RHODODENDRONS 1978
with
MAGNOLIAS and CAMELLIAS

The Royal Horticultural Society
London

Acknowledgements

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RHS
Rhododendron, Camellia
& Magnolia Group

RHODODENDRONS 1978

with

Magnolias and Camellias

THE ROYAL HORTICULTURAL SOCIETY
VINCENT SQUARE
LONDON

SBN: 90062 997 5

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Printed in Great Britain

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FOREWORD

The 1978 "Yearbook" contains accounts of the rhododendrons and camellias grown at Olinda in Australia; at Hergest Croft in Herefordshire; at Coombe Royal in South Devon; and at the Lea Rhododendron Gardens in Derbyshire; as well as of the magnolias planted in a garden in the south of Switzerland. A number of new rhododendron species and forms have been introduced in recent years, and Mr Peter Cox has contributed an account of these, which will be useful to those extending their collections. Mr Davidian has described two new Rhododendron species and a variety, and descriptions are also included of four species and a sub-species arising from the revision being carried out at the Royal Botanic Garden in Edinburgh.

The text is reproduced of the talk which Mr Brickell gave at the International Rhododendron Conference in New York, on the naming of Rhododendron cultivars, and this should help rhododendron growers to understand this revision.

As usual, the main Rhododendron and Camellia shows are described, and details are given of plants which received awards at the London shows and after trial at Wisley.

There are notes on Bark Split in rhododendrons, which has been so serious in recent years, and on Camellia Petal Blight.

E.W.M.M.

Rhododendron species and forms introduced or re-introduced in recent years

P. A. COX

It is basically true to say that the last old style plant hunting expeditions to the great rhododendron areas of eastern Asia finished with Kingdon Ward's Burmese Triangle Expedition in 1953. Since then, as we all know, these parts have been closed to western explorers, and expeditions covering the whole season seem to have become a thing of the past. None the less, a slow but steady trickle of new and re-introduced species and special forms and clones have been coming into cultivation from various sources. A few of these show great promise of becoming beautiful and valuable horticultural treasures. I am not describing the majority of species introduced in the 1950s as most are now reasonably well known and have been written up elsewhere. I will group these plants according to their place of origin, starting with Afghanistan and working eastwards.

Rhododendron afghanicum has been found only in east Afghanistan and on the Afghanistan-Pakistan frontier. Its natural habitat was ably described by Ian Hedge (see *R.H.S. Rhododendron Yearbook 1970*, p. 177) so I will only mention what little experience I have of this species in cultivation. I was very kindly given a plant collected in the wild in 1969. It has now flowered for some three years and, frankly, its only virtue so far is its rarity! The little, dull cream-coloured flowers in erect trusses do somewhat resemble those of *R. hanceanum* horticulturally but Cullen has now placed it in a subsection of its own. I have found it hard to propagate but few people will want it anyway.

R. collettianum from the same area was also re-introduced by Hedge and Wendelbo in 1969, having been originally introduced in 1879 and probably died out in cultivation. While typically a member of the section Pogonanthum (Anthopogon Series), it does have larger leaves and flowers than most of its relatives. The leaves are longer and narrower than most *anthopogon* and the attractive white flowers are considerably larger and more in proportion with the size of the leaves. Like others in this section, it is not perhaps the easiest of dwarf rhododendrons to satisfy and it did suffer some winter damage with us in 1977-8.

R. hodgsonii. Several visitors and collectors to Nepal, north Bengal and Sikkim over the last few years have reported on lovely clear pink to rose flowered *hodgsonii*. Sometimes these occur in groups separated from the better known magenta-purple shades, while elsewhere they are mixed together. My wife and I saw this mixture in north Bengal in 1965. Some of these pink forms have larger flowers in laxer trusses. A few scions and several collections of seed have been sent (to America) but we shall have to wait for these to flower to see how they turn out in cultivation.

R. coxianum. This new member of the Maddenia subsection is related to *formosum* var. *inaequale* and has a similar and equally fine scent. The leaves of *coxianum* are narrower and the flowers generally smaller with heavily indented "potter's thumb" marks on the corolla. Like its

relation, it is too tender for growing out of doors in most of Britain. Collected by Peter Hutchison, my wife and myself in 1965 in the Subansiri Division of Arunachal Pradesh, north-east India.

R. subansiriense was collected by us in the Subansiri area. Only described in 1978, this new species was previously known as *neriiflorum* aff. and then *hylaeum* aff. under C. & H. 418. We have always called it "Old Baldy", being the only tree in the forest without a draping of moss. In the wild it grew to 45 ft. (13 m) with a lovely smooth bark. Although we have found it winter hardy at Glendoick, the young growth comes very early and is frosted most years. It is closely related to *hylaeum* and the newly described *faucium* but has glowing blood-red flowers like its other cousin, the scarlet form of *hookeri*. It first flowered in cultivation indoors at Glendoick in 1976. Our other new species, *santapauii* was described in *Dwarf Rhododendrons*, p. 185-6. (Batsford 1973.)

R. ludwigianum. A large white flowered member of the Maddenia subsection (old Ciliicalyx Subseries) from Thailand. One of the best for its flowers but as cultivated in the Royal Botanic Garden, Edinburgh, it completely lacks scent. Not likely to be hardy anywhere in Britain.

Moving further east, we come to Hong Kong. Several of the species native to this area of south China have been introduced or re-introduced recently. Much to our surprise, *simiarum*, although desperately slow growing, has survived outside for some years. *R. championae* and *westlandii* have both been sent here but perhaps the most exciting is *hongkongense*. This species, closely related to *ovatum*, is represented by two plants in containers in the Royal Botanic Garden, Edinburgh. I was lucky enough to see these in full bloom, for the first time, absolutely smothered in pretty off-white spotted little rotate flowers on compact plants about a foot (30 cm) high and more across. *R. championae* with interesting bristly foliage and pink flowers, may be small enough for indoor culture but *westlandii*, known in pink and white flowered forms is too large for all but a huge greenhouse. Seed has also been sent of *farrerae* but this is unlikely to be of much value.

Taiwan (Formosa) has produced more new or newly introduced species since 1945 than perhaps anywhere else in the world. This is largely due to the efforts of John Patrick of California who has distributed seed and plants over a period of several years (see *R.H.S. Rhododendron Yearbook 1971*, p. 20-7). Most are endemics.

R. ellipticum (synonym *tanakai*) and the very closely related *leiopodum* are members of the section Chioniastrum (Stamineum Series). We have grown this outside for several years and only in the winter of 1977-8 did it really suffer, resulting in bark-split and die-back. It has handsome glabrous foliage, tinged bronze or red when young and is said to have fairly large white to pink flowers in trusses of 1 to 3 per axillary bud. Rather long internodes can lead to an ungainly habit. If we can grow it successfully and flower it, it could be an attractive and different acquisition to our gardens. It has good reports from California.

R. formosanum is reputed to be the finest species in Taiwan. A member of the subsection Argyrophylla, perhaps related to *hypoglaucum* or *simiarum*. We have had it only a few years; it is slow growing and inclined to have chlorotic foliage. The leaves are fairly long and narrow and the flowers are said to be white to pink, spotted, in trusses of 7 to 20. Seems to be fairly hardy and late in growth. We received seed under three numbers of which one has larger leaves and is definitely tender.

R. kawakamii. Another unusual introduction from Taiwan. This is the only member of the section Vireya (included in the old Vaccinioides Series) likely to prove reasonably hardy in Britain. It is rather a straggly small shrub, epiphytic in the wild and has survived outside at Glendoick and in Argyll with some success. The small bright yellow flowers open late in the season. Being naturally epiphytic, perfect drainage is desirable. All efforts so far to cross it with the Malesian species have failed but somebody may well make the breakthrough yet. I had an excellent germination from this species crossed with a yellow Malesian near *laetum* but all turned out to be pure *kawakamii.*

R. pachysanthum. This newly introduced species shows promise of becoming one of the finest foliage plants in the genus. The name *pachysanthum* was previously considered to be a synonym of *morii.* While it does hybridize naturally with the latter species, the average (typical) plant is totally different with a thick indumentum on the leaf underside. It appears to be related to *pseudochrysanthum* which of course only has an indumentum on the midrib but it is more vigorous at present than any forms of that species of which we grow many. I have no information on the flowers but we can be hopeful that they may be similar to the lovely *morii* and *pseudochrysanthum.* Seems hardy and easily grown. In the wild it grows on windswept ridges at about 10,000 ft. (3,000m) forming rounded bushes to 4 ft. (1.20 m) high. We have received two seed collections. The first produced a relatively even batch of seedlings which developed the brown indumentum in their third season. The lovely indumentum on the upper surface is fairly persistent and varies from rusty-brown to silvery-grey. The second batch, now one year old is more variable and some seedlings indicate hybridity with *morii.*

R. pseudochrysanthum dwarf. Old plants in cultivation vary considerably in habit and foliage but while some are low and spreading, none could be termed really dwarf although Wilson was reputed to have collected from the summit of Mt. Morrison. New introductions of Patrick's from the summit of this peak are mostly superb tight little mounds although they may grow more open when mature. Again the foliage is variable and I have been planting these out in groups, selecting plants to show this variation. No flowers as yet.

This leaves us with the azaleas of which there is a great variety on Taiwan. The only one outside section Tsutsutsi (Obtusum Subseries) is *mariesii,* a species which is widespread in southern China. This has been reintroduced but appears to be of little merit and rather tender. The best known Taiwan azalea in cultivation is now *nakaharai,* a splendid creeping little plant with its late red to reddish pink flowers. We grow two clones. 'Mariko', imported by us from Japan is very low, compact and late flowering, often July-August. The Mt. Seven Stars wild collected clone is of a more open habit and blooms in late June with larger flowers. This species is proving an excellent parent for late flowering low azaleas. The rest, although several come from similar or higher elevations, seem to be tender and in any case, many of these have rather dull purplish flowers. *R. kanehirai* has narrow leaves and carmine-red to scarlet flowers and a prostrate habit in the wild. The clone we tried was hopelessly tender. Our plants of *R. noriakianum* do not follow Professor Hsu's description (*Biosystematic Investigation on the Rhododendron of Taiwan,* from the National Science Council, No. 6, March, 1973, p. 13-50) of having red flowers and an erect habit. Ours have tiny leaves and small pale mauve to deep magenta flowers on prostrate to more

erect rather straggly bushes. The deeper coloured forms could be worth growing. Relatively hardy.

R. rubropilosum is a variable species in all ways. One clone we tried with rather dainty little lilac tinged flowers was very tender while a further introduction with an upright habit seems hardier although the flowers so far lack merit. A related and possibly synonymous species named *taiwanalpinum* is probably just a high elevation form of *rubropilosum* and with us has the same erect habit. *R. sikayotaisense* is another diminutive plant with a mouthful of a name; it appeared to be rather similar to *noriakianum* but was too tender for us. The same was the case with a fresh introduction of *oldhamii.*

Other new Taiwan azaleas may have been collected but I have no knowledge of them.

Seed was collected by the American, Warren Berg of *mucronulatum* on the top of the 6,000 ft. (1,800 m) peak on Cheju (Quelpart) Island off the south coast of Korea in 1976. There it makes prostrate bushes on the open hillsides as opposed to the normal erect habit. Our seedlings, now one year old, do show signs of retaining this habit and could be a most exciting addition to our winter and early spring flowering rhododendrons.

Japan has contributed a wealth of horticultural gems to our gardens. It is sad for us in Scotland that our summers are not hot enough to grow many of the Japanese azaleas to perfection. *R. reticulatum,* in its widest sense, with all its Japanese hair splitting names, is not really satisfactory with us. We have tried the majority of these so called species, under such names as *mayebarae, wadanum* and *nudipes.* The last named is said to be something different and superior. Our seedlings of this have not flowered yet but we are unlikely to be able to judge its potential here anyway. *R. amagianum* has been re-introduced. It is close to *weyrichii* with larger leaves and a later flowering season. Near to this is *sanctum,* again not too successful with us. This has large glossy leaves and deep pink flowers like an evergreen azalea which are rather small in comparison with the foliage.

R. tashiroi is an interesting plant. It comes from a wide range of elevations and from several parts of southern Japan and therefore could vary considerably in hardiness. Our first plant was apparently tender at Glendoick but has survived in Argyll. To my surprise, I saw this species in full bloom in Boskoop, Holland at the research station with only the protection of a lath house. I was quite taken with its floriferousness and its overall effect which is not unlike a small *yunnanense.* It is highly rated in Japan for its heat resistance and its ability to cross readily with the *reticulatum* and *weyrichii* groups although its leaves are evergreen.

The prostrate *keiskei* from Yakushima is already quite well known although only recently introduced. It is a dear little plant and seems easier to grow here than the other taller forms, especially in pure peat. It is known under various specific and varietal names plus the clonal name 'Yaku Fairy'.

At long last, a white *camtschaticum* has reached cultivation in America from Alaska. Seed I received this year unfortunately failed to germinate. Several attractive reddish flowered seedlings have appeared amongst those we have grown and I am selecting these for propagating and improvement.

Lastly, but by no means least, we come to American azalea species. A real effort is now being made to select superior clones of the best of

these fine azaleas, although seedlings are by no means to be despised. These clones have only just begun to arrive over here and so far we only have some of the first rate clones of the beautiful *occidentale* selected in the wild by Britt Smith and Frank Mossman. We now grow twenty clones, mostly under number only. Only 'Leonard Frisbie' has been registered and this has yet to flower for us. Some we have flowered for several years and three particularly impress us. SM 28-2 is a semi-double with a compact habit, good foliage and long lasting flowers. SM 186 is a large flowered white with a yellow flair. The best here so far is SM 189 with very large pinkish flowers with a golden flair and lustrous deep coloured foliage. It is an outstanding plant. Some clones have crimped or frilly lobes to the corolla or maroon edges while others are almost totally deep pink. Two or more even lack a corolla altogether.

There are fine selections of *calendulaceum*, *bakeri* and *vaseyi* amongst others and we hope to acquire some of these soon.

The species from the south-east U.S.A. as might be expected, are like some of those from southern Japan and are unsuitable for Scotland. We have tried most of them and *oblongifolium*, *serrulatum* and *flammeum* (*speciosum*) grow on far too late in the season, never ripening their wood. *R. prunifolium* took many years to settle down but is now annually giving us its late show of attractive dark to orange-red flowers.

With the possibility of China opening its doors to exploration once more we may again have quantities of rhododendrons coming in. It is hoped that this will lead to many more enthusiastic species lovers.

Rhododendrons as Foliage Plants

GEOFFREY GORER

It appears to me that we pay too exclusive attention to the flowers of rhododendrons and too little to the beauty of the foliage of some plants, especially the new growths, which can adorn a garden for more weeks than do the flowers. We name clones and give awards almost exclusively on the size, colour and quality of the flowers; I would argue that another type of distinction is needed for clones or varieties with beautiful foliage.

I am not writing about the "big leaves" of the Falconeri and Grande series, which mostly seem to me rather incongruous in an English landscape. There are a few rather uncommon species which are grown for their foliage, such as *R. campanulatum* var. *aeruginosum* with young foliage like emeralds, *bureavii* with its striking rusty red indumentum, and *clementinae* with its apple green top side and white underside to its leaves; the flowers of all three are insignificant and I have seen them in very few gardens.

There are some species which are widely grown which vary enormously in the quality of their young foliage. I shall write chiefly about my own plants, since these are the only ones I can watch throughout the seasons.

I probably have a dozen forms of *R. williamsianum* in my garden, some of them purchased, some received in exchange, several raised from seed. They vary very considerably in the size and colour of their flowers; but I have one clone, with medium-sized rather pale flowers whose young foliage is a beautiful brick-red for about six weeks after flowering. I would never submit this plant for an award for its flowers; but it is one of the most beautiful foliage plants in the late spring which I grow. I think it would be worthy of a clonal name if foliage were taken into account.

Similarly, I have four plants of differing forms of *R. cinnabarinum* var. *roylei*. The largest and deepest coloured flowers are borne by the clone 'Magnificum'; but an unnamed clone with smaller flowers has the most beautiful young apple green foliage.

Some years ago I received from Brodick seeds of *R. caloxanthum*; since none of them have flowered I do not know if the pollen parent was also *R. caloxanthum* and if they are "true to name"; but two out of eight seedlings have the most striking young foliage, like some of the best forms of *Cotinus coggygria*, a glowing purple-red; even if the flowers are insignificant they will have a conspicuous place in my garden; the other seedlings will be kept or discarded according to the quality of their flowers.

Another species with varying young foliage is *R. pseudochrysanthum*; in my best form the young leaves appear silver, setting off the crimson growth buds exquisitely.

R. yakushimanum is another very variable species; I raised nine plants from wild seed collected by Mr Doleshy and one of these has exquisite silvery-fawn young foliage, to my mind far more beautiful

than the F.C.C. form, though it does not compare with the latter either for habit or size of truss.

There are several other species whose young foliage is attractive, as well as their flowers; but I have seen too few plants to be competent to say whether this foliage is a constant feature or no. Among these I would list *R. adenopodum* and *R. smirnowii* with silvery young leaves, *R. tsariense* with bronze indumentum on both surfaces, *R. panteumorphum a* bright emerald green, and *R. serotinum* almost scarlet. I only grow one clone of these, and I have seen too few in other gardens at the appropriate season to make any judgement.

There are a few hybrids which I think would be worth growing as foliage plants: 'Bow Bells' ('Corona' × *williamsianum*) keeps its coppery young leaves for several weeks, longer than any other *williamsianum* cross I grow; and 'Bo-Peep' (*lutescens* × *moupinense*) goes on even longer, glowing bronze until mid-summer in most seasons, as does its less floriferous parent, *R. lutescens*. 'Winsome' (*griersonianum* × 'Humming Bird') has golden spears which I think unequalled among all the *griersonianum* hybrids. Although the display is fleeting, the apple-green leaves and scarlet bracts of 'Alix' (*barbatum* × *hookeri*) are breathtaking for a few days; and the same is true of 'Polar Bear' (*auriculatum* × *diaprepes*).

Would it not be possible to devise some system by which the forms with the most beautiful young foliage could be designated?

Hergest Croft Gardens in Herefordshire

R. A. BANKS

My great grandfather, Richard Banks, moved from Kent to Kington (because, it is said, the smuggling trade became too difficult) early in the nineteenth century. He lived in a house in the town. His son, Richard William (1820-1891), who inherited from his uncle, James Davies, property around Kington as well as the private bank which he ran, moved to Ridgebourne about mid-century, and planted a number of trees such as wellingtonias, Douglas firs, *Abies cephalonica, Acer lobelii* and *Acer rubrum, Crataegus tanacetifolia,* and others of which we have records.

His only son, William Hartland (1867-1930), who also ran the bank until it was sold, was a garden enthusiast from early youth, starting with orchids and then rock plants and, from about 1890, trees and shrubs. In 1895, when he married, he started building Hergest Croft and laying out and planting the garden there as well as the avenue of conifers to the west. He continually altered and extended this until the First World War. About 1910, he bought Hergest Court, the nearby farm, which included Park Wood with its sheltered gully running north-west and south-east through European larch at the top and oak below. He immediately began planting hardy hybrid rhododendrons in profusion in the lower part, notably the Flower Fall on the south-west slope.

