jack Hext — (form of *R. spinuliferum*). Flowers axillary in threes and fours, forming loosely held terminal clusters: Red Group 47B, paling a little towards base. Collector not known, raised and introduced (1974) by N. T. Holman, Chyverton, Zelah, Cornwall, U.K.

Jingle Bells — ('Fabia' × 'Ole Olson'). Truss 8-10 flowered, buds currant 821 H.C.C. Corolla colour Orpiment Orange 10/2 H.C.C. fading to Naples Yellow 403 with age, throat both inside and outside, currant red 821/2, inside with slight 2 rays of spots same colour as throat extending toward outer edges of dorsal lobe. Throat colour does not fade with age. Crossed and raised by Halfdan Lem, introduced by James A. Elliott, Rt. 4, Box 544, Astoria, Or. 97103, U.S.A.

John Dosser — ('Blue Peter' × 'Corry Koster'). Truss 19 flowered: Purple-Violet Group 80A. Paler centre, black blotch on upper lobe. Crossed and raised by K. Van de Ven, and introduced (1973) by D. Dosser, Toolangi, Victoria, Australia.

King's Ransom — (*campylocarpum* × unknown). Truss 10-14 flowered. Yellow Group 3D with blotch in throat Greyed-Purple Group 187A. Crossed by the late Stanley G. Irvine, raised and introduced (1974) by Mr and Mrs H. H. McCuaig, Vancouver, B.C.

Kurt Herbert Adler — (*R. phaeopeplum* × *R. lochae*). Truss 7-8 flowered; Mandarin Red. H.C.C. 17/3, with deeper 17/1 in throat. Crossed by T. Lelliott, Boronia, Australia, raised and introduced (1974) by Strybing Arboretum, San Francisco, U.S.A.

Lamellen Dante (*dichroanthum* × *eriogynum*). Crossed by E. J. P. Magor, raised and introduced (1974) by E. W. M. Magor, St. Tudy, Cornwall, U.K. P.C. 1974.

Landon (parentage unknown – evergreen azalea). Corolla Red-Purple Group 66c with dark magenta spotting. Breeder unknown, raised by Ralph W. Pennington, introduced (1973) by The Landon School, Bethesda, Maryland, U.S.A.

Little White Dove (*fortunei* × *yakushimanum*). Truss 10-12 flowered. White, buds light rose-pink. Crossed by Ben Lancaster, raised and introduced (1971) by James A. Elliott, Astoria, Oregon, U.S.A.

Louisa ('Chinyeyi' (*satsuki*) × 'W. Leith') (evergreen azalea). Truss 1-2 flowered, corolla Nickerson 10 RP 6/12 - 7/8 with inconspicuous spotting on 3 lobes 10 RP 5/12, colour effect fresh pale pink. Crossed by Dr Tsuneshiga Rokujo (Japan), raised and introduced (1972) by Mary Louisa B. Hill, Vineyard Haven, Mass., U.S.A.

Mannie Weber (*catawbiense* 'Boursault' × 'Madame Albert Moser'). Truss 14 flowered. H.C.C. Imperial Purple 33/2 with edging of 33: spotting on upper lobe of Fern Green 0862/3. Crossed, raised and introduced (1973) by Edwin O. Weber, Seattle, Washington, U.S.A.

Manor Hill ('Dido' × ('Jalisco' × *yakushimanum*)). Truss 6-8 flowered. Yellow-Orange. Crossed, raised and introduced (1974) by Crown Estate Commissioners, Windsor, U.K.

Marilee (*nakaharai* × open pollinated), (evergreen azalea). Truss 2 flowered, corolla Nickerson 2.5 R 7/8 to 6/11, spotting on 3 lobes. 2.5 R 4/10 to 10 RP 4/12. Crossed by Dr Tsuneshige Rokujo (Japan), raised and introduced by Mary Louisa B. Hill, Vineyard Haven, Mass., U.S.A.

Mary Jane (*yakushimanum* × 'Leo'). Truss 12 flowered H.C.C. Carmine Rose 621 fading to white. Crossed, raised and introduced by Mrs Le Vern Freimann, 1907 – 38th Street, Bellingham, Wa. 98225, U.S.A. (1973).