Even during the war he was buying trees and shrubs and, immediately after the war he started planting, particularly in two areas, Park Wood,

HERGEST CROFT GARDENS

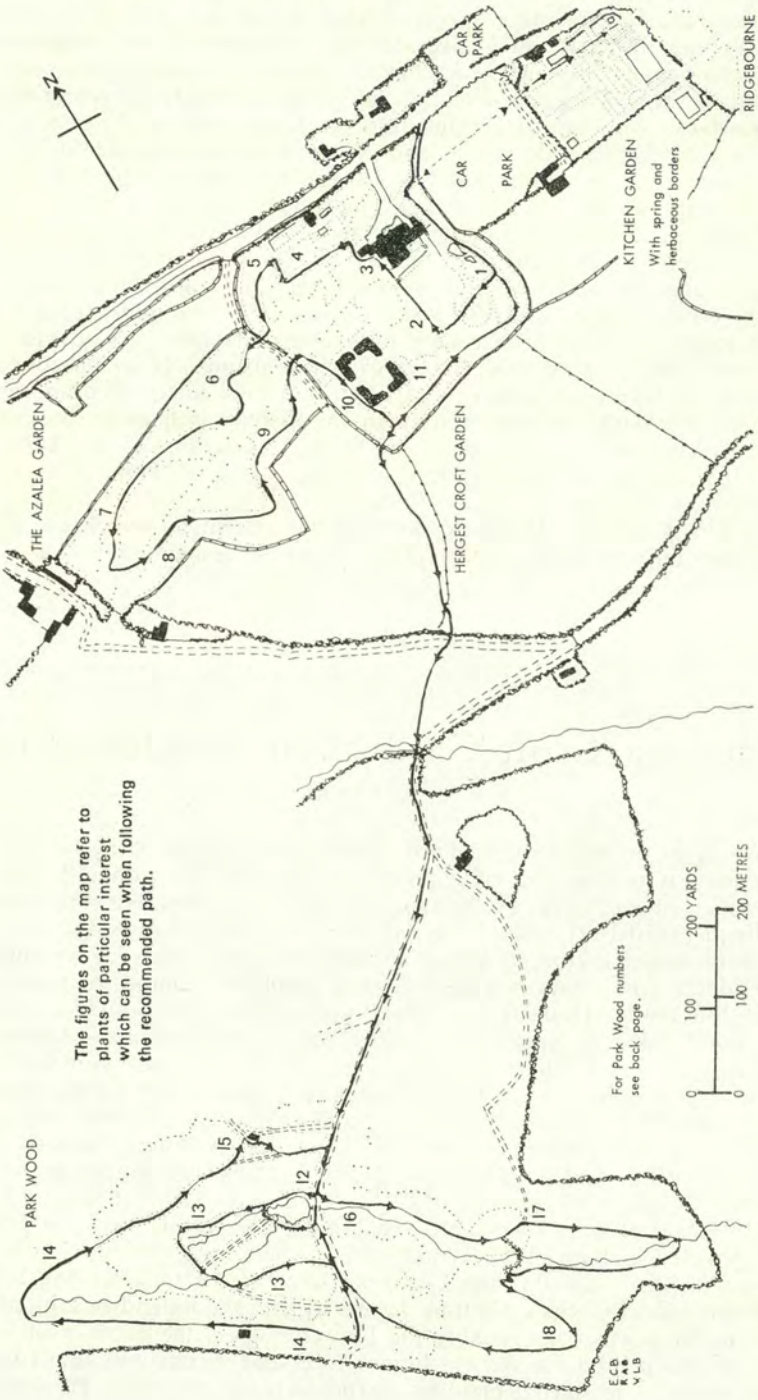


Fig. 1 Map of Hergest Croft

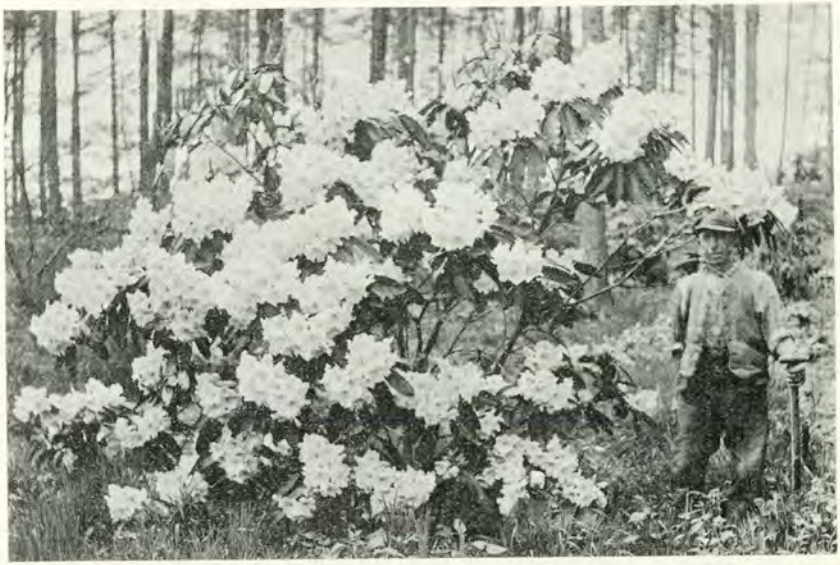


Fig. 2 *Rhododendron loderi* in Park Wood at Hergest Croft

(Both photographs are from the Banks' album of the 1920s)

Fig. 3 A view of the azalea garden at Hergest Croft, looking west

and north and south of the avenue of conifers just west of the garden. In Park Wood, he planted conifers and broad leafed trees along the top of the south-west bank. In the shelter of the oak and larch trees, he put many rhododendrons, mostly species or first crosses, with additional shelter provided by belts of hardy hybrids which were largely removed by me, in many cases too late, in the 1940s.

Between 1920 and 1930, he planted several thousand rhododendrons with his own hands and the help of two old woodmen, each bed among the trees being dug to a depth of two feet and terraced with the stone removed from the bed.

Rhododendrons, including some 200 different species, were obtained from every source available to him, some 40 in all, including private collections such as Leonardslee, Aldenham, Castle Kennedy, Trewithen, Westonbirt, Tittenhurst and, above all, Lamellen, and many nurserymen, including French and Dutch, but particularly Reuthe, Gill, Veitch, White, Wallace, Hillier and Slocock. He also had a number of Forrest and Kingdon Ward seedlings from the Royal Botanic Garden at Edinburgh.

On the north side of the avenue of conifers, he planted masses of deciduous azaleas in beds among recently planted trees such as cherries, birches, *Malus* and other specimen trees including some conifers for winter shelter. On the other side, the planting was largely of deciduous trees and shrubs including maples, and what is now a huge *Davidia.*

After his premature death in 1930, my mother carried on nobly with the help of my sisters – the eldest of whom had hybridised quite a number of rhododendrons – and the splendid old head gardener, George James. At this time, Bruce Jackson catalogued and labelled most of the trees and shrubs, except the rhododendrons.

Then my mother died in 1937; the war came; my sisters left; the house was requisitioned for a school; and in 1940 the disastrous "ice storm" or frozen rain, broke or bent almost every tree. George James carried on as best he could but much was lost, neglected or forgotten. All this time, I was working for I.C.I. in Cheshire; after the war my wife and I visited as often as possible, and worked hard at weekends, but we fought a losing battle till 1953 when we moved to London and spent holidays and every weekend at Ridgebourne, and the jungle was halted. Finally, I retired in 1964 and since then we have made steady progress with the admirable help of Bill Cowdell, who succeeded George James, though we have to be satisfied with low standards of tidiness so long as plants are reasonably healthy. Bill retired at the end of 1974 after 51 years here, and now Peter Relf from Borde Hill is in charge.

The garden is 80 years old and I am only just beginning to realise that a new and very demanding phase has begun. Many of the trees are reaching maturity or are so tall that they catch the wind and blow over. The ground gets congested with rotting roots which foster honey fungus, especially in wet weather after high temperatures as in 1976 and 1977. However, new problems present new opportunities and thanks to many friends we have a wealth of young plants, and my son Lawrence and my daughter-in-law Elizabeth, to whom the garden now belongs, are as keen as the rest of us to maintain the gardens and woodland with their ever changing problems.

I attach a list of some of the more interesting rhododendron species, though this has been sadly reduced by the heat and drought of 1976.

Fig. 4 Park Wood, Hergest Croft

Rhododendron Species at Hergest Croft

albrechtii
ambiguum
arboreum
arizelum
augustinii
auriculatum
bainbridgeanum
barbatum
basilicum
brachyanthum
callimorphum
calophytum
calostrotum
carolinianum
cerasinum
chaetomallum
charitopes
cinnabarinum
clementinae
concatenans
coriaceum
coryphaeum
crinigerum
cyanocarpum
davidsonianum
decorum
desquamatum
dichroanthum
discolor
eclecteum
euchaites
eximium
faberi
falconeri
fargesii
fictolacteum
ferrugineum
floccigerum
fletcheranum
forrestii
fortunei
fulgens
fulvoides
fulvum
glaucophyllum
glischroides
griersonianum
griffithianum
habrotrichum
haematodes
heliolepis
hunnewellianum
impeditum
insigne
kaempferi
keysii
litiense
lutescens
macabeanum
macrophyllum
makinoi
mallotum
meddianum
metternichii
mollyanum
moupinense
mucronatum
mucronulatum
nakaharai
neriiflorum
orbiculare
oreodoxa
oreotrephes
pemakoense
pocophorum
pseudoyanthinum
puralbum
quinquefolium
racemosum
reticulatum
rex
ririei
roxieanum
rubiginosum
scabrum
schlippenbachii
smithii
smirnowii
souliei
spinuliferum
stewartianum
strigillosum
sutchuenense
taliense
tephropeplum
thomsonii
tosaense
traillianum
trichanthum
triflorum
tsangpoense
ungernii
valentinianum
vaseyi
venator
viscosum
wardii
wightii
williamsianum
wiltonii
xanthocodon
yakushimanum
yunnanense

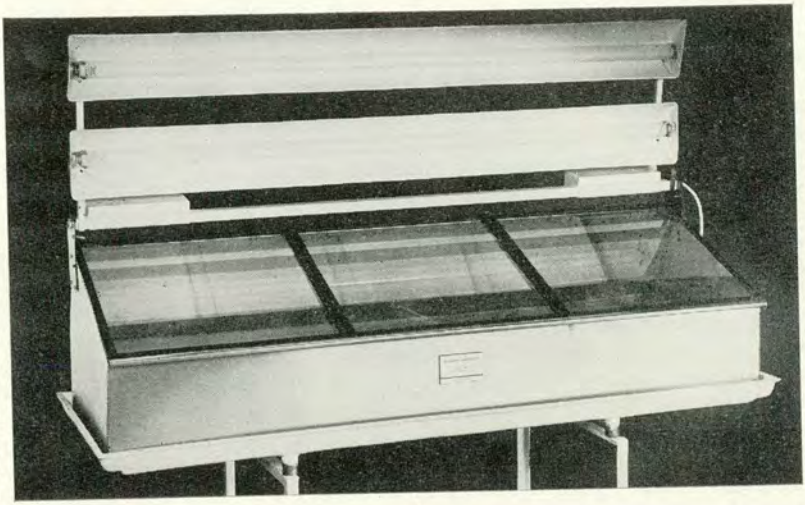
Lea Rhododendron Gardens

J. E. COLYER

"Beginning in 1935 at the age of 68, JOHN MARSDEN-SMEDLEY transformed this one-time quarry into the sheltered garden needed for rhododendrons. The making of this garden gave him and others many happy hours during the remaining 24 years of his life."

So reads the memorial stone in the midst of Lea rhododendron gardens whose creation was the climax of a long and busy life in industry and all branches of horticulture and forestry.

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 £300) may be obtained from
RICHARDS DEWPOINT LTD SEASCALE CUMBRIA CA20 1QA
phone Seascale 323

The garden lies on a steep and rocky hillside near Matlock in a Derbyshire valley facing west at 650 feet, and in spite of a cold climate with hard winters and late spring frosts, it has proved a favourable site and the rhododendrons have grown well. Despite the spaciousness of the setting, the area of the garden is only about three acres, but as it consists solely of rhododendrons and alpines, an intense concentration of colour and scent is achieved which makes an immediate impression on entering the garden. It has been said that one of the most distinctive features is the large number of plants that can be seen in a short walk.

The hillside was quarried for building stone about two hundred years ago and much rubble remains, but whilst it is an embarrassment in some ways, it has been used to good effect in making numerous paths and terraces which give character and provide easy access. Trees around the boundary and dispersed about the garden give shade and protection from the wind, and many of the original plants are now 20 feet (6 m) high and have been pruned into trees to give shelter to the younger replacement plants growing underneath. Owing to the steepness of the slope these tall plants can be viewed from overhead and as they flower well at an older age they are allowed to grow on until they become top heavy and come to a natural end in a gale or heavy snowstorm.

The garden is now very heavily stocked and the plants provide their own protection, but in the beginning when all was bare and exposed to the elements, artificial barricading and planting with *R. ponticum* shielded the more tender varieties whilst that admirable variety 'Christmas Cheer' gave colour and ground cover and still heralds the spring. In spite of its more exotic successors, it is regarded with the affection reserved for the family pet!

The season opens with many early species whose flowers have a precariously short life owing to the lingering winter frosts, but give much pleasure at a time when there are few flowers elsewhere. As it advances the more tender hybrids appear, followed by a cheerful burst of hardy hybrids and azaleas which encourage visitors to brave the climate and try growing rhododendrons in their own gardens.

At first the garden was stocked with purchases from leading gardens and nurseries and many of these have proved to be good forms of particular varieties and have won prizes at the R.H.S. Rhododendron Show. Some of the more ambitious attempts perished in the hard winters of the 1940's, but others soon adapted when protection was given for the first season. There are now about 350 varieties of rhododendron growing in the garden and perhaps the most spectacular are the several forms of Loderi which are now very large trees growing on the lower slopes and filling the whole garden with their scent.

As the garden grew in size and popularity it was decided to live on the spot and so about ten years ago on the only possible position and entailing considerable expertise, a split level house was built. Once again the rocks hindered progress and many hundreds of tons were removed and much new soil imported to extend the garden round the house. To prolong the flowering period this was planted with early alpine forms of rhododendron and heather, but the higher and more open slopes of the garden have proved too exposed for rhododendrons and although they thrived at first, the burning heat of the summer of 1976 proved too much for them and some were lost.

Meanwhile interest in alpines and auriculas was growing and it was decided to create rock gardens and scree on the limited area of flat

ground at the top of the slope and these are now well established and provide an additional attraction and demonstrate a style of gardening well suited to hilly country. The alpines are propagated from cuttings in cold frames and the rhododendrons are grown from layers and all are available for sale at the appropriate season.

The number of visitors increases every year as, in addition to rhododendron enthusiasts, there is a large industrial population in close proximity, who find peace and relaxation in the colourful beauty and scents of the garden, many of whom return home with new ideas for their own gardens.

A Himalayan Diary

A. D. SCHILLING

In the spring of 1977 I had the privilege of spending three weeks leading a group of adventure seeking tourists into The Sanctuary of the Annapurna Himalaya north of Pokhara in central Nepal.

At that season the vast rhododendron forests are at their most colourful and the world is full of the song of migrant birds as they return from the wintering areas to the south.

The trek was advertised as "a flower trek", but it proved to be rather more than that. In the event it became a real adventure and several of the party (including the author) were extremely fortunate to survive to tell the tale.

The following notes are based on extracts taken from my diary, and serve to give some impressions and highlights of the experience as a whole.

Day 1 (April 5).

Away from Kathmandu at dawn by road to Pokhara, a long circuitous journey, but full of interest and beauty. Sal (*Shorea robusta*) forest, a mass of creamy heavily scented blossoms pervading the atmosphere of the hot low valleys. *Hypericum cordifolium, Woodfordia fruticosa* and *Bauhinia purpurea* also noted with interest as a blur of occasional colour from the windows of the rickety bus. Camped above and beyond Pokhara close to giant Bo trees (*Ficus religiosa*).

Days 2 and 3 (April 6/7).

Very hot strenuous period up and over low open hills, but not without interest. *Fraxinus floribunda,* the Himalayan ash, noted along with the scarlet waxy blooms of the kapok tree, *Bombax malabaricum.* Himalayan griffon vulture and Egyptian eagle noted circling high above the ridges. Orchids on the trees and our first sight of the blood red, low altitude form of *Rhododendron arboreum.*

Day 4 (April 8).

Several of our party down with the "Kathmandu Quickstep", one of the inevitabilities of a holiday in Asia! Day spent climbing steeply up into the cool-temperate zone. Good to be out of the blistering heat of the low valleys and into an area of botanical excitement. *Clematis montana,* the white form, lush rosettes of *Cardiocrinum giganteum,* "curtains" of the climbing *Hydrangea anomala,* snake-like *Arisaema* species, *Osmanthus suavis* and, most exciting of all, our first sight of the waxen white flowers of *Magnolia campbellii.*

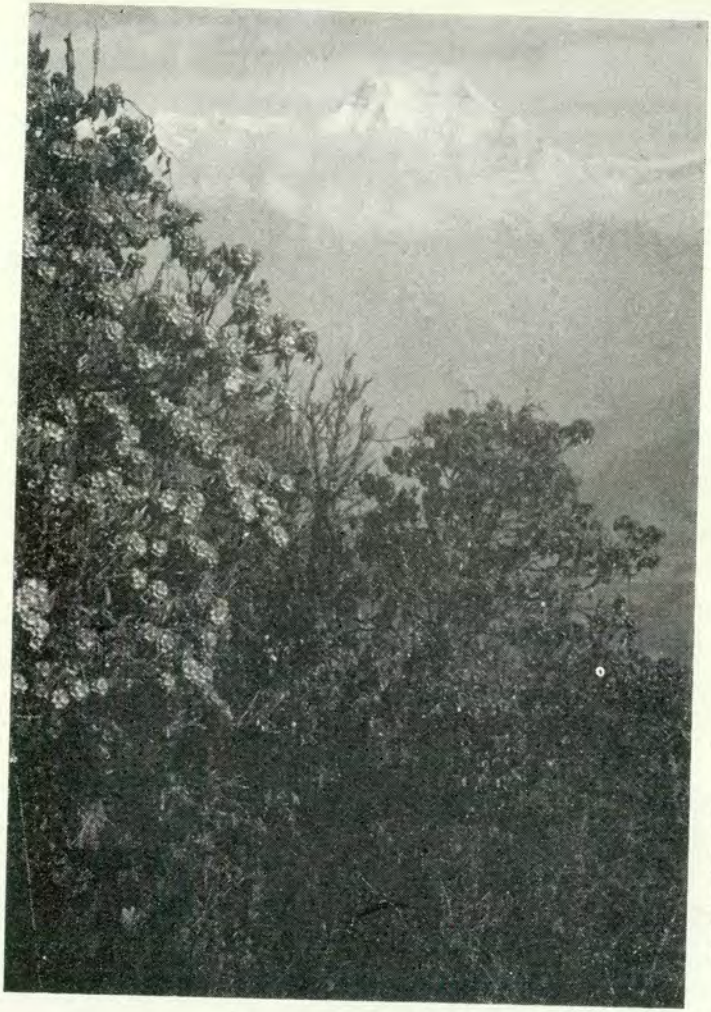


Fig. 5 *Rhododendron arboreum*, with Mt. Dhaulagiri in the background

Day 5 (April 9).

At leisure (if there is such a thing in Nepal) in the vast *Rhododendron arboreum* forests around the 9,000 ft. contour at Gorapani. A truly beautiful area on the eastern edge of the immense Kali Gandaki gorge. Dhaulagiri, Nilgiri and Annapurna high in the sky away to the north. *Daphne bholua* – deciduous and evergreen forms in abundance. Many as good, if not better than the clone in cultivation named 'Gurkha'. Likewise the myriad forms of *R. arboreum* run away as far as the eye could follow in a sea of pink, rose and scarlet – even the occasional splash of white. The thought of handing out A.M.'s and F.C.C.'s along the ridges makes me smile. An R.H.S. Committee seems a world away and quite incomprehensible when one is as remotely situated and amidst such scenic majesty as this.

Day 6 (April 10).

Over the 10,000 ft. Deorali Pass. Flowers of *Primula algida* and *Pieris formosa* noted on the ascent. Higher still we saw our first birch (*Betula utilis*), copper bark shredded and gleaming alongside mauve peeling stems of the scarlet flowered *Rhododendron barbatum*. Just below the summit, our first flowers of *Rhododendron campanulatum* seen. *Abies spectabilis* (silver fir) and *Tsuga dumosa* all about us. A situation of exceptional beauty.

Upon this high, remote and beautiful hilltop, I and my Sherpas set up two 20 ft. tall prayer flags in memory of Len Beer, whose untimely death a week or so earlier had left the gardening world the poorer.

Len was a great lover of Nepal and an enthusiast for the high places of this world and for the plants which grow there. I like to feel that the flags we left on this forest-clad pass high on the flanks of Annapurna South stand as an expression of the nobility of man and of the beauty of this world in which he lives.