Maryke (*discolor* × 'Fabia'). Truss 13-15 flowers; edges of corolla strong purplish pink 5 RP 7/9 (Nickerson) blended towards centre which has tones of yellow 7.5, moderate reddish-brown 7.5 R 3/6 in throat. Crossed, raised and introduced (1955) by T. Van Veen Sr., Van Veen Nursery, Portland, Oregon, U.S.A.

Mini Bell (*tephropeplum* × unknown). Truss 35 flowered, Red-Purple Group 35B to 35C, upper petal spotted. Crossed by the late Stanley G. Irvine, raised and introduced by Mr and Mrs H. H. McCuaig, Vancouver, B.C.

Molly Ann ('Elizabeth' × un-named, unknown seedling). Truss 7 flowered, corolla colour: H.C.C. Crimson 22 with small red spots on upper lobes. Crossed, raised and introduced by Mrs Le Vern Freimann, 1907 – 38th Street, Bellingham, Wa. 98225, U.S.A. (1973).

Mrs Betty Hager ((*decorum* × *discolor*) × 'Madame de Bruin'). Truss 15 flowered, buds R.H.S. Red-Purple Group 63B, corolla colour Red-Purple Group 66C, with blotch and spotting on upper lobe, Red Group 53B. Crossed, raised and introduced by Alfred A. Ranstein, 230 Union Ave, Holbrook, N.Y. 11741, U.S.A. (1973).

Norseman (parentage unknown). Truss 12-15 flowered, colour: Carmine 21/1 H.C.C. Scarlet 19 in throat. Crossed by Halfdan Lem, raised and introduced by James A. Elliott, Rt. 4, Box 544, Astoria, Oregon 97103, U.S.A. (1972).

Peter Barber ('Crest' × 'Jalisco'). Truss 9-11 flowered, Yellow Group 12C. Crossed, raised and introduced (1974) by Edmund de Rothschild, Exbury, Southampton, Hants., U.K.

Princess Anne — (*keiskei* × *hanceanum*). Trusses 6 flowered. Flowers Yellow-Green Group 154D. Crossed, raised and introduced (1961) by W. S. Reuthe, Keston, Kent, U.K.

Red Paint — ((('Fabia' × *haematodes*) × 'Earl of Athlone') × 'The Hon. Jean Marie de Montague'). Truss 10-14 flowered, clear bright red with no blue, a few tine spots on upper lobe. Crossed by Dr David Goheen, raised and introduced by Charles McNew, 2710 Mt. Brynion Road, Kelson, Wa. 98626, U.S.A. (1973).

Red Rum — ('Barclayi' × *forrestii* var. *repens*). Truss 4 or 5 flowered; Red Group 46B. Crossed, raised and introduced (1974) by Crown Estate Commissioners, The Great Park, Windsor, Berks. A.M. 1974.

Redpoll — (*forrestii* var. *repens* × 'Rocket'). Truss 8 flowered. Flowers Red Group 64A. Crossed and raised by A. F. George, introduced (1974) by Hydon Nurseries Ltd., Godalming, Surrey, U.K.

Rosey Ball — (form of *R. rubiginosum*). Truss: inflorescence. A 4in. ball of up to 30 flowers, made up of several trusses of 6-8 flowers each. Corolla strong purplish pink 7.5 RP 7/10 (Nickerson) with strong Red 2.5 R 5/12 spotting on dorsal lobe. Collected by Rock Expedition 1948, raised and introduced by Dr Carl H. Phetteplace, Star Route, Leabens, Or. 97401, U.S.A.

Rowland P. Cary — (*metternichii* × 'Van der Hoop'). Truss 17-20 flowered. Buds dark pink, corolla blush pink with light tan spotting on dorsal lobe. Crossed, raised and introduced by Edward A. Carey, 246 Boston Turnpike, Shrewsbury, Mass. 01545, U.S.A. (1973).

Ruth A. Weber — ('Marchioness of Lansdowne' × 'Old Port'). Truss 17 flowered; H.C.C. Bishop's Violet 34/2 with light spotting of Dahlia Purple 931 on upper lobe. Crossed, raised and introduced (1973) by Edwin O. Weber, Seattle, Washington, U.S.A.

Sausalito — (*calophytum* (pink form) × 'Loderi Venus'). Truss 11-14 flowered. Colour Nickerson 5 RP, inside light pink, 5 RP with red blotch 2.5 R 4/10 on upper lobe. Crossed by John Henny, raised and introduced (1972) by the Bovees, Portland, Oregon, U.S.A.

Shalimar — (unknown) (from open pollinated Dexter hybrid × unknown). Truss 12 flowered. R.H.S. Red-Purple Groups 73D shaded 68D. Collected by Paul Vossberg, raised and introduced by Mrs Dorotny Schlaikjer, Box 193, Halesite, L.I., N.Y. 11743, U.S.A. (1973).

Shalom — ('Anna' × 'Antoon Van Wellie'). Truss 16 flowered. Buds R.H.S. Red-Purple Group 58C, corolla colour white shaded Red-Purple Group 58D with spotting of Red-Purple 59B. Crossed by Halfdan Lem, raised and introduced by Nathaniel Hess, Sloames Court, Sanos Point, L.I., N.Y. 11050, U.S.A. (1973).

Snow Hill — (*wadai* × *mucronatum*). White with green eye. Crossed, raised and registered (1974) by Crown Estate Commissioners, Windsor, U.K.

Snowy River — (*ririei* × *niveum*). Trusses 13-15 flowered; Purple Group 76B with deeper veining and suffusing of Purple Group 77A. Crossed and raised by the 2nd Lord Aberconway, introduced by Lord Aberconway and the National Trust, Bodnant, Tal-y-cafn, Denbighshire, North Wales. A.M. 1974.

Spring Melody — ('Goldie' × unnamed Mollis-yellow seedling), (deciduous Azalea). Truss 10-12 flowered, H.C.C. Buttercup Yellow 5, Gold blotch. Crossed by Lanny Pride, raised and introduced by Warren Baldsiefen, Box 88, Bellvale, N.Y. 10912, U.S.A. (1973).

Stockholm — (*catawbiense* var. *album* 'Catalgla' × *decorum* (HU Expedition)). Truss 14 flowered white with small dorsal posterior dual-rayed spotting strong greenish yellow, Nickerson 10 Y 7.5/9. Crossed by D. Hobbie, raised and introduced (1972) by Dr David G. Leach, N. Madison, Ohio, U.S.A.

Summertime — (form of *maximum*). Truss 22-24 flowered; white suffused towards lip with shades of Red-Purple Group 68, upper throat heavily spotted yellow-green. Collector not recorded, raised and exhibited by Crown Estate Commissioners, The Great Park, Windsor, U.K. A.M. 1974.

Sunset Lake — (*griersonianum* × (*arboreum* × *decorum*)). Trusses 8-12 flowered; light crimson to crimson lake, with a deep red flush in throat. Crossed, raised and introduced by Oswald Blumhardt, RD9, Whangarei, New Zealand.

Sunset Queen — (*griersonianum* × (*arboreum* × *decorum*)). Trusses large, loose, colour rich coral rose. Crossed, raised and introduced by Oswald Blumhardt, RD9, Whangarei, New Zealand.

Tioga — (('Jalisco Elect' × ('Fawn' × 'Sarita Loder')). Truss 8 flowered, corolla primrose yellow 601/2-601/3 (H.C.C.) with a few light reddish brown spots. Crossed, raised and introduced by Walter V. Joslin, Rt. 4, Box 338, Coos Bay, Or. 97420, U.S.A.

Tonga — (unknown × unknown), (deciduous azalea). Truss 10 flowered, H.C.C. Dutch Vermilion 7A. Seed from New Zealand, raised and introduced by Walter Baldsiefen, Box 88, Bellvale, N.Y. 10912, U.S.A. (1973).

Tony Schilling — (form of *R. arboreum* var. *roseum*). Trusses up to 25 flowers; mid rose-pink, spotted and streaked crimson, uppermost nectar pouch blotched purple-red. Collector not recorded, introduced by the Director, Royal Botanic Gardens, Kew, from Wakehurst Place, Sussex, U.K. A.M. 1974.