Afterwards, onwards and downwards via a wet, steep and rocky gorge – care required in places. Mauve-pink *Primula geraniifolia* by the camp. Thundery rain in late afternoon. It is almost a daily happening and is keeping the leeches all too active.

Day 7 (April 11 – Easter Monday).

On around the hillsides (much upping and downing in dense forest) noting *Pleione humilis*, one of the prettiest of orchids. *Rhododendron dalhousiae*, past flowering, by the lunch camp. Later, down into more open and warmer climes to camp at Kymnu, passing *Prunus napaulensis*, *Jasminum dispermum* and *Euonymus echinatus* en route. A short but interesting day. Getting close to the fabled Modi Khola gorge at last.

Day 8 (April 12).

A long, demanding and varied day. Noted *Caryopteris wallichiana* (mauve blue spikes on 4 ft. tall shrub). Wonderful views at lunch stop of Machapuchare (Fish Tail Peak) epitomising the inviolate. Climbed again around a long flank and into the Modi Khola gorge – grim views northwards into its forbidding depths. A variety of orchids including *Coelogyne cristata* and *C. ochracea* on the lower slopes in trees. Higher, as the day progressed, we entered lush temperate forest boasting a wealth of species. *Alnus nepalensis, Betula alnoides, Acer sterculiaceum, Eriobotrya elliptica, Quercus lamellosa, Persea duthiae* and seemingly countless other members of the Lauraceae.

Rain soon after 2 pm. Wet steep sloping rock slabs, leading down to camp. One of the party fell off into the bamboo break and badly dislocated his shoulder blade. A lot of *Arisaema wallichiana*, purple black and cobra-like amidst the bamboos (*Arundinaria* sp.) surrounding our wet and dreary camp.

Day 9 (April 13).

Injured member of party, and one other exhausted, return to Pokhara. Over half the day spent ploughing and toiling through dense bamboo forest with beetling grim-looking cliffs hemming us in on both sides. The Modi Khola gorge is 11,500 ft. deep – and that means 2 miles. Very threatening feeling to this part of the trek. Too many leeches to make it fun. In spite of it all there is much to take the eye. Huge and abundant rosettes of *Meconopsis napaulensis* and the strange uncurling fronds of *Dryopteris wallichiana*, not forgetting the ever present *Rhododendron*

arboreum and *R. barbatum*. Great drops below into a seemingly bottomless gorge, Machapuchare and Hiunchuli almost closing the sky above us; the guardians of the Annapurna Sanctuary.

A superb morning for plants. *Saxifraga* sp. (probably *S. poluniniana*). *Valeriana wallichii*, an abundance of shiny-leafed *Cardiocrinum giganteum* waiting for the monsoon rains, countless golden-green hairy-leafed rosettes of *Meconopsis regia* and *M. paniculata*, sparkling with beads of moisture and often smothered in ladybirds.

The mixed forest slowly altered as the way led northwards until only dense bamboo-break amidst boulder strewn slopes remained. At 1.30 pm, crossed a slope of old compacted snow, a residue of late winter avalanches and a reminder of the great heights which rose above.

Upwards, around and down a wet slabby corner of the gorge, the bluff descending awkwardly to end at a vast, steep stretch of snow debris; some old, stable and dirty; some recent, soft and white.

Some of our porters were a few minutes ahead, a few having already crossed the great convex fan-shaped avalanche slope and others, plus the lead Sherpas, were close behind, but still high on the centre section of hard snow-ice. Immediately above us hung a thousand foot high black cliff down which was coming a thin icy waterfall from the upper slopes of Hiunchuli.

Two of us started kicking steps obliquely outwards and upwards in the wake of our Sherpas. The place was eerie and one could sense it was a dangerous place to be.

Just as we were approaching the point-of-no-return, the taut silence was shattered by a terrible roaring sound and all was suddenly turned to noise, fear and confusion. Blind instinct coupled with terror gave wings to our retreat as we slipped, stumbled and ran back to the safety and shelter of the cliffs we had so recently left. A second or two later, I saw Sherpas, grey faced with shock, running back to join us, others were falling, running and stumbling down the very centre of the slope amidst a chaos of head baskets, rucksacks and scattered equipment all of which seemed to be driven along by a sea of snow and flying rocks until spin-drift enveloped the scene.

For at least three minutes the "trundle" continued. When at last all was still, a sense of relief was converted immediately to renewed panic as we descended towards the nose of the avalanche cone fearing the worst. For ten dreadful minutes, I was convinced that we had lost at least two Sherpas. Mixed emotions of anger, shock and grief washed over our frantic movements and discussions; discussions made difficult because of tensions and language problems.

Eventually horror was replaced by a feeling of immense relief as we realised all were unscathed. One porter had lost all his belongings in the chaos, and some of our kitchen equipment was missing but was later dug out of the debris and retrieved.

Strange how close a disaster and unharmful excitement can be, the former leaving a scar on the memory for life, the latter actually adding to the zest for life (causing merriment with the story-telling which follows).

We "licked our wounds" and retraced our steps to a glade in the bamboo forest to set camp for the night. All around was a wild, almost terrible beauty; soaring cliffs, white fluted peaks, the roar of the river, and spring flowers seemingly mocking the dangers of the gorge. *Viburnum grandiflorum, Piptanthus nepalensis* and *Rhododendron*

arboreum blossomed and it seemed hardly credible that a few hundred yards away we had narrowly missed being killed by a spring avalanche off Hiunchuli's flanks.

Day 10 (*April 14*).

Across the nose of the avalanche cone at first light and up into the Annapurna Sanctuary in poor weather. Back into winter as we ascended to 12,500 ft. *Potentilla* sp. not in flower, its leaves poking through the snow. The only flowers seen were those of the drum-stick primrose, *Primula denticulata* – a pretty sight, but hardly worth risking an avalanche for! Hurriedly back to camp before the warmth of midday created a repeat of yesterday's events.

(*April 15-19*).

Nothing to push for now save a long but beautiful walk back out of the oppressive Modi Khola gorge and into the warm open forests below; *Aesculus indica* coming into bloom near the village of Gandrung and *Dendrobium densiflorum* flowering on the trees beyond. *Viburnum erubescens, Englehardtia acerifolia* and *Albizzia mollis* cheering our path.

(*April 20*).

Camping tired but happy on the river bank close to the sheltered settlement of Yamdi. The limpid night air filled with the soft murmur of the river and the glimmer of countless fireflies.

Two New Rhododendron Species and a New Variety*

H. H. DAVIDIAN

Rhododendron adenosum Davidian, sp. nov.

Species *R. glischro* Balf. f. et W. W. Sm. affinis sed foliis infra esetulosis, apice acutis vel obtusis, calyce minore 4-5 mm. longo, inflorescentia 4-8-flora, foliis plerumque minoribus recedens.

Fruitex vel arbor parva ad 5 m. alta; ramuli floccosi vel glabri, dense setuloso-glandulosi, sub inflorescentia 4-6 mm. diametro, perulis deciduis. Folia sempervirentia; lamina coriacea, ovato-lanceolata vel lanceolata, 7-12.8 cm. longa, 2-5 cm. lata, apice acuta vel obtusa et mucronata, basi rotundata vel leviter cordata, supra atroviridis vel oliacea, levia, plana, opaca, moderate vel sparsim floccosa vel glabra, esetulosa, setuloso-glandulosa vel eglandulosa, costa media sulcata, floccosa vel glabra, moderate vel sparsim setuloso-glandulosa vel eglandulosa, venis primariis 12-16 impressis; margine plano esetuloso, setuloso-glanduloso vel eglanduloso; infra pallide viridis, glabra vel dense tomentosa, esetulosa, dense vel moderate glandulosa, costa media prominente, tomentosa vel glabra, esetulosa, dense vel moderate setulosa-glandulosa, venis primariis elevatis; petiolus 0.8-2.3 cm. longus, supra sulcatus, floccosus vel glaber. Inflorescentia racemoso-umbellata 4-8-flora, bracteis deciduis; rhachis 0.6-1.2 cm. longa, pubescentia, eglandulosa, pedicelli 1.5-3 cm. longi, tomentosi, esetulosi, dense setuloso-glandulosi. Calyx 5-lobatus, 4-5 mm. longus, pallide viridis, lobis lanceolatis vel ovatis, extra tomentosis vel glabris, dense vel moderate glandulosis, margine glabris, glandulosis. Corolla campanulata, 3-5.3 cm. longa, alba roseo-tincta vel alba basi atro-rubro-notata vel nota carente, atro-rubro-maculata vel immaculata; lobi 5, 1-2.4 cm. longi, 1.4-3 cm. lati, rotundati emarginati. Stamina 10 vel raro 13 inaequalia, 1.8-4.6 cm. longa; filamenta basi puberula. Gynoecium 3.2-5 cm. longum; ovarium conoideum, 3-4 mm. longum, glabrum vel raro pubescens, glandulis longe pedicallatis ascendentibus dense praeditum, 5-6-loculare; stylus glaber eglandulosus. Capsula gracilis vel oblonga, 1.6-2.1 cm. longa, 3-5 mm lata, paulo curvata vel recta, tomentosa vel glabra, moderate vel dense setuloso-glandulosa, calyce persistente.

S. W. Szechuan. Mountains of Kulu. Alt. 3380 m. Shrub, 3-5 m. In spruce forests. July 1929. J. F. Rock No. 18040.

S. W. Szechuan. Mountains of Kulu. Alt. 3540 m. Shrub or tree, 3-4 m. In hemlock forest. Sept. 1929. J. F. Rock No. 18226.

S. W. Szechuan. Mountains of Kulu. Alt. 3540 m. Shrub, 2-2.5 m. In spruce forest. Sept. 1929. J. F. Rock No. 18228. (Holotype in Herb. Hort. Bot. Edin. Details of the flower are taken from a cultivated plant).

This plant has been known under the name *R. glischrum* var. *adenosum*. It is so distinct in cultivation, that it merits specific rank.

* Reprinted from *Quarterly Bulletin of the American Rhododendron Society*, Vol. 21, No. 2, pp.81-85.

R. adenosum was discovered by Rock in July 1929 on the mountains of Kulu, south-west Szechan. It was again found by him later in September in the same region. The plant grows in spruce and in hemlock forests, at elevations of 11,081-11,606 feet.

The species belongs to the Glischrum Subseries, Barbatum Series. It bears a resemblance to *R. glischrum* in some features, but is readily distinguished by the very short hairs and glands on the lower surface of the leaves, by the short calyx, and usually by the fewer-flowered inflorescence and shorter leaves.

It was introduced by Rock in 1929. Two colour forms are in cultivation, white, and white flushed pink. The plant is hardy and very free-flowering in April or May. It is uncommon in cultivation, but is well worth a place in every collection of rhododendrons.

A shrub or small tree 2-5 m. high; branchlets hairy or glabrous, rather densely setulose-glandular, those below the inflorescences 4-6 mm. in diameter, leaf-bud scales deciduous. Leaves evergreen, ovate-lanceolate or lanceolate, lamina coriaceous, 7-12.8 cm. long, 2-5 cm. broad, apex acute or obtuse, base rounded or cordulate; upper surface dark green or olive-green, not rugulose, flat, mat, moderately or sparsely hairy or glabrous, not setulose, setulose-glandular or not setulose-glandular, midrib grooved, hairy or glabrous, moderately or sparsely setulose-glandular or not setulose-glandular, primary veins 12-16 on each side, deeply impressed; margin flat, not setulose, setulose-glandular or not setulose-glandular; under surface pale green, not hairy or rather densely hairy with very short hairs, discontinuous, not setulose, rather densely or moderately glandular with long – or medium-stalked glands, discontinuous, midrib prominent, not hairy or hairy, not setulose, rather densely or moderately setulose-glandular in its entire length or in the lower half, primary veins raised; petiole 0.8-2.3 cm. long, grooved above, not hairy or hairy, not setulose, rather densely or moderately setulose-glandular. Inflorescence a lax racemose umbel of 4-8 flowers, flower-bud scales deciduous; rhachis 0.6-1.2 cm. long, pubescent, not setulose-glandular; pedicel 1.5-3 cm. long, hairy with small hairs, not setulose, rather densely setulose-glandular. Calyx 5-lobed, 4-5 mm. long, pale green lobes with short hairs or not hairy, rather densely or moderately glandular with medium – or long-stalked glands, margin glabrous, glandular with medium – or long-stalked glands. Corolla campanulate, 3-5.3 cm. long, white tinged pink or white, with or without a crimson blotch at the base, and with or without crimson spots; lobes 5, 1-2.4 cm. long, 1.4-3 cm. broad, rounded, emarginate. Stamens 10 or rarely 13, unequal, 1.8-4.6 cm. long; filaments puberulous at the base. Gynoecium 3.2-5 cm. long; ovary conoid, 3-4 mm. long, glabrous or rarely hairy with long hairs, densely glandular with long-stalked ascending glands, 5-6-celled; style glabrous, eglandular. Capsule slender or oblong, 1.6-2.1 cm. long, 3-5 mm. broad, slightly curved or straight, hairy or glabrous, moderately or rather densely setulose-glandular, calyx lobes persistent.

Rhododendron luteiflorum Davidian, sp. nov.

Species *R. glaucophyllo* Rehder affinis sed floribus viridulo-flavidis, foliis infra squamis laxioribus inter se 3-8 diametris distantibus praedita, et aream allopatricam habitans differt.

Frutex patens vel rectus 75 cm. – 1.50 m. altus, cortice levi brunneo desquamante, ramulis lepidotis. Folia sempervirentia; lamina coriacea, aromatica, lanceolata, oblanceolata vel oblongo-lanceolata, 4-6.8 cm.

longa, 1.5-2.6 cm. lata, apice rotundata vel obtusa et mucronata, basi cuneata, obtusa vel rotundata, paulo decurrens vel haud decurrens; supra atroviridis nitens elepidota vel lepidota; infra conspicue glauca, squamis minoribus pallide flavidis inter se 3-8 diametris distantibus, squamis majoribus atrobrunneis dispersis; petiolus 0.7-1.2 cm. longus, lamina decurrente anguste alata, vel rotundatus, moderate vel dense lepidotus. Inflorescentia terminalis, umbellata vel breviter racemose, 3-6 flora, bracteis deciduis; rhachis 3-5 mm. longa, lepidota; pedicelli 0.8-1.5 cm. longi, corollae breviores, dense vel moderate lepidoti. Calyx 5-lobatus magnus 6-8 mm. longus, lobis lanceolatis vel ovato-lanceolatis, apice acutis, extra lepidotis, margine eciliatis. Corolla campanulata, 2-2.2 cm. longa, 5-loba, viridulo-flavida, immaculata, extra lepidota vel elepidota. Stamina 10 inaequalia, 1-1.5 cm. longa, corollae breviora; filamenta basi vel in trientibus decobus inferioribus dense pubescentia. Ovarium conoideum vel oblongum, 5 mm. longum, 5-loculare, dense lepidotum; stylus longus validus curvatus, corollae brevior, elepidotus. Capsula conoidea vel oblongo-ovalis, 5-7 mm. longa, 5-6 mm. lata, dense lepidota, calycis lobis persistentibus circumcinctis.

North Burma. North Triangle. Uring Bum, above Akkail. 9500 feet. *Rhododendron* sp. affin. *R. glaucophyllum*. A small more or less erect shrub or undershrub, growing in dense bushy thickets on the open granite ridge with several other species of *Rhododendron* and *Vaccinium*, *Gaultheria*, etc. Probably dwarfed in the open – here about 3 feet tall. Flowers over. This is probably its lower limit. F. Kingdon Ward, No. 20845.

North Burma. North Triangle. Tama Bum. 10,000-11,000 feet. June 20, 1953. *Rhododendron pruniflorum*? A bushy shrub, 3-5 feet tall. Leaves glaucous and scaly beneath. Style glabrous. Flowers not seen, three per truss. Bark flaky. Fruiting; not common in thickets along the ridge. (Same as No. 20845?) F. Kingdon Ward, No. 21041.

North Burma. North Triangle. Uring Bum, above Akkail, 10,000 feet. November 4, 1953. *Rhododendron* sp. Series Glaucophyllum. A dwarf scrub plant growing socially on the exposed crest of the ridge. In more sheltered spots opening its buds. Flowers lemon yellow. (So this is neither *R. pruniflorum* nor *R. glaucophyllum*. The colour is much better than that of *R. hypolepidotum*.) Anthers red-brown, base of filament puberulous. Style glabrous. Same as No. 20845, and probably No. 21040. F. Kingdon Ward, No. 21556 (Holotype in Herb. Brit. Mus. Nat. Hist.).

This plant was at first described as *R. glaucophyllum* var. *luteiflorum*. Further investigations of specimens and plants in cultivation show that it merits specific status.

Kingdon Ward discovered this plant in June 1953 at Tama Bum, North Triangle, North Burma. He collected it again later in November at Uring Bum, above Akkail in the same region. It grows in dense bushy thickets on open granite ridges, at elevations of 9,500-11,000 feet.

The species is a member of the Glaucophyllum Subseries, Glaucophyllum Series. It is allied to *R. glaucophyllum* from which it differs markedly in its lemon-yellow or greenish yellow flowers, in the laxly scaly lower surface of the leaves, the scales being 3-8 times their own diameter apart, usually in the larger leaves, and often in the somewhat different habit of growth. It also differs in its geographical distribution. *R. luteiflorum* comes from North Burma, whereas *R. glaucophyllum* is known from Nepal, Sikkim, Bhutan and Assam.

The plant was introduced by Kingdon Ward under No. 21040, in 1953. It is one of the finest yellow-flowered dwarf rhododendrons in cultivation. Other remarkable features of this plant are the markedly glaucous lower surface of the leaves, the large leafy lanceolate or ovate-lanceolate calyx, and the smooth, brown, flaking bark of the stem and branchlets. It is hardy, but to be able to grow it satisfactorily along the east coast and in gardens inland, a well-sheltered position should be provided. The species was given the Award of Merit in 1960 and the First Class Certificate in 1966 when exhibited by the National Trust for Scotland, Brodick Castle Gardens.

A rounded spreading or broadly upright shrub, 75 cm. – 1.50 m. high; stem and branchlets with smooth, brown, flaking bark; branchlets scaly. Leaves evergreen, lanceolate, oblanceolate or oblong-lanceolate, aromatic, lamina coriaceous, 4-6.8 cm. long, 1.5-2.6 cm. broad, apex rounded or obtuse, mucronate, base tapered, obtuse or rounded, slightly decurrent on the petiole or not decurrent; upper surface dark green, shining, not scaly or scaly; under surface markedly glaucous, laxly scaly, the smaller pale yellow scales 3-8 times their own diameter apart, the larger dark brown scales widely separated; petiole 0.7-1.2 cm. long, margins slightly winged or ridged or rounded, moderately or rather densely scaly. Inflorescence terminal, umbellate or shortly racemose, 3-6-flowered, flower-bud scales deciduous; rhachis 3-5 mm. long, scaly; pedicel 0.8-1.5 cm. long, shorter than the corolla, rather densely or moderately scaly. Calyx large, leafy, 5-lobed, 6-8 mm. long, lobes lanceolate or ovate-lanceolate, apex acute, outside scaly, margin not ciliate. Corolla campanulate, 2-2.2 cm. long, 5-lobed, lemon-yellow or greenish yellow, without spots, outside scaly or not scaly. Stamens 10, unequal, 1-1.5 cm. long, shorter than the corolla; filaments densely pubescent at the base or in the lower two-thirds of their length. Ovary conoid or oblong, 5 mm. long, 5-celled, densely scaly; style somewhat long, stout, sharply bent, shorter than the corolla, not scaly. Capsule conoid or oblong-oval, 5-7 mm. long, 5-6 mm. broad, rather densely scaly, enclosed by the persistent calyx lobes.

Rhododendron zaleucum Balf. f. et W. W. Sm. var. **flaviflorum** Davidian, var. nov.

Aspectu *R. zaleuci* Balf. f. et W. W. Sm. sed floribus flavis, foliis majoribus ad 10 cm. longis recedens.

North Burma. North Triangle. (Uring Bum, above Akkail) 9000 feet, 14 May 1953. Probably a new species. Rhododendron sp. § Triflorum. A small tree up to about 25 feet high. Like *R. triflorum* in some respects, but flowers much larger, trusses more crowded, corolla a purer yellow. Actually the flowers vary in colour, white, yellow, almost salmon. A beautiful species now in full bloom. Common along the exposed ridge. F. Kingdon Ward No. 20837 (Holotype in Herb. Brit. Mus. Nat. Hist.).

The variety differs from the species in its yellow flowers, and in the larger leaves, lamina up to 10 cm. long.

Kingdon Ward discovered this plant in May 1953 at Uring Bum, above Akkail, North Triangle, North Burma, at an elevation of 9,000 feet. He records it as being common along the exposed ridge. The plant was introduced by him the same year (K. W. No. 20837).

In its native home the variety is a small tree up to 25 feet high, although in cultivation it is a broadly upright shrub up to 6 feet in height,

fairly well-filled with foliage. It is a vigorous grower, and is of great beauty when covered with large funnel-shaped yellow flowers. The plant is hardy in a sheltered position, and is worthy of being grown in every collection of rhododendrons.

Rhododendron montroseanum Davidian

Rhododendron mollyanum from south-east Tibet, described in 1954, must have a new name, because at an earlier date in 1909, the name *R. mollianum* (sic) had been given to a rhododendron from New Guinea. The Tibetan plant will now be named *R. montroseanum*, in honour of the late Duchess of Montrose. The change in nomenclature may be regretted, but is strictly in accordance with the International Code Of Botanical Nomenclature. (It may be remarked that *R. mollyanum* was also named after the same Duchess of Montrose who was known to her family as "Molly".)

The American Garden at Lower Coombe Royal, Kingsbridge

Surgeon-Captain J. A. N. LOCK

The American Garden at Lower Coombe Royal is first mentioned in an article in the *Journal of Horticulture and Cottage Gardening* in 1871. From this it appears that it was laid out soon after 1840 by John Luscombe as an addition to the garden of his house, Coombe Royal. He was an enthusiastic gardener who corresponded with Sir William Hooker at Kew and received seeds of rhododendrons and other plants from him. Among these were some of the first Sikkim rhododendrons, brought from India by Sir William's son Joseph. John Luscombe was one of the first hybridisers of rhododendrons, and raised hybrids such as 'Luscombei', 'Coombe Royal' and 'Luscombe's Scarlet'. *Rhododendron fortunei*, introduced in 1859, first flowered in this garden in 1866 and was illustrated in *Curtis's Botanical Magazine* in that year.

Another source for the plantings was the firm of Veitch. In 1977 Alan Mitchell, of the Forestry Commission Research Station at Alice Holt, visited the garden and measured the more notable trees. He reports that three conifers, *Abies firma* and the varieties *filifera* and *squarrosa* of *Chamaecyparis pisifera* are the second biggest in the U.K., and two broad-leafed trees, *Drimys winteri* and *Zelkova serrata* are the largest – taller ones being only known in southern Ireland. All of these except the *Drimys* were first introduced in 1861 by John Gould Veitch as a result of his expedition to Japan and China, and it seems probable, in view of their size, that the Coombe Royal trees derive from this first introduction.

In spite of several periods of neglect, the garden still contains many of its original plants, in good health and of great size. There are several fine plants of *Rhododendron arboreum* in shades of red, pink and white, and large specimens, probably the originals, of Luscombe's hybrids, as well as a number which remain unidentified. John Luscombe obviously did not realise how big his rhododendrons would become;

they were planted far too close together, and many are now tall with bare trunks, and flowers and leaves only at the tops. However, partial clearing has created open spaces and encouraged many of the trees to refurnish themselves to ground level.

As well as the rhododendrons there are about twenty old camellias, the largest 31 inches in girth and about thirty feet high, in spite of severe lopping in the past. The most spectacular plant is an enormous *Magnolia denudata,* 35 feet high and 53 feet across, with a girth of 65 inches, the survivor of the two mentioned by J. G. Millais in his books on *Rhododendrons* and *Magnolias,* published in 1924 and 1925. The other, which was even taller, was blown down about ten years ago.

It seems that the term "American Garden" was first used at about the time John Luscombe was starting his planting. It originally described areas used for the quantities of new plants being sent back from America by David Douglas, James McRea and William Lobb. Subsequently many other plants with similar cultural requirements – a cool acid soil and informal treatment - came to be included in such plantings.

The garden is of about two acres, long and narrow, occupying the bottom of a valley and therefore sheltered from wind, except from the south, but tending to be a frost pocket. Various established trees provide some top cover and others are being encouraged to extend this. The soil is a neutral to slightly acid stony clay-loam, derived from shale which lies close to the surface except in the bottom of the valley. Within the American Garden an acid peaty layer has developed on the surface beneath the rhododendrons.

After our arrival in 1962 we spent about three years clearing brambles and fallen trees before much replanting could be done. We realised at

an early stage that there was a heavy infection with honey fungus in the old part of the garden. We have ignored it in our replanting, and it has, as yet, affected 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 the 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.

Among camellias which have done well are the Jury hybrids from New Zealand, and several Australian hybrids including 'E. G. Waterhouse', 'Sayonara' and 'Shocking Pink'. Americans include '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 a 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 old stumps, must be self sown.

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

The National Rhododendron Garden, Olinda, Australia

ARTHUR W. HEADLAM

The development of the first fifty acres of the National Rhododendron Garden at Olinda by the Australian Rhododendron Society, started in 1961, was a formidable undertaking which has taxed the resources of the Society to the utmost. However, it has been the dedication of members, past and present, the generosity of members and nurserymen in donating plants and eventually, recognition and welcome financial assistance from the Government and Tourist Development Association which has brought about the realisation of the original concept. Progress has steadily continued and in 1975 the Society began the development of the second and final fifty acres. A great deal of preparatory work was necessary, clearing the scrub and undergrowth, removing rocks where possible, grading the surface and forming access roads and tracks as well as extending the fence from the existing garden, and

finally, a very necessary requirement, the installation of an adequate water supply.

Further financial assistance was received from the Government, without which the quite considerable undertaking would have been far beyond the limited resources of the Society. Throughout the existence of the Society, finance has been raised at annual shows, by the Ladies' Auxiliary, from legacies, and of course, the welcome Government grants. Help has also been forthcoming from other horticultural societies, the Australian Lilium Society, the Alpine Society (Victoria), and the Australian Camellia Research Society, who have all staged exhibits in the show hall, thereby attracting more visitors to the garden.

The Australian Camellia Research Society (Victoria Branch), has now joined with the Australian Rhododendron Society in the development of the final fifty acres by establishing a camellia garden, details of which have been described in a separate article, "The Formation of a Camellia Garden at Olinda". A feature of the new area will be the planting of trees and shrubs in strategic positions where they will beautify the landscape without restricting the views of the River Yarra Valley, the Silvan dam in the middle distance (one of the sources of Melbourne's water supply), and the Warburton Ranges rising to four thousand feet in the background.

The development of the final fifty acres of land has given the Society the opportunity of achieving its ultimate goal, the formation of a permanent rhododendron species garden in an area where growing conditions can only be described as ideal, with sufficient timber protection, particularly for the large-leafed members of the genus, well drained, acid volcanic moisture retentive soil, combined with a climate in which growing even the most tender species, which includes the Maddenii Series and Subseries, presents no problem.

The planting of the species in their Series and Subseries is being carried out under the supervision of Peter Damman, a Foundation member of the Society, Chairman of the Species Study group and a species enthusiast in his own right as he grows a comprehensive collection of species in his own ten acre garden at Olinda. It would be difficult to find anyone better qualified to carry out the operation of transplanting the species to the new area, for only a few years ago he moved all of his collection from a property which he sold, to his new garden about a mile distant. As a matter of interest, many of the species raised from seed and ranging from twenty to twenty-five years of age, had not previously flowered, but on lifting, with a certain amount of root pruning, and transplanted in his new garden, bloomed for the first time the following season. Many species have been propagated and grown on in his garden for the new project and other members have done likewise, whilst nurserymen have also donated species for the new area.

No sooner had the last panel of fencing been erected than the "operation transplant" began. Many of the large-leafed species were quite sizeable plants, the largest being *R. sinogrande* var. *boreale*, 9 feet high (3 m) and lifted with a ball of earth not far short of one ton. After a magnificent effort, some 650 species were planted, watered and settled in the new area from July to September 1977. Rhododendrons lifted with a large ball of earth, especially when replanted in an almost identical environment, hardly seem to notice their move.

As there is often considerable variation between plants of the same species, wherever possible they were planted in groups of three, for two

reasons, firstly in the event of a death all is not lost, and secondly, if there are any great differences, the poorer form or forms may be disposed of and more plants vegetatively propagated from the selected form. Naturally, a project of such magnitude will not be achieved in a few years, it is a long term project, but with careful selection and propagation, even in five or six years, it should create considerable interest amongst rhododendron, and in particular, species enthusiasts.

The Species Study Group met and inspected the new garden regularly throughout the flowering season. Each plant carries a label as well as a numbered metal tag, and details are entered in a stock book showing the name and origin of each plant, hopefully resulting in lack of identification problems in the future.

A wide path with sweeping curves leads through the existing garden and eventually, after many pauses to look at the items of interest on the way, the new area is reached, the first sign of activity being the garden in process of development by the Camellia Society. Then following the path around another curve, an impressive sight unfolds, a line of 45 plants of *R. arboreum*, stretching from the edge of the timbered area along the contour of the hillside. Most are seven to eight feet high (2.5 m) and up to twenty-five years old, whilst several flowered for the first time last spring, all in the blood red shades. These plants were raised by a member for whom the seed was collected in Nepal, and when he left Olinda and his property was sold, it was through the untiring efforts and generosity of the Chairman of the Species Study Group that this fine collection was secured for the rhododendron species garden. They mark the dividing line between the camellia garden and rhododendron species area and will certainly make a striking display as they develop.

A group of *R. arboreum* subsp. *cinnamomeum* provide a pleasing contrast with their white flowers highlighted against the rusty brown indumentum on the undersides of the leaves, whilst a group of *R. niveum* makes a complete colour change with their rather small but compact trusses of smoky blue. A return to the red and scarlet colours is represented by groups of *R. delavayi* and *R. zeylanicum*. In the Subseries Argyrophyllum, *R. formosanum* causes considerable interest with its white flowers carrying a blotch in the throat; it is a rhododendron not often seen in cultivation.

In the Triflorum Series a group of *R. augustinii* flowers freely with colours in varying shades of lavender blue, whilst groups of *R. lutescens* make a pleasing contrast with their yellow flowers and later with their bronzy-red growth, whilst *R. davidsonianum* and *R. yunnanense* as usual produce a profusion of flowers.

In the Azalea Series, a group of three plants of *R. bakeri*, a native of North America, certainly make an impressive impact on the general scene in their part of the garden with their glowing orange-red flowers, particularly when viewed in the bright spring sunshine.

A path leads into an area shaded by eucalypts and acacias and in the Grande Series, a five foot plant (2 m) of *R. macabeanum* immediately becomes the centre of interest. It carries a number of trusses of deep yellow flowers and one particularly fine truss carrying twenty-five flowers was exhibited in the non-competitive section of the Society's early show, October 1/2, making it the first flower from the new species garden to be exhibited at a rhododendron show.

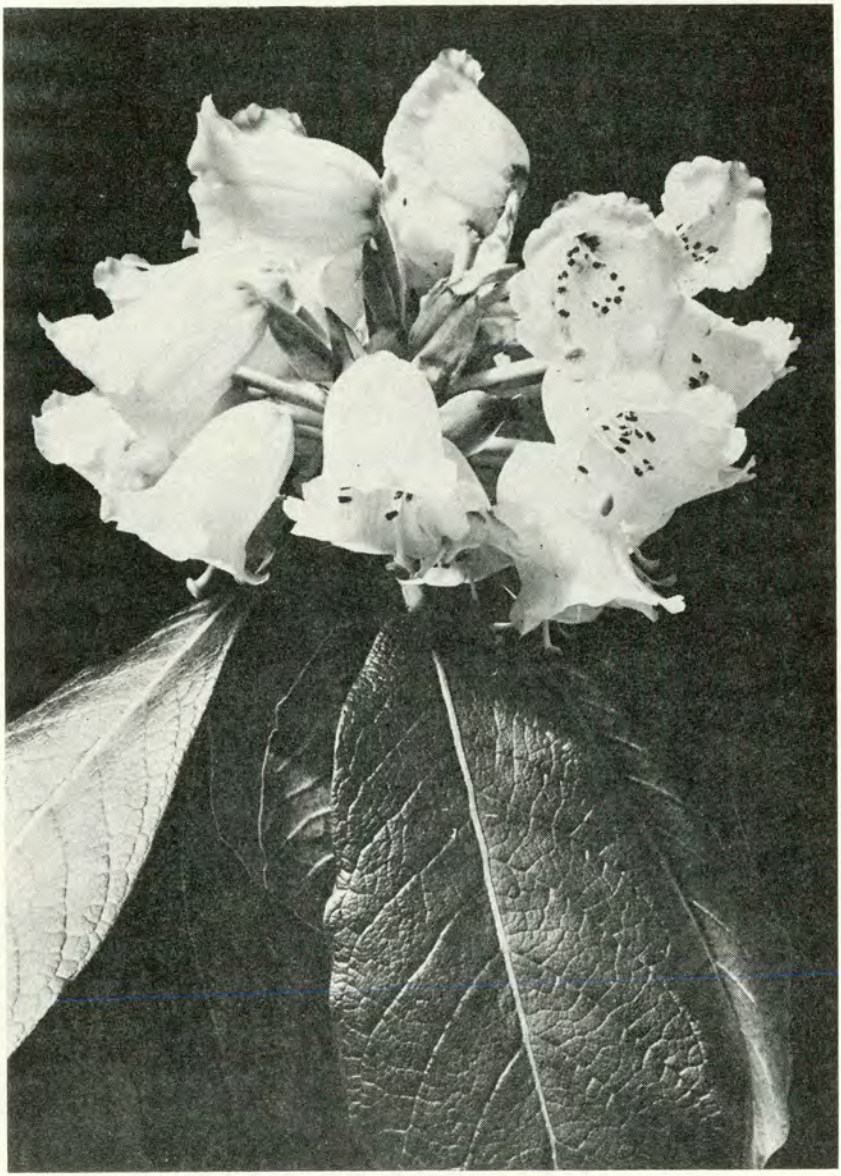


Fig. 6 *Rhododendron falconeri* in the garden at Olinda

Following the path through the woodland area are groups of *R. sidereum, grande* and *mollyanum*, the latter being a grafted plant, the scion of which was obtained from Benmore. All of this group carry flowers, but it may be necessary to wait for some years before flowers are seen on *R. giganteum* and *R. sinogrande*, both of which have a reputation of taking much longer to flower.

The path leads through groups in the Falconeri Series, the species *eximium, falconeri, fictolacteum* and *hodgsonii*, each of which indicate their satisfaction of their new environment by producing flowers so soon after being transplanted.

A turn in the path leads to a more open area in which a group of three plants of *R. yakushimanum* were the centre of interest, the dome shaped plants of some two feet high (60 cm) by three feet across (1 m) indicating that they appreciate their rather open siting by covering themselves with a profusion of flowers, pink in the bud and later fading to white. The foliage carried the usual tawny coloured indumentum, but the leaves were somewhat wider than those of the F.C.C. form, and in the same Series were groups of *R. degronianum, hyperythrum, makinoi, metternichii* and *smirnowii*, each of which has yet to flower. The Species Study Group is looking forward hopefully to this event in the coming spring.

R. griersonianum, the one and only representative of its Series, makes a colourful display late in the season and the Irroratum Series is well represented by plants of *R. aberconwayi, irroratum, elliottii, eriogynum* and *kyawii*, the last named being of special interest for its bright green rather bullate leaves, its large tubular campanulate flowers, sixteen to

eighteen to the truss, and finally, the fact that it flowers, usually in mid-summer and marks the end of yet another flowering season.

The Maddenii Series and Subseries is well represented by groups of *R. burmanicum, ciliicalyx, formosum, johnstoneanum, crassum, veitchianum, maddenii, polyandrum, dalhousiae, lindleyi, megacalyx, nuttallii* and *taggianum*, all of which flowered in spring 1977, and two species recently acquired, flowered for the first time, *R. parryae* and *R. calophyllum*, neither of which appear to be often seen in cultivation.

It is fortunate that the climatic conditions are sufficiently mild to grow these species as garden plants, making this section of the garden of particular interest to overseas visitors.

There still remains a group of *R. nuttallii, dalhousiae, johnstoneanum* and *maddenii* just inside the main entrance gate, a welcoming committee as it were, to ensure that visitors do not miss the opportunity of seeing a more comprehensive collection of the Maddenii Series in the new species area.

In the Fortunei Series, *R. griffithianum*, a magnificent species from the Himalaya, has been used extensively and successfully in hybridizing, but unfortunately can only be grown in the mildest of climates. The plant in the species garden flowered for the first time last spring, producing a profusion of large white flowers tinged pink, a tribute to the mildness of the climate prevailing at Olinda. Other members of this Series are *R. calophytum*, with large trusses from pale lilac to pink, and groups of *R. diaprepes, fortunei* and *houlstonii*, and finally *R. orbiculare*, a favourite for its well rounded shape, its bright green young shoots and its rose pink flowers in loose trusses, set off to advantage against the rounded bright green foliage, glaucous below.

Having started the description with the forty-five plants of *R. arboreum* which make an impressive introduction to the species garden, it would perhaps be appropriate to conclude with a group on the other end of the scale as regards size, the Lapponicum Series, in which few plants would reach more than three feet. This group includes *R. fastigiatum, impeditum, hippophaeoides* 'Haba Shan', *scintillans* and *websterianum*, all of which flowered last year, and all of the flowers are in the lavender, lavender-blue, mauve and purple tonings.

The description of the species garden is not intended to cover all of the Series, nor all of the species in any one series, but to give a general outline of the progress made by a relatively small and certainly hard working group of members of the Australian Rhododendron Society.

There is every indication that autumn and winter in 1978 will be a busy time in the species garden, for all transplanting had to be curtailed with the approach of summer 1977. What with the carry over, the many promises of more plants, some of quite considerable size, and material presently being propagated, the future of the species garden appears to be assured.

Next summer will be the time to pause and take stock for there will be no point in accepting or propagating species of which there are sufficient specimens in the garden.

It will be necessary to produce an inventory of all the species in cultivation in order that future efforts may be directed towards filling the gaps in the relevant Series and Subseries.

A Cornish Tour

ISOBYL la CROIX

As I was unable to go on the official group tour this year, the opportunity to make an alternative trip to Cornwall, centred around the Truro Show, seemed too good to miss. We left Surrey on March 29, making a slight detour en route to Exmouth to call on Mr Judson, as I had read in the *Bulletin* that he would like news of his seedlings – and what better way to do that than to call in. Mr Judson very kindly showed us around his garden, with a surprising variety of rhododendrons in a small space, and round his immaculate greenhouse which contained an interesting collection of tender species such as *R. ciliicalyx, R. inaequale, R. lyi* and *R. edgeworthii.*

It was rather a shock to wake up on the morning of March 30, the opening day of the show, to find the ground white with frost; in spite of this, I cannot recall seeing any signs of frost damage in any of the gardens I visited – a tribute, I suppose, to their sheltered situations. The first visit was to Trelissick – not, I had been told, one of the great rhododendron gardens, but one that seemed a pity to miss as we were so near. The camellias were in full bloom, *reticulata* and *saluenensis* as well as many cultivars of *japonica* and × *williamsii* – in my garden, the first buds had just started to show a little colour. I noticed some fine specimens of a tree I was soon to become familiar with, *Myrtus luma,* with its attractive red-brown bark. One rhododendron that impressed me was a specimen of *R. racemosum* with very deep pink flowers; I should have thought it was Forrest's dwarf form F 19404 if it hadn't been at least 8 feet tall (2.5 m). I saw a similar plant later at Tremeer; I find these deeply coloured specimens much more attractive than the pale forms, but I was told that they do not find favour with judges at shows.