Tropic Sun — (Bud sport of 'Hino Crimson'), (evergreen Azalea). U.S. Plant Patent 3048. Truss 8 flowered, corolla Orange-Red. Patented 1971, raised and introduced by Akehurst Nurseries Inc. 4428 East Joppa Road, Perry Hall, Md. 21128, U.S.A.

Umpqua Queen — (parentage unknown), (deciduous Azalea). Truss 12 flowered; flowers Yellow Group 11A with Yellow-Orange 14A blotch on dorsal outer lobe. Raised by Ralph Schoneman, introduced (1974) by Theiss Azalea Garden, Canyonville, Oregon, U.S.A.

Vallerie Kay — (*yakusimanum* × 'Leo'). Truss 20 flowered, H.C.C. Carmine 21/1 fading to 21/3. Crossed, raised and introduced by Mrs Le Vern Freimann, 1907 – 38th Street, Bellingham, Wa. 88225, U.S.A. (1973).

Verna Carter — (*yakusimanum* × 'Leo'). Truss 12 flowered, white buds, light pink. Crossed, raised and introduced by Mrs Le Vern Freimann, 1907 – 38th Street, Bellingham, Wa. 98225, U.S.A. (1973).

Victor Frederick — (unknown × unknown). Truss 17 flowered. Basically R.H.S. Red Group 44B, Velvety Red blotch, Red Group 46A on dorsal lobe, and in ring round centre base of throat, with red dots Red Group 46A, on dorsal lobe. Reverse (outside) of corolla Red Group 44A, with Red Stripe, 46A down centre of each lobe. Crossed by Halfdan Lem, raised and introduced by Mr and Mrs J. E. Sinclair, 617 N.W. 175th Street, Seattle, Wa. 98177, U.S.A. (1973).

Weber's Pride — ('Lady Clementine Mitford' × 'Kate Waterer'). Truss 17 flowered; H.C.C. Rhodamine Purple 29/3 with blotch Mars Orange 013/1 on upper and two side lobes; reverse Cyclamen Purple 30/3. Crossed, raised and introduced (1973) by Edwin O. Weber, Seattle, Washington, U.S.A.

White Lace — (form of *racemosum*). Corolla White (pure white with no pink tinge). Collector not recorded, raised and introduced (1974) by Glendoick Gardens Ltd., Perth, Scotland.

White Velvet — (form of *R. yakusimanum*). Truss 16 flowered. Buds pink, corolla light pink fading to white, with tan pepper spotting on dorsal lobe. Seed from Japan, imported by E. Greer (1964), raised and introduced (1970) by Cyril H. Ward, Ward's Garden, 3111 N.E. 49th Street, Vancouver, Wa. 987663, U.S.A.

William Moss — ('Roman Pottery' × 'Golden Fleece'). Truss 7 to 11 flowered; Red Group 41c to Orange-Red Group 33c. Crossed, raised and introduced (1974) by W. Moss, Afonwen, Flint, Wales.

Wintergreen — (*nakaharai* × unknown (open pollinated)). Truss 2 flowered; Nickerson 2.5 R 7/8 to 6/11 with spotting on lobes of 2.5 R 5/12. Crossed by Dr Tsuneshige Rokujo, Tokyo, Japan, raised and introduced by Mary Louisa B. Hill, Vineyard Haven, R.F.D., Mass., U.S.A.

Witch Doctor — (('Doncaster' × 'Nereid') × 'Vulcan'). Truss 6 flowered. Corolla Cardinal Red 822/3. H.C.C. heavily spotted dark red on all lobes, in throat, and on calyx. Calyx with 5 reflexed lobes, held in one place at right angle to pedicel of heavy substance. Crossed and raised by Halfdan Lem, introduced by James A. Elliott, Rt. 4, Box 544, Astoria, Or. 97103, U.S.A.

Windles — ('Dido' × ('Jalisco' × *yakushimanum*)). Truss 6-8 flowered; Yellow Orange. Crossed, raised and introduced (1974) by Crown Estate Commissioners, Windsor, U.K.

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