From Trelissick, we went on to Trewithen. There is so much to see here, but the garden was dominated by two plants, or rather three. One was the magnificent *Magnolia campbellii* (var. *mollicomata*?) covered with pink flowers the size of soup plates. So often this species flowers so high up that it is difficult to appreciate it properly, but this one carried its blooms down to eye level. The other two were the splendid bushes of *R. macabeanum,* also absolutely at their peak. Both were covered in flowers down to ground level, great round daffodil yellow trusses with a red blotch in the heart of each flower. The two plants did not seem quite identical; the smaller of the two had flowers that were perhaps individually slightly larger and slightly deeper a yellow, and also darker and glossier leaves.

These were, of course, by no means the only plants of interest. A fine *R. strigillosum* was in full bloom and we noticed *R.* 'Chrysomanicum' with vivid yellow flowers, a good specimen of *Corylopsis platypetala* and a wide range of camellias, including the opulent deep pink 'Drama Girl', as well as a number of other magnolias. I had never before seen such enormous trees of *Eucryphia cordifolia*; they made great clumps and thickets and must be spectacular when in flower.

Next stop was the Truro Show, where again there was almost too much to see in the time available. I shall not describe it, as it is usually written up in the Yearbook. In the evening, we went to Mr Davidian's

talk, which dealt with a good selection of rhododendrons illustrated by some fine slides, including some awful warnings of how *not* to grow rhododendrons.

Next day we started at Penjerrick. This garden is now sadly overgrown, but it still contains many fine plants and the very fact of its semi-wild state lends it a strangely fascinating atmosphere. The first notable plant we saw was again a magnolia, this time a spreading tree, perhaps 25 ft. high (7 m), covered with pendant, pure white flowers, intensely perfumed. I do not know what this was, possibly a form or a hybrid of *M. sargentiana.* One uncommon rhododendron we saw was *R. genesterianum,* covered in dusky, plum-purple flowers – perhaps more a curiosity than a beauty, but certainly an interesting plant. A large-leafed species with trusses of purple-pink flowers we thought was probably *R. magnificum.* There were many good unnamed red hybrids, and *R.* 'Chrysomanicum' was represented again. Once more there was a good collection of camellias – two that caught my eye were 'White Swan' and another white that looked like 'Francis Hanger'. There was not time to see half of Penjerrick, we did not even cross the bridge, as we wanted to go round Trengwainton in the afternoon and planned to call in at Glendurgan on the way.

Like Trelissick, Glendurgan did not have a great deal in the way of rhododendrons, although there was a large plant of Gill's hybrid 'Beauty of Tremough' (*R. arboreum* × *R. griffithianum*) in full bloom. We were interested in the huge clumps of *Drimys winteri* and the profusion of tree ferns. An enormous plant of *Agave americanum* was putting up what would surely be a spectacular flower-spike, and a young plant of *Pinus roxburghii* was striking with its tufts of very long needles.

Trengwainton could well have occupied a day by itself, although to some extent it was frustrating to see the many representatives of the Maddenii Series with fat buds giving the promise of magnificent flowers in a few weeks time. I had never before seen anything like the arrangements in the walled gardens, where the soil is banked up at the south-facing end of each enclosure, providing the maximum insulation and at the same time, forming a protective wall in the adjoining enclosure. As well as tender rhododendrons, there was an interesting selection of southern hemisphere plants, which I should have liked to have seen in flower. Of the rhododendrons that were flowering, *R. strigillosum* was again outstanding with its pillar-box red trusses, and there was a good 'Sir Charles Lemon' and also *R. mallotum*, with dark red flowers and a very richly coloured indumentum. Perhaps the most interesting species was *R. stenaulum* of the Stamineum Series, rated as H1 in the *Handbook*. The shiny, rather light green leaves did not look very rhododendron-like; the specimen in the magnolia garden was well-covered with lilac-pink flowers, in spite of the hard winter.

That evening, Mr Page, the south-west branch organiser of the Rhododendron Group, very kindly arranged to take us to Tregye to meet Edward Needham. Most members will have read his account in the 1975 *Yearbook* called "Rejuvenating a Rhododendron Garden in Cornwall", so there is little point in giving a detailed description. I thought that "re-creating" would have been a more apt word than "rejuvenating", as there seems to have been little left of the old garden and the new one is very much a creation in its own right. The setting is very attractive, with a stream with cascades and pools running down the foot of the steep valley, but the chief interest, of course, is the superlative collection that Mr Needham is building up of the best forms of a very large number of species. There is also a good collection of Australasian plants, and I was most impressed by the profusion, by the stream, of the lilac-blue *Primula bhutanica*. This is a petiolarid primula, a notoriously difficult section, but here they were growing like primroses in a hedgerow. The species was first found by Kingdon Ward in the Assam Himalayas in 1935 and it is interesting that it is described as growing "under rhododendron and on damp, mossy banks", so it must really have felt at home.

It was 9pm and almost dark when we left Tregye. Next day started with an 8.30am visit to South Down nurseries, and then we made our way to Lamellen to join the Cornish branch on the day's outing. Major Magor and his daughter conducted us around the garden, where there was a surprising amount of colour considering what the weather had been like. A sad reminder of the recent gales was the sight of a fine *Magnolia denudata*, blown down near the house. One outstanding rhododendron in full bloom was *R. erubescens*, of the Fortunei Series, with large, blush-pink bell-shaped flowers. Another plant I had not seen before and liked very much, was a pink-flowered form of *R. lutescens*. This was a very attractive plant, with soft pink flowers, on the apricot rather than the mauve side of pink. I do not know if it comes true from seed. Another uncommon species was *R. searsiae* of the Triflorum Series, with purple-mauve flowers, freely produced. There were many old hybrids, quite a number raised at Lamellen, including those of *R. calophytum*. In the shelter of a high wall near the house was a collection of tender species, none of course in flower, but well budded up. We were very kindly provided with lunch at Lamellen and then moved on to

Tremeer, just over the hill, the fine garden made by General Eric Harrison.

We were shown around the garden at Tremeer by Mr John Carter, head gardener. There was a lot in flower here, but one or two plants stand out in my mind. One was a magnificent hybrid between *R. arboreum* and *R. calophytum*, a very variable cross made at Lamellen in 1930, of which a clone from Exbury called 'Androcles' received an A.M. in 1948, and another called 'Tretawn' from Lamellen was given an A.M. in 1976. The one here had pure white trusses and attractive foliage. Another fine plant was the A.M. plant of *R. parmulatum*, 'Ocelot', with neat rounded leaves and masses of pale yellow bells heavily spotted with red. The original plant of *R. tsariense* 'Yum-Yum' was just coming into flower; it was attractive as a foliage plant with the rich red indumentum below the leaves. A very fine plant of *R. valentinianum* was in full flower, and we saw two plants of 'Crossbill' (*R. lutescens* × *R. spinuliferum*), one with orange flowers and the other of a much richer shade of red.

I came home well satisfied with the Cornish tour; no one would have imagined, in spite of the signs of gale damage in most of the gardens, that the winter had been so hard. I was sorry not to have seen Caerhays, but that was not open during the time I was there. However, there are other years – I shall have to come back some time to see the Maddenii Series in flower.

Rhododendron cultivars, their Nomenclature and International Registration*

C. D. BRICKELL

Among the international organisations involved in attempts to stabilise plant nomenclature, the International Association for Plant Taxonomy (IAPT), an organisation of plant scientists and plant science institutions, is the driving force behind the production of the International Code of Botanical Nomenclature. This governs the use of botanical names in Latin for both wild and cultivated plants (excluding graft-chimaeras). The Association is also responsible for publishing the International Code for the Nomenclature of Cultivated Plants, for convenience here called the Horticultural Code, although it also controls the naming of agricultural and silvicultural cultivars (varieties). This Code is formulated and adopted by the International Commission for the Nomenclature of Cultivated Plants (ICNCP) which, with IAPT, comes under the aegis of the International Union of Biological Sciences (IUBS). The Horticultural Code originated from suggestions agreed by both the International Horticultural Congress and the International Botanical Congress in 1952.

This first co-ordinated attempt to stabilise the names of cultivated plants resulted in the formulation of the International Code for the Nomenclature of Cultivated Plants published by the Royal Horticultural

* Part of a paper read at the International Rhododendron Conference at New York Botanic Garden, May 1978.

Society in 1953. This Code has been amended and up-dated at intervals since, and in the 1958 Code, published under the auspices of IAPT, it was decided that, to be legitimate, cultivar names given on or after January 1, 1959 must be validly published according to certain Articles of the Code. Cultivar names published before that date are also subject to certain Articles of the Code in order to be legitimate.

These organisations, IAPT and ICNCP, are not involved directly with implementing the Horticultural Code, and the International Society for Horticultural Science (ISHS), an offshoot of IUBS, formed an ISHS Commission for Nomenclature and Registration to organise and encourage the implementation of the Horticultural Code. This is not an easy task on a world scale as since man has cultivated plants he has named them, but the documentation and identification of most cultivated plants has been hazy and inexact. Through this Commission the ISHS has appointed International Registration Authorities for particular genera of plants whose purpose is to maintain registers and stabilise the naming of cultivars within the genus for which they have undertaken responsibility.

At present over sixty genera are covered by International Registration procedures; as examples the Royal Horticultural Society is responsible for eight of these, including rhododendrons, orchids, lilies and daffodils, whilst the Arnold Arboretum has accepted responsibility for twelve, mainly shrubby, genera.

There are some who question the need for controlling the names of cultivated plants, but they are in a very small minority. The majority of reasoned and informed horticultural opinion understands the need and encourages the implementation of measures to stabilise the naming of cultivated plants.

The major purpose of International Registration of cultivar names is to obtain stability so that names within one genus are not duplicated and so that confusion between names is prevented or minimised; in the words of the Horticultural Code "to promote uniformity, accuracy and fixity in the naming of cultivars".

It is important to realise that the rules of the Code are formulated to apply to a very wide range of plants and that the misapplication or misuse of cultivar names may have repercussions in horticultural research, farming, forestry and medicine as well as in our gardens.

Most of the rules included in the Code are based on knowledge of past confusion and are designed to minimise this in the future.

How does the International Registration Authority (IRA) for rhododendrons function and what does it do? Quite simply its aim is that of the Horticultural Code – to promote the uniformity, accuracy and fixity in the naming of *Rhododendron* (including azalea) cultivars.

Any IRA is required to conform to the principles laid down in the Horticultural Code and as IRA for *Rhododendron* the Royal Horticultural Society is required to register cultivar names within the genus according to these rules and recommendations. There is a degree of flexibility of interpretation with various recommendations of the Code to take into account particular features of the genus but otherwise the rules (known as Articles in the Code) are maintained.

The initial step for an IRA is to compile and publish a tentative Check List of all known cultivar names for the genus. In 1958 the R.H.S. published the first International Rhododendron Register which was compiled by Dr H. R. Fletcher. Since that date new registrations and

amendments have been published annually in the *R.H.S. Rhododendron Year Book* until 1970, with addenda published in the *Proceedings of the Royal Horticultural Society* (1971) and in *Rhododendrons with Magnolias and Camellias* (1972-78).

At the moment a complete revision of the International Register is being undertaken and I urge all who raise and name rhododendron hybrids to register the names they propose as it is most important for all who grow rhododendrons that a stable list is made available. In the States Ed Parker registers names on behalf of the American Rhododendron Society; since his appointment he has ferreted out numerous unregistered names and helped to unravel many difficult problems. He has proved adept at persuading many growers to register names and I would like to thank him publicly for the invaluable support he has provided. The new register would certainly not have been as comprehensive as we hope it will now be without his extremely hard and thorough work.

It would be as well at this point to define the terms cultivar and clone as there is often confusion between them. A cultivar is an assemblage of cultivated plants which is clearly distinguished by any characters (morphological, cytological or others) and which, when reproduced (sexually or asexually) retains its distinguishing characters. Cultivars fall into several categories differing in their modes of reproduction, some being vegetatively propagated and others seed-raised.

For the purpose of this registration (and for most, although not all, horticultural plants) we are dealing with the category of cultivar known as clones. A clone is a genetically uniform assemblage of individuals derived originally from a single individual by asexual (generally vegetative) propagation. As an example A. M. Williams, an English rhododendron breeder, crossed *R. griersonianum* with *R. haematodes*. He selected an individual plant from the cross which he considered outstanding and called it 'May Day'. That plant, together with its vegetatively propagated offspring, constitutes the clone 'May Day'.

Other plants from that cross, or seed-raised plants from 'May Day' itself, are not entitled to the clonal name. Unfortunately in the past (and occasionally now) confusion has been caused by misuse of clonal names for seed-raised plants, a point which will be discussed later.

Although previously in this paper the term cultivar has been used in rhododendron registration we are concerned basically with clones.

In the future it is possible that another cultivar class of true-breeding, seed-raised lines of rhododendrons may be developed. In this event registration of cultivar names for these lines will be necessary.

The R.H.S. has now to complete and publish a comprehensive International Register of all names of *Rhododendron* clones known to be in cultivation and all known synonyms. The Register will also include the names of all clones which are of historical importance as well as those which are presumed no longer to be in cultivation. This also involves accepting for registration clonal names not previously used within the genus *Rhododendron* provided these are in accordance with the Horticultural Code.

Unfortunately, before the publication of the 1958 Register, there was considerable duplication of names, the same name being applied to two or more quite distinct plants. In the new Register each known usage of such names will be included with the appropriate description and, where known, the priority of valid publication for the name indicated.

Unregistered but validly published names and illegitimate names will

also be included in the Register. Many such names are in use by horticulturists and it would be wrong to ignore them. Their status as illegitimate or unregistered names will be made clear and no official registration certificates will be issued for such plants.

Duplication and re-use of already existing names is a common and difficult problem. It is understandable that commercially some names are more important for sales than others but confusion can occur even if the plants to which the same name has been applied are totally different in character. It is often forgotten by specialists in a particular group of plants that although they may not be confused by duplicated names themselves there are many other gardeners who could be misled. The argument has been put forward that no one could possibly confuse a deciduous azalea with an evergreen large-leafed rhododendron so why should the same name not be used in each group? If the plants are seen in flower there may be little likelihood of confusion, but a much wider viewpoint must be taken as the same name will appear in catalogues and in the literature referring to different plants. The initiated may still not be confused but the non-specialist will be uncertain in many instances what plant is involved. The International Code of Nomenclature for Cultivated Plants *must* cater for a much wider audience than specialists in particular groups.

Similarly, names which differ only slightly in spelling from existing names must be rejected if there is the likelihood that confusion might occur. As an example 'Joana' is a registered clonal name for *Rhododendron wardii* × 'Albatross'. Alternative spellings such as 'Joanne' and 'Joanna' are likely to be mis-spelt and could cause confusion so would be rejected, whatever the parentage, if put forward for registration today. If the name 'Joanna Smith' was submitted, there would be no reason why this should not be accepted provided it had been or would be validly published.

Equally the use of the name of a garden or nursery as the initial part of the clonal name is acceptable, provided the name is admissible otherwise under the Code. For example 'Wisley Pink', 'Wisley Yellow', 'Wisley Cream' and 'Wisley Flame' (fictitious names) are all acceptable. At one time this duplication of the initial word in a clonal name was specifically excluded under the rules, but is now accepted provided confusion is not likely to occur. It would not, however, be acceptable under the present system for the name 'Exbury May Day' to be registered as although it is a selected clone from the same cross as 'May Day' (*griersonianum* × *haematodes* originally raised by A. M. Williams) it should under modern rules receive a separate clonal name to avoid confusion with the original plant. The distinction is a fairly fine one but is based on past experience of the confusion which arose when the same cross was made in several gardens within a few years and the selected offspring were named by using the original clonal name attached to that of the garden concerned.

For this same reason the registration of fancy grex (group) names has been discontinued. Using this same example we have a situation where May Day is used for the grex name (written May Day g. or May Day gr. without quotes) to cover all offspring between *R. griersonianum* and *R. haematodes*, but is also applied to an individual clone and its vegetatively reproduced offspring written 'May Day' with single quotes.

The confusion which could and did occur under such a system is obvious and happily Dr Fletcher decided some years ago that fancy grex

names should not be officially registered and that the published addenda to the Register should be concerned only with clonal registration.

In certain circumstances, names of extinct clones may be re-used and registered (or re-registered) at the discretion of the IRA provided that the Registrar is satisfied that the name of the extinct clone is not used for any clone of its group in cultivation commercially or in gardens, is not of historic importance, and accords with the rules of the Horticultural Code.

Only in exceptional cases, however, would re-use of a clonal name be granted, as, although it is relatively easy to ascertain commercial availability, it is extremely difficult to establish the existence in cultivation of a particular rhododendron clone. Many old clones are still grown in many gardens throughout the world even though they are no longer listed by nurserymen.

In practice, therefore, re-use of clonal names can only be permitted on the assurance that the whole stock of a clone, which had been named and registered but never distributed, has died or been destroyed. This has occurred in the cases of a few *Rhododendron* clones but the ISHS Commission has made it quite clear that this practice is only permissible when the IRA is assured by the raiser that the clone concerned is extinct.

It is important to note that organisations in Europe granting Plant Breeders Rights will not accept re-use of clonal (or cultivar) names within the same genus under any circumstances. This can be of significance to rhododendron breeders wishing to obtain commercial rights on the clones they have raised.

It has been argued that many of the old clonal names of rhododendrons which no longer appear to be grown should be made available for re-use "because we are running short of suitable names to use". Apart from the obvious danger of confusion already mentioned, it is difficult to accept this argument. It is a sad reflection on our ingenuity if it is true, but a glance at other International Registers will perhaps stimulate the imagination, particularly the mammoth list of rose names.

A further difficult problem is that of reserving clonal names. The registration of names for plants which do not exist is not permitted under the Horticultural Code as valid publication of the name depends on the existence of the plant. A rhododendron breeder, however, may have raised a seedling and wish to use a particular name should the plant prove its worth. The name may be registered immediately after the initial flowering of the plant but it is possible that the next season it may prove less meritorious than the breeder first hoped. If so, the name is wasted and it is reasonable to ask for a name to be reserved should a breeder feel that the apparent swan may turn out to be a goose the next season. Consideration would certainly be given in such cases to reserving for one season a name which may have special significance for the breeder. Reservation of clonal names should not, however, be regarded as a normal procedure and it is unlikely to be requested very frequently as most breeders get the "feel" of a good plant at an early stage.

Although this paper by no means covers all the problems of the International Registration of rhododendron names, I hope it has given you an outline of the procedures and problems involved and the importance of the accurate registration and documentation of clonal names within the genus. Confusion over names and descriptions helps no one, amateur or professional, beginner or enthusiast, who is interested in

rhododendrons. International registration of all the names of *Rhododendron* clones is the only method of ensuring stability. This depends very largely on the occupation of all those who grow rhododendrons but, in particular, the cooperation of those who breed rhododendrons is essential. It means a certain amount of trouble in providing information and completing a registration form, but without it we shall not achieve the aim of obtaining stability, accuracy and fixity for the clonal names within the genus *Rhododendron*.

Cullen (1977) has provided an admirable account of the work being carried out at Edinburgh on the classification of the genus *Rhododendron* and has given us the reasons for the changes and amendments proposed.

One question which will need to be discussed from the viewpoint of the rhododendron grower and breeder is the position of horticulturally important entities which disappear into oblivion of synonymy in this modern revision of the genus. Such taxa which are no longer accepted botanically as distinct species or infraspecific variants, are not recognised even in minor botanical ranks in the revision, yet from a horticultural viewpoint (and occasionally for botanical purposes) it will frequently be necessary to refer to them.

For example a *Rhododendron* species collected at a high altitude may have the horticulturally important character of hardiness. If during the revision that species is placed in synonymy under another species which, as known in cultivation, is less hardy, it is important that gardeners are able to refer to the hardy entity. A similar situation could occur with leaf, flower and other characters.

Unless these important taxa can be provided with some acceptable handle so that they can be recognised for horticultural purposes, it is likely that they will eventually be lost to gardeners or breeders.

One possibility is to attach the collector's number, where known, to the name of the species into which it has disappeared. An example is *Rhododendron cinnabarinum* ssp. *xanthocodon* KW 5874 which would be used to indicate the plant originally known as *R. concatenans* collected under this Kingdon Ward number.

The drawbacks to this are that collectors' numbers very easily become altered inadvertently, that in many cases the collector's number is unknown or the "species" may be represented in cultivation by several similar collections, and, most important for the gardener, that there is no connection between the name of the original species and that of the species into which it has been merged.

It seems essential, therefore, to retain by some acceptable nomenclatural device the epithet by which the merged taxon was originally known. There appear to be three ways of doing this.

Prominent botanists such as Rehder and Hylander made constant use of the lower echelons of formal taxonomic categories (*forma* and *varietas*) to accommodate many of the minor variations within a taxon of higher rank which they considered worthy of recognition. This is still a course open to anyone who wishes to recognise, for example, *R. concatenans* which in the Edinburgh revision is regarded as synonymous with *R. cinnabarinum* ssp. *xanthocodon*. The epithet *concatenans* could be used at the rank of *varietas* or *forma* under *R. cinnabarinum* ssp. *xanthocodon* provided the correct publication procedure was followed.

I have argued strongly (Brickell 1973) for some link to be forged between the Botanical and Horticultural Codes in the past, suggesting

that the botanical category *forma*, now largely discarded by taxonomists, could fulfil this link role. In this instance, however, although the well-known epithet *concatenans* would be preserved, it is an artificial and somewhat clumsy method of dealing with the problem and would not meet with universal botanical approval.

As an alternative Cullen (1977) has pointed out that under the Horticultural Code it is quite in order to treat a sunk specific epithet such as *concatenans* as a cultivar, that is as *R. cinnabarinum* ssp. *xanthocodon* 'Concatenans' or simply as *R. cinnabarinum* 'Concatenans'. This usage is certainly acceptable under the Horticultural Code but has a very distinct drawback. Most horticulturists do not distinguish between the terms cultivar and clone (particularly with woody plants). They would almost certainly regard 'Concatenans' as an unvarying clone and not as a collection of varying clones which it is. This results from the two terms being confused and misunderstood although clearly differentiated in the Horticultural Code. The difficulty arises from the fact that all cultivar categories are written in a similar manner using a capital initial letter and enclosing the epithet in single quotes. There is a failure, therefore, to distinguish between the categories and it is not possible, in print, to tell whether they are vegetatively increased clones or seed-raised groups which may be variable.

In view of these difficulties I propose that a method based on a provision in the current International Code of Nomenclature for Cultivated Plants (Horticultural Code) is considered.

This is based on Article 26 and would involve defining and formalising the term Group to cover cases of this type. At the present moment Article 26 is concerned with assemblages of similar cultivars of species or interspecific hybrids but could readily be redefined to include horticulturally important entities, once accorded botanical rank, which disappear into synonymy when a revision of a genus is published. The principle is the same, that of providing a reasonably circumscribed handle for a group of plants which derive from a particular source but cannot satisfactorily be treated for nomenclatural purposes as clones, cultivars or botanical taxa.

Table 1 lists and compares the taxa grouped under the Balfourian method as Series Cinnabarinum, their treatment as Subsection Cinnabarina (Hutchinson) Sleumer in the Edinburgh revision, and their treatment as Subsection Cinnabarina using the suggested Group method to accommodate sunk taxa of horticultural importance.

The Edinburgh revision leaves only two species and a further two subspecies of *R. cinnabarinum*, a considerable reduction from the six species, six varieties and three clones grouped in Series Cinnabarinum. Dr Cullen's research clearly shows that most of the taxa recognised at present are not botanically separable when a large range of herbarium material is examined, but the devastation for the horticulturist is considerable.

The proposed Group method has the merit of avoiding the confusion between clone and cultivar and yet does not involve any alteration to familiar names, merely an alteration in presentation and orthography. It will be clear from the use of the word Group that no clonal status is implied and it is still possible to select and name individual clones within each Group, retaining the relationship without affecting the nomenclature.

Table 1

SERIES CINNABARINUM Balfourian System. Includes taxa described under this system together with named clones.	*SUBSECTION CINNABARINA* (Hutchinson) Sleumer Edinburgh Revision	*SUBSECTION CINNABARINA* (Hutchinson) Sleumer Edinburgh Revision using the Group Method to accommodate horticulturally important entities (Botanical Authorities omitted)
R. cinnabarinum Hooker var. *cinnabarinum* var. *aestivale* Hutchinson var. *blandifordiiflorum* Hooker var. *roylei* (Hooker) Hort. var. *roylei* 'Magnificum' var. *roylei* 'Vin Rose'	*R. cinnabarinum* Hooker ssp. *cinnabarinum*	*R. cinnabarinum* ssp. *cinnabarinum* *R. cinnabarinum* 'Aestivale' Blandfordiiflorum Group Roylei Group (Roylei Group) 'Magnificum' (Roylei Group) 'Vin Rose'
var. *pallidum* Hooker var. *purpurellum* Cowan *R. xanthocodon* Hutchinson *R. concatenans* Hutchinson *R. concatenans* 'Copper'	*R. cinnabarinum* Hooker ssp. *xanthocodon* (Hutchinson) Cullen	*R. cinnabarinum* ssp. *xanthocodon* *R. cinnabarinum* ssp. *xanthocodon* Pallidum Group Purpurellum Group Concatenans Group (Concatenans Group) 'Copper'
R. tamaense Davidian	*R. cinnabarinum* Hooker ssp. *tamaense* (Davidian) Cullen	*R. cinnabarinum* ssp. *tamaense*
R. igeum Gowan *R. keysii* Nuttall *R. keysii* Nuttall var. *unicolor* Hutchinson	*R. keysii* Nuttall	*R. keysii* *R. keysii* Unicolor Group (or 'Unicolor')

It will be noted in Table 1 that var. *aestivale* Hutchinson is designated as a clone 'Aestivale' and not a Group under this system. Bean (1976) states that Hutchinson described his var. *aestivale* from a single plant at Borde Hill, Sussex, flowering later than normal (July) and with narrower leaves than other forms of *R. cinnabarinum*. Clearly this should be accorded clonal and not group status. A similar situation may have occurred with *R. keysii* var. *unicolor* but the exact status has yet to be determined.

Horticulturally it is also useful where Rhododendron Show Schedules are concerned, avoiding the need for any drastic modifications to schedules which might well be required using the Edinburgh revision alone.

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New Taxa *

J. CULLEN and D. F. CHAMBERLAIN

Subsect. **Monantha** Cullen, **Subsect. nov.**

Frutices, saepe epiphyticae. *Squame* magnae, planae, late marginatae, saepe inequales. *Inflorescentia* 1-3-floris. *Corolla* lepidota, lutea (in sicco saepe viridulo-lutea) vel raro purpurea, tubulosa, lobis vix patulis. Stamina stylusque e corolla exserta. *Stylis* impressus. *Capsula* lepidota.
Typus Subsectionis: R. monanthum Balf. f. & W. W. Smith.

Subsect. **Fragariflora** Cullen, **Subsect. nov.**

Suffrutices humilae. *Folia* parva, crenulata, subtus conspicue nervosa. Squame vesiculosae. *Inflorescentiaa* 2-3-floris. *Calyx* conspicuus, 5-lobatus. *Corolla* rotata, tubo brevi, lobis patulis. *Stylus* impressus, quam staminibus longior. *Capsula* lepidota.
Typus Subsectionis: R. fragariflorum Ward.

* Reprinted from "A preliminary synopsis of the genus Rhododendron". Notes Roy. Bot. Gdn. Edin. Vol. 36, (1978), pp. 105-126.

Subsect. **Afghanica** Cullen, **Subsect. nov.**

Suffrutex humilis. *Folia* coriacea. *Inflorescentia* racemosa, elongata, 12-16-floris, rachidi elongato, conspicuo. *Corolla* tubo brevi, lobis patulis. *Stamina* non declinata. *Stylus* impressus, ante anthesin conspicue deflexus. *Capsula* lepidota.

Typus Subsectionis: R. afghanicum Aitchison & Hemsley.

R. pseudociliipes Cullen, **sp. nov.** (Subsect. Maddenia)

Frutex, 0.6-2 m. *Rami* juveniles setoso-ciliati, ciliis plerumque caducis *Folia* anguste elliptica vel anguste obovata, basim versus cuneata, apice acuta, 40-60(-80) × 16-27 mm, subtus brunnea, laxe lepidota. *Inflorescentia* 1(-2)-floris, pedicellis lepidotis. *Calyx* variabiliter lobatus vel disciformis, lobis plerumque eciliatis. *Corolla* alba vel subrosea, (50-)55-65(-70) mm, tubo 25-35 mm, basim versus pubescens, tota laxe lepidota. *Stamina* 10. *Ovarium* in stylum gradatim angustatum. *Capsula* lepidota, oblongo-cylindrica, 15-20 mm.

China. Yunnan, eastern flank of the N'Maikha-Salween Divide, 26° 20′ N, v 1929, *Forrest* 17900 (holo. E).

This new species, which occurs in NW Yunnan and adjacent Burma, is represented by many gatherings and is easily identifiable by its 1-flowered inflorescences and small leaves. The material put together here has been variously identified (by Hutchinson and others) as *R. ciliicalyx, scottianum, ciliipes* (a paratype!), *dendricola, notatum* and *supranubium*. It closely approaches Hutchinson's concept of *R. supranubium* (as deduced from his description and specimens annotated by him) – a high-alpine plant with 1-flowered inflorescences – but, unfortunately, the type of this name does not agree, so a new name is necessary.

R. yungchangense Cullen, **sp. nov.** (Subsect. Maddenia)

Frutex, 0.8-1.3 m. *Rami juveniles* setoso-ciliata, ciliis variabiliter persistentibus. *Folia* anguste elliptica vel anguste obovata, basim versus cuneata, apice obtusa, 70-100 × 28-38 mm; supra atroviridia, glabra, elepidota, marginibus ciliatis, ciliis caducis; subtus pallide glauca, papillosa, squamis laxis, luteis, inequalibus provisa. *Petioli* lepidoti, setosi. *Inflorescentia* 2-4-floris, pedicellis sparse lepidotis. *Calyx* conspicuus 5-lobatus, lobis oblongis, obtusis, c. 7 mm longis, ciliatis. *Corolla* c. 60 mm, alba, infundibuliformi-campanulata, extus glabra atque elepidota. *Stamina* 10. *Ovarium* in stylum gradatim angustatum; stylo ± elepidoto. *Capsula* lepidota, oblongo-cylindrica, 12-16 mm.

China. Yunnan, ranges N of Yungchang-fu, 25° 12′ N, shrub of 4 feet, flowers white faintly flushed rose on exterior, fragrant; on cliffs and in side valleys, 7-8000 feet, *Forrest* 25446 (holo. E); ditto, fruiting, *Forrest* 25772.

Known only from the type and its re-collection in fruit, this is a very distinct species, characterised by its very individual calyx, glabrous and elepidote corolla, and elepidote style. The plant in cultivation under *Forrest* 25446 is the quite different *R. chrysodoron* (Subsect. Boothia).

R. calostrotum Balf. f. & Ward subsp. **riparioides** Cullen, **subsp. nov.** (Subsect. Saluensia)

A subsp. calostroto squamis in pagina inferiora folii planis, foliis 22-33 mm differt.

China. Yunnan, on the Shui-lu-shan, west of Wei-hsi, 27° 12′ N, 99° 12′ E, 13,000 ft, June 1924, *Forrest* 25503 (holo. E).

A rather distinct variant of *R. calostrotum*, known from a number of specimens collected around Wei-hsi in northwest Yunnan; its longer leaves with flat scales on the lower surfaces distinguish it from the other subspecies.

R. subansiriense Chamberlain & Cox, **sp. nov.** (Subsect. Thomsonia)

R. hookeri, affinis sed ovario dense tomentoso.

Frutex vel arbor, ad 14 m alta. *Truncus* ad 60 cm diam.; cortex cinereus vel griseo-lateritius, laevis. *Gemmae foliosae* c. 3 × 0.8 cm, cuspidatae. *Folia* oblonga 7-10.5 ×2-3.5 cm, 3-3.5-plo longiora quam lata, apice rotundata, apiculata, basi plus minusve rotundata, margine recurvata non undulata; lamina glabriuscula, ad paginam inferiorem glandulis sessilibus unoquoque pilo vestigiali praedito. *Petioli* 1-1.5 cm longi, glabri. *Inflorescentia* densa, saltem 15-flora; rhachis c. 5 mm longa; pedicelli 7-10 mm longi, glabri. *Calyx* 4-5 mm longus, cupulatus, lobis rotundatis, ciliatis. *Corolla* c. 40 mm, tubuloso-campanulata, carnosa, saccis nectariferis depressis, coccinea, intus maculis purpureis paucis provisa. *Ovarium* dense tomentosum eglandulosum. *Capsula* ignota.

NE India. Arunachal Pradesh, ridge SE of the Apa Tani valley, Subansiri Division, mossy rain forest, 2600-2800 m, 18 iv 1965, *Cox & Hutchinson* 418 (holo. E). Cult., Glendoick, ii 1976, C 10670, E.

R. subansiriense forms with *R. hylaeum*, *R. faucium* and *R. hookeri* a distinct group of species within Subsect. *Thomsonia*, defined by the presence of fasciculate leaf hairs with punctate bases. The deep red corollas distinguish *R. subansiriense* from *R. hylaeum* and *R. faucium* and the eglandular, though densely tomentose, ovaries separate it from all these species. The red-flowered forms of *R. hookeri* that might be confused with *R. subansiriense* may almost always be also distinguished by the more substantial, better-developed fasciculate leaf hairs. *R. kendrickii* (Subsect. *Irrorata*), with which there is at least a superficial resemblance, has also been collected in the Apa Tani Valley (*Cox & Hutchinson* 416) but there is an altitudinal separation between the two species: *R. kendrickii* apparently occurs only between 2300 and 2450 m and even there is a rare plant. *R. subansiriense* on the other hand is evidently common within the upper altitudinal range of 2600-2800 m. The total geographical range of the species is uncertain as it is at present only known from the type locality.

R. subansiriense has been established in cultivation and has so far proved winter hardy in the milder parts of Britain. As it flowers and produces its first flush of leaves early, it is susceptible to frost damage but in more favourable sites, as in Cornwall and Argyll, apparently recovers quickly. In cultivation it produces an erect-growing shrub and soon develops characteristic smooth peeling bark. It flowered for the first time in a cool greenhouse at Glendoick, Perthshire in February 1976, 11 years after its introduction, probably at an age of about 15 years from germination. As this plant (specimen C 10670) matches the wild collected type there is every reason to expect that it breeds true from seed.

R. faucium Chamberlain, **sp. nov.** (Subsect. Thomsonia)

R. hylaeo affinis sed ovario dense stipitato-glanduloso et foliis paucioribus lamina gradatim decrescente.

Frutex vel arbor, 1.5-6.5 m alta. *Truncus* ad 15 cm diam.; cortex griseo-lateritius, laevis. *Gemmae foliosae* c. 2 cm longae, cuspidatae. *Folia* oblanceolata, 7-12 × 2.5-3.5 cm, apice rotundata, plerumque lamina gradatim decrescente, margine recurvata; lamina glabriuscula, ad paginam inferiorem glandulis sessilibus praedita. *Petioli* 0.7-1.5 cm longi, stipitato-glandulosi, saepe breviter alati. *Inflorescentia* densa, 5-10-flora; rhachis 8-10 mm longa; pedicelli 5-10 mm longi, glabri vel glandulosi vel pilis dendroideis obsiti. *Calyx* 3-5 mm longus, lobis chartaceis glanduloso-ciliatis. *Corolla* 35-45 mm longa, campanulata, carnosa, saccis nectariferis depressis, pallide rosea vel alba roseo-suffusa, rare, sulphurea, purpureo-maculata. *Ovarium* dense stipitato-glandulosum, 5-7-loculatum. *Capsula* cylindrica, c. 15 × 7 mm.

S Tibet. Pome province, Layoting, Tongyuk Chu, 2750 m, 12 iii 1947, *Ludlow, Sherriff & Elliott* 12019 (holo. E). Also represented at Edinburgh by numerous collections of *Ludlow et al.* (12045, 12208, 12290, 12313, 12514, 13559, 13593, 13596, 13610, 13611, 13643, 13755) and *Kingdon Ward* (5732, 6064, 640) – all from Tibet.

The characteristic sessile "glands" or hair bases on the lower surface of the leaves coupled with the smooth bark link this species with *R. subansiriense* and *R. hookeri* as well as with *R. hylaeum*. However the complete fasciculate hair characteristic of the group is only rarely persistent in *R. faucium*. *R. faucium* is restricted to the Tsangpo Gorge and surrounding area in S Tibet and is clearly a western vicariad of *R. hylaeum* which occurs in NW Yunnan and adjacent NE Upper Burma and SE Tibet. *R. hylaeum* proper may be distinguished from *R. faucium* as follows: leaves broader, lamina 3.5-5.7 cm wide, usually broadest at about the middle of the leaf; petioles terete, never flattened or winged; ovaries glabrous.

R. faucium is in cultivation at Edinburgh raised from seed under the following numbers: *LSE* 12019, 12045, 12208 and a Kingdon Ward collection from the Tsangpo Gorge. The last mentioned has reached a height of at least 5 metres and has a loose growth form with several trunks from a single stock. The above plants were wrongly labelled either *R.* "Irroratum Series" or "*R. hylaeum*". Indeed I suspect that many of the plants in cultivation as *R. hylaeum* are in fact referable to *R. faucium*, as the two are easily confused. The species is apparently fairly hardy.

Some Rhododendron Breeding experiences

MICHAEL HAWORTH-BOOTH

Having bred rhododendrons for over thirty years, I am now enjoying the flowering of the F_2 generation of earlier crosses.

A good example is the variety 'Target' of the Flameheart grex. Now, I only make crosses with a definite objective. In this case it was a large-flowered scarlet, flowering in mid-July. As a garden-landscape specialist I felt that this particular epoch in the shrub flowering season needed

stronger colour. To this end the first cross was between a particularly vivid scarlet and bushy-habited seedling of pure *R. griersonianum* and a late-July flowering pink *R. discolor* whose flowers did not brown off quickly. The result was crossed with a good form of *R. auriculatum*. The offspring proved a powerful grower with large, durable pink flowers with a red eye which I named and registered as Flameheart grex.

The next operation was to self-pollinate this variety thus producing an F_2 generation in which the genes form new combinations. About a hundred seedlings of this were raised and provided an astonishing variation. There were June-flowering pinks, July-flowering pinks and scarlets and even crimsons, and August- and September-flowering fragrant whites. The purest July-flowering scarlet we named 'Target'.

Another attempt at this desired end was 'Doncaster' × *eriogynum* which also produces scarlet flowers in July and was named 'Grand Finale'. It is a very rampant grower and I think hardier than the other *eriogynum* crosses.

Many gardens can only grow the really hardy hybrids successfully, but these tend to have somewhat weak colouring, so I set out to produce an absolutely hardy hybrid with orange flowers.

Only two rhododendron species could be relied on to produce these characteristics. One was *R. catawbiense*, of which the dwarf Mount Mitchell form is the hardiest known rhododendron. The other was *R. dichroanthum* which always produces orange flowers (even when crossed with *fortunei*!). A great gardening friend, the late Mrs Ziegler of Haslemere, had given me a plant of the Catawba and from the Crown Lands Sir Eric Savill had given me a very fine pure *R. dichroanthum*. Their union produced 'Zanna' (named after my wife) a fairly dwarf 3 or 4 foot, dense plant with orange-pink flowers. But, again, it was the F_2 generation of this which produced the most perfect result with pure orange flowers in a fine, tall truss. To this we have given the provisional "kennel name" of 'Princess of Orange'.

Another quite useful variety is 'Oleanda'. In this case the objective was to produce a rhododendron opening a succession of flowers over a longer period than the norm. We had a seedling of *R. griersonianum* which showed this characteristic to some extent and so this was crossed with 'Doncaster' and the resulting seedling with the most extended flowering season was named 'Oleanda' as the flower truss rather reminds one of the nerium.

An experiment with magnolias

SIR PETER SMITHERS

I would make a guess – and that is all that it can be – that a large proportion of the people reading these words have passed the middle period of life and wish that they had been able to plant magnolias when they were young in order to enjoy them in maturity, that is, both for the trees and for themselves. But, alas, the modern world is not made that way, and very few are those who have grown up with their magnolias.

Personally, I longed to grow magnolias as a schoolboy, and having carefully studied the literature put out by nurserymen, bought *M.* × *watsonii* from Hilliers. But we lived on chalk soil then and for many

years thereafter, and the splendid and famous fragrance never materialised, for there was never a flower.

When I retired from a full-time occupation in 1969 and was able to choose to live in the mild climate of Canton Ticino at the southern foot of the Alps on Lake Lugano, with plenty of rain, plenty of sun and a mildly acid soil, arguably the best magnolia climate in Europe, my chance came at last. But most of life lay behind and results were needed quickly. It is this experiment – the enjoyment of magnolias in the first eight years from planting – that I now describe.

Our garden was a disused vineyard on a steeply terraced south-east slope, and the house having taken a large slice out of the 5,000 or so square yards (vertical measurement) of the land of Switzerland of which I was the owner, any idea of a parklike layout à la Wisley was out of the question unless we were to grow only a handful of varieties. So after some anxious thought, I decided to canopy-plant about a third of our total garden area to magnolias, at a spacing which would mean that they would join up and form a closed canopy of trees in an estimated fifteen years. Planting one row per terrace, and using a spacing of 18 feet along the rows, and staggering the rows, this would enable us to plant about eighty trees, all different, and to tuck in a further twenty small-growers elsewhere. A century of magnolias in fact.

As the hillside slopes very steeply, each tree would obtain a great deal of sunlight even after the canopy closed. As the house stands on a terrace overlooking the whole garden, after the canopy closed we would look down on the flowers. While nothing equals the splendour of an isolated magnolia standing with a clear view all round, some study of the literature, later confirmed by observing magnolias in the wild in the southern U.S.A., led me to feel that perhaps magnolias themselves really preferred to grow in community though not necessarily in stands. Furthermore, and this was I fear the decisive point, I wanted in my own lifetime to grow and flower as many different magnolias as possible. In this way we would have a great wealth of young plants. If the community project was a failure, I or my successors could thin out the planting leaving a few specimens, and nothing would have been lost. At the end of eight years, with upwards of sixty different magnolias blooming this season, and one or two now standing at twenty feet (after planting at three feet in 1970) and at this moment carrying uncountable numbers of blooms, I can say that this first part of the calculation has been fulfilled in satisfaction beyond my wildest hopes. But of course, as with every experiment, there was much to learn, and what I now write is a mixture of foresight and hindsight.

In the spring of 1970 we planted twenty-eight magnolias of all sections. I thought this bold at the time, but I now regret that I did not then, in year one of retirement, plant every magnolia I could get hold of. It would have saved money and, above all, years. We added a few each year until 1976 when, convinced of the success of our culture, we planted another twenty-four and this year our final plantings will make up our century.

Establishing young magnolias, an operation of which we now have rather intensive and sometimes anxious experience, presents some unexpected problems. If one plants the latest thing from the great gardens – 'Treve Holman', 'Iolanthe' or 'Princess Margaret' F.C.C. – they will necessarily be very small grafts a foot high perhaps. Now, it is true that if all goes well they will grow into forest trees, but in the first year not

only is the limited root system very drought sensitive, but the very smallness of the plant makes it liable to unexpectedly dangerous enemies. In this garden one of our potential forest trees was seriously set back by a nocturnal predator which ate the young growth as it emerged from the bud. When I lay in wait at night with a flashlamp this turned out to be an earwig. We then reflected that, by carefully sticking each plant with a new bamboo we had created a luxury housing estate for earwigs, and a little insecticide poured into each immediately revealed the accuracy of this. So now the tops of our bamboos are filled in. Another of our infant forest trees was entirely demolished by a large slug, and – pace the conservationists – a ring of slug pellets now surrounds each young magnolia. Every climate and region no doubt has its particular pests and one must find out what the special enemies of magnolias are in one's own locality and take measures against them. For my part, being now released from the routine of an office I have replaced it with a twice daily inspection of all young magnolias during the growing season.

Another hazard to very small plants occurs in the first winter after planting. If all has gone well the young graft will have grown away vigorously and will have made a strong terminal bud and, possibly, no laterals. This is quite likely to be the case with *campbellii* in particular. If during winter, the snow or animals or some other accident should break off the terminal bud, the plant, instead of using the first few precious weeks of the growing season to make a flying start with new growth, will be obliged to use its energies and valuable growing time in activating a lateral growth point from its dormant state. This may well take three weeks, and although once growth is away it will probably be extra vigorous it will not in all probability make up for the lost time. Meticulous staking with a good bamboo (remembering the earwigs waiting to occupy the top of it) is therefore essential.

Once over the first delicate stage when a slight mechanical setback by insect, animal or accident, can be important, with luck after the second season's growth, small plants in their permanent places give little or no trouble.

Growth in this favoured climate, if all goes well, is extremely fast and blooming is profuse and early. *Magnolia campbellii* can be flowered here in eight years from planting and should do so without fail in ten. But even here magnolias are not immune from the sulks, that disagreeable state of equilibrium in which they remain exactly the same size year after year, regardless of being cut down, fed and threatened with the bonfire. A considerable number of the plants set out here, particularly those not planted from containers, sulked in this way. The result was that by 1975 several plants two feet high stood by their contemporaries already topping fifteen feet.

It was in 1975 that we discovered about the reaction of magnolias to foliar feeding. Regular foliar feeding in the late summer of 1975 seems to have stimulated the growth of roots that autumn and to have broken out of the state of equilibrium between top-growth and root system, for in 1976 nearly all our sulkers started away in fine style and have continued vigorously ever since. We now foliar feed all small magnolias with Murphy's formula. Having tried this with success ourselves, my neighbour, Dr Van Veen, tried the same treatment on his sulkers, and, like me, he has no doubt as to the response.

Fig. 7 *Magnolia* × *watsonii* in Sir Peter Smithers' garden

A study of the literature suggests that nearly all the nitrogen in foliar feed is taken up within four hours and that most trace elements go in during four days. Absorption is helped by the addition of a "wetter" to the spray, and it is important to spray the underside of the leaf as well as the upper surface. Sundown is probably the best time for application since the surfaces remain moist for a longer period, and of course it is advisable to avoid rainy weather. But even within an hour, it appears, much nitrogen is taken up, so it is worth risking a wash-off later on.

As to frequency of feeding in this way, the literature suggests about three or four applications, to supplement root feeding. With small plants in a hurry we root feed with rhododendron fertilizer in March, and begin foliar feeding as soon as the leaves are large enough, at weekly intervals. Until a plant is fairly racing away as it should, we continue this foliar programme. A heavy mulch of peat over the roots is maintained at all times with young plants.

All this of course is gardening in a hurry. But then so many of us must hurry! And this brings me to some observations about selecting varieties to plant, a subject normally dealt with in what seems to me a most perfunctory and misleading way.

For immediate results we must look to *M.* × *soulangiana* and similar plants, *M. denudata* and *M. stellata*, plus a few other species and hybrids. Now when one plants a magnolia, the view forward is one of an unlimited number of years in the course of which the plant grows bigger and better and our stock of time to enjoy it grows less and less. In these circumstances there is no excuse for planting any variety which, though good, is not the best. So far as the Soulangianas are concerned the plain fact is that the old standbys of the nurserymen's catalogues are

now quite outdated, and after trial we have thrown them almost all away. The following is our selection. The earliest to open here is 'Wada's Picture', a magnificent very large flower with splendid rather solid pink outside and contrasting white inside. No early Soulangiana can compare with it. For midseason, 'Sundew' far outclasses all the standard Soulangiana forms, both as to size of flower, shape, and treelike growth. For a pure white, nothing equals a good form of the *M. denudata* parent of the Soulangianas, and the plant we have under the name of Japanese clone is vastly superior in form and floriferousness to plain *denudata.* For a deep solid pink, old 'Lennei' still takes the prize for a fine large well-shaped flower, but it is an untidy grower. The newer 'Burgundy' is a vastly superior garden plant. Immensely floriferous, with a smaller flower of excellent colour, it has no rival in this garden. However, the plant which we have under the old name of 'Rustica Rubra' is also a fine thing, midway in habit and flower between 'Lennei' and 'Burgundy'. For a later white the best plant is the so-called 'Lennei Alba', a stronger grower with magnificent large well-shaped flowers, which are ivory, not true white in colour. For a late bloomer, the standard advice is 'Brozzoni', but nobody who has room for only one late Soulangiana and can get 'Grace McDade' should plant 'Brozzoni'. 'Grace' has immense goblet-shaped flowers beautifully carried on the branches and nicely shaded from pink to cream, which far outclasses the older plant. Finally in this class of magnolia comes the plant marketed as *M. denudata,* 'Purple Eye', a very elegant large and well-carried flower with a purple base: a plant of great distinction which looks to me like a hybrid. These plants have given us "instant magnolias" and now put up an extraordinary show of bloom and fragrance, while we wait for the statelier trees of the *M. campbellii* complex to begin their display.

However, the short trial which we have been able to give to the Gresham hybrids from the U.S.A., which are *soulangiana*-type plants with 25% *M. campbellii* in their blood from the 50% *M.* × *veitchii* parent, promise to displace some of the Soulangianas even of the newer vintages. Blooming when very small as do the Soulangianas, they are extremely rapid growers with larger and sometimes even better shaped flowers. Of the eight or so named clones that we have tried, all are excellent. In the Gloster Arboretum in Mississippi and at the Dodd nursery at Semmes, Alabama, I recently saw several hundred large seedlings of these crosses, which have not been selected and introduced. They certainly contain some splendid material, including the latest to bloom which have probably delayed doing so because they have inherited a rather larger share of *M. campbellii* genes than those which are instant performers at three feet high. For anybody adventurous and who wants a treelike plant, I suggest 'Rouged Alabaster', 'Sayonara' and 'Royal Crown', taking care to train them to a single stem.

Here perhaps I should add a warning. In the first year of blooming, in our haste to get the best plants established, we came near to discarding both the splendid 'Sundew' and 'Grace McDade'. It is impossible to judge a magnolia by its first year or so of bloom, though one may make some tentative estimates of its value. Almost all seem to improve in colour and size as they mature. This has been particularly noticeable with the pink stellatas, such as the very good 'Massey Rosea', and with the Soulangianas. I owe to Mr Pickard, who supplied me with some of my best plants, the sharp warning which pulled me up in time!

I shall not take space with our experience of various groups of species, *grandifloras*, the *wilsonii* complex, *salicifolia*, *cylindrica* and others, all of which have a part to play in a garden for the first decade of planting. Instead, I shall conclude with a word about planting the various forms and hybrids of *M. campbellii* and *M. sargentiana robusta*. The advice in the books to the effect that these plants may keep us waiting for fifteen or twenty years for a bloom, should not be the end of the story even for what in the U.S.A. are called "senior citizens". It is, of course, commonly written that certain magnolias are worth planting for their magnificent foliage regardless of their floral qualities. *M. hypoleuca* or *M. macrophylla* are obvious examples of this. But in this garden we have derived great pleasure from the splendid foliage put forth by certain magnolias in the *campbellii* complex, which thus atone for any waiting period for the flowers. At this moment *M. campbellii* 'Ethel Hillier' is putting out leaves of a luscious texture and form which are 12¼ in. × 6 in., *M. campbellii* 'Caerhays' 13 in. × 6½ in. and *M.* 'Treve Holman' 11½ in. × 7¼ in. (all exclusive of petioles), while the smaller, pointed, rigid and beautifully sculptured brightest green leaves held on exceptionally stiff branches of *M. campbellii* 'Landicla', have a character quite different from all others. While for size none of these can approach *M. hypoleuca* at 18½ in. × 9 in., the variety of form texture and colour is very pleasing and is also a reminder of the degree of intermarriage which has taken place in gardens during the relatively short time that these plants have been in cultivation. So this, the final year of our planting programme, will see us concentrating almost entirely upon plants of this class.

So far as our original estimate of fifteen years to achieve our closed canopy is concerned, it has probably turned out to be too pessimistic in a climate where growth of three feet in a year is quite usual. Our most

Fig. 8
Magnolia
'Massey
Rosea'

successful plants will probably join up in the twelfth year. Meanwhile the intervening spaces have been filled with a catch crop of peach trees, which are gradually being cut out to the loss of our deep-freeze: of hybrid blueberries which will suffer the same fate, and of camellias and rhododendrons which we shall try to keep as an understorey vegetation such as one sees around *M. macrophylla* in nature. Perhaps this may not work, but if it does not, at least we shall have had a decade of peaches, blueberries, camellias and rhododendrons.

Gardening is an art in many dimensions, of which time is one of the most important. In retrospect, we could have handled the eight years of our magnolia programme better than we in fact did. Nevertheless the response of our plants has far exceeded my expectations. *M.* × *watsonii*, planted as a little slip of a thing in 1970, is now a massive bush eighteen feet high and as much through. For many weeks of summer the almost imperceptible movement of air up the hillside which accompanies the

early morning sun, carries the famous fragrance to our windows high above.

Now, lest any faint hint of self-congratulation be detected in what I have written, the acknowledgements must be made. We are the inheritors of the work of the great plant collectors, and based on their material, of more than a century of breeding and selecting carried out mainly in the great private gardens of Britain, and latterly in the Arnold Arboretum and the National Arboretum in the United States, while in New Zealand an important contribution is now being made. Then there is the Japanese heritage, mainly associated with the Wada family, which still continues its work with a further generation of "Picture" selections. But to assemble a collection of a century of magnolias, all of prime quality breeding, from these diverse sources, would be far beyond the capability of any ordinary garden of today. This has been achieved here through the specialist collections of Messrs Treseders and Hilliers. I do not need to write an advertisement for these two famous nurseries, but I simply state the fact that without their work in making a worldwide selection of magnolias available for retail purchase, a garden whose staff consists of one part-time gardener and the owner could not possibly have assembled the material which I now enjoy.

Camellias in Australia

ARTHUR W. HEADLAM

In *Rhododendrons with Magnolias and Camellias, 1977*, the formation of a camellia garden in part of the new development of the National Rhododendron Garden at Olinda was described; however, in an undertaking of such magnitude with some 3,000 camellias to plant, it was inevitable that there would be a number of unexpected delays and it was decided to plant as many camellias as possible in the nursery beds before the end of spring, to enable them to become acclimatised to the prevailing conditions before the short move to their final positions in late autumn 1978.

Producing and maintaining an inventory of camellias in the garden will be a formidable task and labelling of the plants so that their names will be clearly visible to members and visitors will also be of considerable importance. Certainly such a comprehensive collection of camellias in this area will add considerably to the interest of the National Rhododendron Garden, and will be complemented by a project of the Alpine Society, Victoria, who plan to develop a nearby area of some three acres of rising land which literally bristles with outcrops of rocks of all shapes and sizes.

Camellias are certainly a most popular shrub in Australia and are grown in very widely separated areas as is indicated by the fact that the Australian Camellia Research Society has branches in Western Australia, South Australia, Victoria, Tasmania, New South Wales and the Australian Capital Territory. Although the Society does not have a branch in Queensland, it does have a number of members in that State, who grow camellias quite successfully in certain areas.

The A.C.R.S. (Victoria Branch) holds monthly meetings from March to November in St John's Hall, Toorak, which is spacious and admirably suited for holding blooms competitions, which are staged each month from April to October. The competition is divided into two

sections, open and novice, and each section carries some 21 classifications. As one may well imagine, when a large number of members get together, there is considerable discussion on the subject of which are the best and most popular camellias, those in the fortunate position of having large gardens and can acquire most of the new releases are quite sure that they have the "winners", whilst members with established gardens are equally confident that the "old and tried" are the best. It occurred to me that a comprehensive study of the results of the monthly points competitions for 1977 would reveal some interesting facts on the subject and a detailed analysis was made of the prize winning blooms. It was decided to omit the miniatures and boutonnieres, thus leaving the following classifications for the purpose of the analysis, covering both open and novice sections.

C. japonica single, semi-double, incomplete double, informal double, formal double, hybrid to 65 mm, hybrid from 66 mm to 115 mm: *C. reticulata* and *C. reticulata* hybrids under 115 mm: *C. reticulata* and *C. reticulata* hybrids over 115 mm; species, seedlings: *C. japonica* hybrids under 115 mm; *C. japonica* hybrids over 115 mm; multiple blooms 3 distinct cultivars; multiple blooms 3 of one cultivar; *C. sasanqua* single; *C. sasanqua* double.

'Spencer's Pink', an Australian introduction of 1940, headed the list by winning prizes on sixteen occasions, closely followed by 'Debbie' (15), 'Water Lily' (14), 'Elegans' (9), 'Margaret Davis' and 'Debutante' (8), 'Dainty Maiden' and 'Kramer's Supreme' (7), 'C. M. Wilson' and 'Guilio Nuccio' (6), then a group of 'Purple Gown', 'Elsie Jury', 'Pink Diddy Mealing', 'E. G. Waterhouse' and the species *C. maliflora* each won prizes on five occasions, and a longer list with 4 wins to their credit were 'China Lady', 'Dream Girl', 'D. Herzilia de Freitas Magalhaes', 'Elegans Splendor', 'Elegans Supreme', 'Jeanette Cousin', 'Mary Phoebe Taylor', 'Magnoliaeflora', 'Show Girl', 'Wildfire' and the species *C. lutchensis*. Then followed 160 entries which appeared amongst the prize winners on fewer than four occasions. Space does not allow the complete list, but as a matter of interest a few are as follows: 'Angel Wings', 'Barbara Clark', 'Bernadette Karsten', 'Cornelian', 'Crimson Robe', 'Donation', 'F. Tuckfield', 'Grand Slam', 'Highlight', 'Hawaii', 'Incarnata', 'K. O. Hester', 'Kick Off', 'Leonard Messel', 'Lasca Beauty', 'Nuccio's Gem', 'Overture', 'R. L. Wheeler', 'South Seas', 'Samantha', 'The Czar', 'Tomorrow Park Hill', 'Valentine Day' and 'Wildfire'.

In the *C. sasanqua* section the following were amongst the prize winners: 'Star above Star' (9), 'Hiryu' (8), 'Bonanza' (7), 'Beatrice Emily' (6), 'Apple Blossom', 'Sparkling Burgundy', 'Showa No Sakae' and 'Yuletide' (each 4), and a number of others won prizes on less than four occasions.

To win the points competition is no easy task, it is essential to pick up as many points as possible early in the season by entering *C. sasanqua* (which carry the same number of points as a large *C. reticulata* hybrid), the early flowering varieties and as many classifications as possible, for when the peak of the flowering season arrives, the entries increase enormously and it is much more difficult to add to one's points.

It is interesting to note that 'Spencer's Pink', 'Debbie' and 'Water Lily' appeared amongst the prize winners for six months out of a possible seven!

During the points competition for 1977, the prize for the best bloom of the night was awarded to:

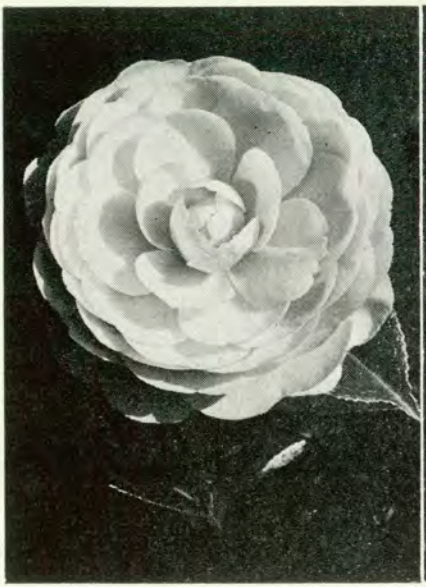

Fig. 9 Camellia 'Water Lily'

Fig. 10 Camellia 'Betty Sheffield Supreme'

Open Section: 'Water Lily', 'Pink Smoke', 'Kramer's Supreme', 'Elegans Splendor', 'White Nun', 'Purple Gown' and 'Florence Jane'

'Arch of Triumph', 'Elsie Jury' and 'Edith Linton'.

It occurred to me that an interesting exercise would be to compare the 1977 results with some of the prize winners of ten years ago, fortunately I had kept the relevant news letters, but on examination it was obvious that the competitions of 1967 certainly did not have as many classifications nor as many entries. Heading the list with wins on five occasions were 'C. M. Wilson', 'Fimbriata' and 'Gauntletti', followed by 'Crimson Robe' and 'Guilio Nuccio' with four wins to their credit and amongst the prize winners on three occasions were 'Captain Rawes', 'Dainty Maiden', 'Debutante', 'Juanita Smith', 'Lady Clare', 'Lady St. Clair', 'Spencer's Pink', 'Thompsonii Rosea', 'Ville de Nantes' and 'William Honey', and finally amongst those mentioned once or twice were 'Alba Plena', 'Citation', 'Coral Pink Lotus', 'Donation', 'Donckelarii', 'Elegans', 'Elsie Jury', 'E. G. Waterhouse', 'Hawaii' and 'Drama Girl', from which it will be seen that quite a number of the 1967 prize winners are still amongst the winning blooms in 1977, so it would be reasonable to assume that some of the 1977 winners will still be with us in 1987.

As well as the monthly competitions there are a number of interesting programmes for members during the year, such as lectures on hybridizing, pests and diseases, propagating and good garden practice; there is a distribution of seed which is an excellent way of getting members and visitors involved, and a grafting night is held in July each year when demonstrations are given on film as well as practical demonstrations by experts. Members may bring their own stock plants, or obtain them from the Opportunity Table where a wide range of scions is readily available, and members may have them grafted, or alternatively, do their own grafting under expert supervision. This is one of the most popular nights of the year.

The A.C.R.S. Victoria Branch is a very active group and participates in a number of shows in conjunction with other horticultural societies and garden clubs.

A two day show held August 13/14 in St John's Hall, Toorak, the first combined Royal Horticultural Society of Victoria Fellows Group/ A.C.R.S. (Victoria Branch) Show was very successful and well attended on both days. The quality of the blooms exhibited was of a very high standard, despite the fact that the weather during the preceding week produced rain, hail and gale force winds. The Blue Ribbon winners were: 'Elegans Supreme', 'Grand Prix', 'Dr Clifford Parks', 'Angel Wings', 'Ave Maria' and the miniature 'Wilamina'. An interesting feature was a well arranged display of a collection of blooms of 'Water Lily', showing a number of varying forms, each of a very high standard.

The Camellia Lodge trophy for 12 blooms, *C. japonica*, distinct, was won by 'Grand Prix', 'Easter Morn', 'Guilio Nuccio Var.', 'Ecclesfield', 'Elegans Supreme', 'Betty Sheffield Supreme', 'Dixie Knight' and 'Grand Slam', and the A.C.R.S. President's trophy for six blooms *C. japonica*, distinct, was awarded to 'Easter Morn', 'San Dimas', 'Emmett Pfingstl', 'Elegans Supreme', 'Margaret Davis' and 'Guilio Nuccio'. The R.H.S. Victoria Secretary's trophy for the best bloom in the Novice section was won by an outstanding bloom of 'Debbie'.

Finally, another camellia show sponsored by the Waverley Garden Club/A.C.R.S. (Victoria Branch), held August 20/21, only a week after the previous show, although giving exhibitors little time to prepare, was extremely successful. Despite the hazards of strong winds and rain, it was difficult to provide sufficient bench space to accommodate the numerous entries. This year was the first time the show has been staged for two days, Saturday and Sunday, and from the record number of entries and attendances, it appears that it will be a permanent innovation in the future. The following were the Blue Ribbon winners: 'Drama Girl', 'Nuccio's Gem', 'Elsie Jury', 'K. O. Hester', 'Pearl's Pet' and 'Ave Maria'.

Mention has been made about the inclement weather prevailing during the weeks preceding the two main shows, and of course during the winter months of the blooms competitions; however, camellias are winter flowering shrubs and such hazards must be accepted as a challenge to exhibitors who have devised many ways of maintaining their blooms in perfect condition for the show bench, where even the smallest blemish may result in loss of points. Plants in containers may be moved to a sheltered position, to a greenhouse if one is available, or to a porch or under the eaves of the house. Where plants cannot be moved, leaves or branches which may mark the flower may be pinned back with clip type clothes pegs, and it is not unusual for an umbrella to be used to keep rain from damaging a potential prize winner, and if it appears that blooms may be past their prime by the time of the competition, they are often held in a household refrigerator for a few days.

It is sincerely hoped that the notes on the formation of a camellia garden at Olinda and the reports on the shows and competitions for 1977 have achieved their purpose, which is to describe in general the widespread activities of the Australian Camellia Research Society, and in particular the Victoria Branch, and to give readers at least an indication of the camellias generally grown and exhibited at the A.C.R.S. (Victoria Branch), monthly blooms competitions and the two main shows held each year.

The Chromosomes of *Camellia, Magnolia* and *Rhododendron*, and their significance in the breeding of hybrids in these genera

MARTYN RIX

It is often thought that the question of the parentage of a hybrid may be settled by a study of its chromosome number. Unfortunately this is only true in a small number of cases; some of these I shall briefly mention here, and at the same time explain the general principles which are involved.

The proteins which make up the genetic code are aggregated into bodies called chromosomes, which form part of the nucleus of each plant cell. The chromosomes are visible under a microscope at certain stages of cell division. It is usually necessary to look at several hundred dividing cells before one is found at the right stage; then the chromosomes may be counted (they look like sausages lying in a pan). In each vegetative cell there are twice as many chromosomes (2n) as there are in a pollen or egg cell (called a gamete) (n). In each genus there is usually one basic number, and the different species have evolved as multiples of this basic number, or, more rarely, additions or subtractions.

The commonest situation is for a species to have twice the basic number. These are known as diploids, and other multiples are known as triploids, tetraploids, etc.

In *Camellia* the basic number is 15 and two different numbers have been found; *C. japonica* and *C. saluenensis* are diploid (2n = 30) and *C. reticulata* is hexaploid (2n = 90). Hybrids between *C. japonica* and *C. saluenensis* would therefore have 2n = 30 and occur relatively easily. Study of the chromosomes would not help in deciding the possible parentage, if that is in doubt. A simple way of telling whether a plant is pure *C. japonica*, or *C.* × *williamsii* is by looking at the ovary; *C. saluenensis* and *C.* × *williamsii* have silky hairs on the ovary; *C. japonica* has none. Therefore, if the female parent of a purported cross between these two species is *C. japonica*, the ovaries of the flowers of the offspring will be hairy if the male parent was *C. saluenensis*, but glabrous if the male parent was *C. japonica*.

2n =30 has been found in *C.* 'Donation', and would be expected in other *C.* × *williamsii* hybrids. There has been much doubt about the parentage of the hybrid *C.* 'Salutation'. It is discussed at length by Neil Treseder in "Growing Camellias", and by Longley and Tourje (1960). A hybrid between *C. reticulata* and either of the other two would be expected to have 2n = 60 (45 from *reticulata* and 15 from the other). Another hybrid, *C.* 'Inamorata', has been found with 2n = 75; this could have arisen because a normal gamete (egg or pollen cell) of *C. reticulata*, n = 45, was fertilised by an abnormal, doubled, gamete of *C. saluenensis* n = 30. This aberrant doubling of the chromosomes has proved to be very useful for the plant breeder, and may be induced artificially by the use of colchicine. One interesting side effect of this is that sterile diploid hybrids may become fertile when the chromosome content of each cell has been doubled. As far as I know this has not yet happened in *Camellia*, but it has occurred in several other genera, and the fertile polyploids of hybrid origin are a regular source of new species.

In *Magnolia* the basic number is 19, and three different chromosome numbers have been recorded as follows:

M. heptapeta (*denudata*)
M. sprengeri
M. campbellii
etc. } 2n = 114

M. kobus
M. salicifolia
M. stellata } 2n = 38

M. sieboldii
M. sinensis
etc. } 2n = 38

M. quinquepeta (*liliiflora*) 2n = 76
M. acuminata 2n = 76
M. cordata 2n = 76

M. nitida 2n = 38
M. delavayi 2n = 38
M. grandiflora 2n = 114

M. hypoleuca (*obovata*)
M. officinalis
M. macrophylla } 2n = 38

Thus the chromosome numbers follow the groupings based on other characters. Most of the recorded hybrids are within the groups and so would have the same chromosome numbers as their probable parents.

One exception is *M.* × *soulangiana*, a hybrid between *M. heptapeta* (2n = 114) and *M. quinquepeta* (2n = 76). The expected chromosome number is 2n = 95, and this number has been recorded. 2n = 114 and 133 are also recorded in *M.* × *soulangiana* 'Lennei' and further study has shown other variations among the numerous forms of this cross.*

Other recorded hybrids between parents of different chromosome number are *M. virginiana* (2n = 38) × *M. grandiflora;* the hybrid has been found to have 2n = 76. Two clones have been selected and named in the U.S.A.: 'Freeman' and 'Maryland'. The hybrids that are becoming well known here, with names such as 'Randy', 'Peter', 'Betty' and 'Susan', etc., are sterile triploids between *M. kobus* var. *stellata* and *M. quinquepeta* (*liliiflora*), and have 2n = 57, (38 + 19). 'Caerhays Surprise', a hybrid between *M. campbellii* and *M. quinquepeta* 'Nigra' would be expected to have 2n = 114 or 95.

In Rhododendron the basic number is 13 and five different chromosome numbers have been recorded. The vast majority of species have 2n = 26.

Some lepidote series contain tetraploid (2n = 52), hexaploid (2n = 78), octaploid (2n = 104) and there are even dodecaploids (2n = 156) in some forms of *R. manipurense.* The uniformity of chromosome number in the elepidote rhododendrons is an indication that the great diversity of this subgenus has evolved relatively recently, and this is supported by the ease with which the majority of species can be crossed. The well known almost total sterility between lepidote and elepidote species must depend on factors other than chromosome number.

One other detail may be sometimes of use – chromosomes are not simple cylinders, but may have constrictions, or extensions (known as satellites). When studied carefully particular chromosomes may be recognisable in one parent and in its hybrid offspring. The parentage of *Lilium* 'Black Beauty' was established in this way. Furthermore by special treatment and staining, bands of different colour may be seen on the chromosomes and so a particular chromosome recognised in both

* See also the chapter on cytology of magnolias by Dr J. Wilkinson in "Magnolias" by N. Treseder (Faber 1978), pp. 209-211.

parent and offspring. When they were first studied the chromosomes themselves seemed to offer a chance to look inside the plant at its most fundamental part, and so learn much about its relationships. Today we have realised that chromosomes do not offer the perfect solution. Modern research is beginning to be able to reveal the sequences of proteins which make up the genetic message itself, and by seeing how far these protein sequences have diverged, to get a clearer picture of the relationship of species and groups of species.

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Bark split in rhododendron

ROGER COOK
(R.H.S. Garden, Wisley)

Recently several specimens of rhododendron stems with the disorder known as "bark split" have been sent to us at Wisley for identification. The trouble was described by Peter A. Cox in Wisley Handbook 2 *Rhododendrons* (1972) and by Audrey V. Brooks in *Rhododendrons 1974 with Magnolias and Camellias.* It follows injury to the bark tissue caused by frosts occurring at times when the stems are full of sap. The stems of the recent specimens were damaged near ground level although branches higher up, as shown in the photograph, can also be affected. All types of rhododendrons are vulnerable to the disorder.

Typically the bark is seen to have peeled away in strips from the underlying woody tissue. If the bark peels away all the way around the stem the branch becomes effectively "ring barked". However, the growing points are not killed immediately since they are supplied for some time with water and inorganic nutrients by the still functioning conducting tissue. Eventually either the unprotected woody tissue dies out and can no longer supply sufficient water to replace losses due to transpiration from the leaves or the roots die since they can no longer receive food materials such as sugars from the leaves via the bark tissue. At this point the leaves droop and turn brown and the full extent of the damage becomes obvious. Thus, if the damage is initiated in the autumn, the effect may not be noticed until the plant is stressed for water in the spring.

Where the bark does not split away entirely but remains attached in places around the stem, callus tissue will develop around the edges of the wounds. This may enable a severely damaged stem to remain alive

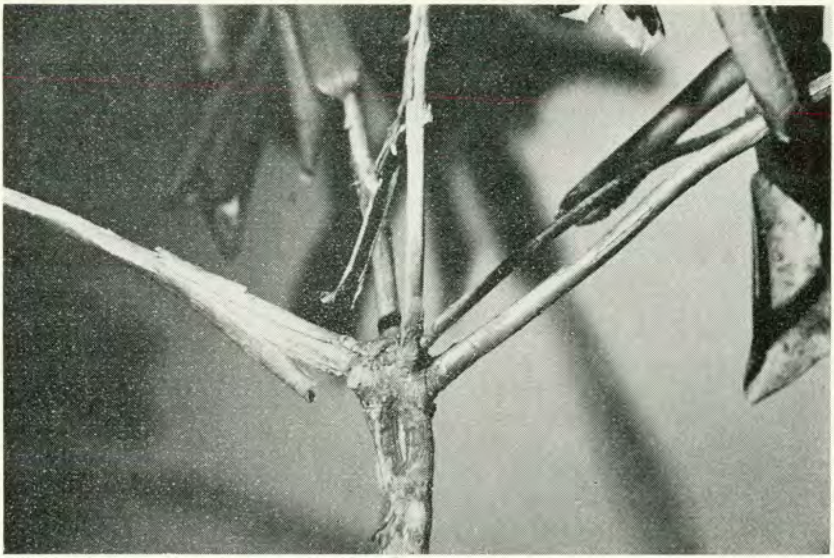

Fig. 11 Bark Split

for a longer period, but being so weakened, growth remains stunted even if the branch survives the winter.

Instances of "bark split" reported to us in March 1977 were probably caused by frosts in early September 1976. Indeed light ground frosts were recorded at Wisley on September 3 and 4 even though our meteorological instruments are situated on high ground and not in a frost pocket. Frosts at this time could have damaged the bark tissue of the normally hardy rhododendron 'Elizabeth' at Wisley, although here the symptoms were not observed until early in 1978. These early frosts would have been particularly devastating to rhododendrons growing in frost pockets since rain in late August stimulated renewed growth and caused the sap to rise in the stems following the long dry summer of 1976.

Whilst the abnormal growing conditions of 1976 probably rendered plants particularly susceptible to early autumn frosts it should be emphasised that an out-of-season frost in any year could cause "bark split". For instance we believe the severe, frequent and widespread frosts occurring between March 28 and April 20, 1977, and a severe frost on May 1, 1977, could have initiated the disorder in areas not normally considered to be frost pockets.

If it is known that bark tissue has been injured by frost it may be possible to prevent peeling by binding up the affected stems with grafting tape. Unfortunately by the time the damage is noticed it is usually far too late to effect a remedy in this way. The trouble is, therefore, best avoided by not planting rhododendrons or azaleas in hollows and by insulating at least the major stems with material such as sacking if frost is expected during a period of active growth.

Camellia Petal Blight, or Flower Blight

(*Sclerotinia camelliae*)

A member of the Rhododendron and Camellia Committee observed extensive damage to camellia blooms caused by Petal Blight at shows in California early this year, a disease not so far encountered in Britain, and which for this reason was not included in the article by Miss Brooks on the Diseases of Camellias in *Rhododendrons, 1975, with Magnolias and Camellias.*

Sclerotinia camelliae Hara. is a fungus disease which attacks camellia flowers. The spores are airborne from small dark coloured sporophores (toadstools) in the spring in cool, cloudy, damp weather, and can be spread by air currents up to one mile from the source of infection. The fungus grows best at temperatures between 50° and 65°F., and it could therefore become troublesome in this country in a warm spring, if the disease were introduced. The fungus can invade flower tissue at a low temperature without displaying symptoms, but if infected flowers are brought indoors, or if the outside temperature rises, brown or blackish spots appear as the diseased blooms open, and these spread on the petals of the flower as it develops. The infected flower acts as a carrying body, and when it falls to the ground it leads to the development of sporophores the following spring. The cycle can be broken by keeping all flowers picked up and destroyed, and this is the best control so far known.

The fungus can be spread to new areas on cut blooms, or on plants growing in infected soil, as the resting bodies (sclerotia) remain viable in the soil for up to three years. While it is safe to move camellia cuttings and scions that are free of flowers or buds from area to area, cut blooms or plants with soil attached to their roots should not be introduced from areas where this disease occurs.

Book Notes

Magnolias. By Neil Treseder. 224 pp. Illus. 1978 (Faber & Faber) £30.00

It is commonly and rightly said that Magnolias are the most splendid flowering trees cultivated in temperate climates. The planting of a young magnolia is always an event of importance, and a large specimen in bloom is a garden in itself. Yet the public has been poorly served so far as the available literature is concerned. Millais' *Magnolias*, though reprinted, is long out of date. Johnstone's *Asiatic Magnolias*, a splendid work within its scope, is out of print and prohibitively expensive, and also out of date. The nursery catalogues reprint the same old obsolete Soulangiana hybrids. Yet scattered through the learned periodicals – publications of the American Magnolia Society, the R.H.S., the Arnold Arboretum – is an immense amount of material of scientific and horticultural interest. But this is inaccessible to anyone without access to a first-rate horticultural library and a knowledge of the material.

When the second volume of the eighth edition of Bean's *Trees & Shrubs* appeared, many people must have turned eagerly to the section on Magnolia, only to be disappointed, for it was incomplete and lacking in scientific and cultural detail. Mr Treseder's long promised monograph on *Magnolias* has therefore been awaited with keen anticipation by all

who grow or are interested in these plants. We needed three things: a complete book of reference assembling the scattered knowledge available to the researcher, a planter's guide giving an up-to-date list of species and selections as well as new hybrids with descriptions, and a comprehensive treatment of culture and propagation.

Mr Treseder has attempted this difficult task. In his book there is assembled so much information which will be new and interesting to all gardeners who are not professional students of magnolia, that it will in future be unthinkable to select and plant without reference to it. Those who already have a collection of magnolias will find much new information about plants which they already grow, thus adding greatly to their pleasure. Though the vast amount of information culled from the literature and from living authorities has presented a difficult task of organization, Mr Treseder has simplified matters by arranging his book in subgenera and sections following Dandy's arrangement. It is therefore essentially a work of reference rather than one intended to be read "cover to cover". Within this framework he has not reprinted the standard descriptions of species which are available elsewhere, but instead has assembled under each one a surprising amount of historical, scientific and descriptive matter with cultural information and descriptions of outstanding specimen trees. After this main body of the work comes a comprehensive section on culture and propagation, a paper on cytology by Dr Wilkinson, and a number of useful tables including a complete list of R.H.S. awards to magnolias, and a list of specimen trees with locations in Britain.

When it comes to the "planter's guide" aspect of his work, Mr Treseder takes us far beyond any printed material at present existing. Some of the coloured illustrations, for example, will astonish those whose knowledge of what has been taking place in the selection and hybridization of Magnolias in recent years is derived from standard works on gardening. The stately pace at which the latest and best tree magnolias emerge from the great gardens where they have their origins, inevitably results in an interval of decades between their fleeting passage before an R.H.S. awards committee and their arrival in quantity in the market. But this book reveals their existence and thus for the first time enables the enthusiast to take steps to secure an early propagation. In a family of trees which last a lifetime and provides a resplendent display of annually increasing scale, it is folly to be content with the second best. When I saw the colour photograph of *M. campbellii* 'Landicla' I realised for the first time the magnificence of the plant already ten feet high in my garden bought under that name, and when I saw a picture of *M.* 'Moresk', of which I had never previously heard, I wrote at once to ask for a propagation to be made. If any criticism is to be made of the colour photographs and Mrs Blamey's paintings, it is that illustrations of familiar plants such as *M. stellata* might well have been omitted to enable others of the newest vintage, as yet unseen by the public, to be included.

In spite of the illustrations, however, the selection of forms and hybrids for planting will still not be easy. It is a pity that Mr Treseder, out of his unique experience, did not attempt a grading in terms of merit, rather as has been done with rhododendrons in the R.H.S. handbook, and indeed as is to be found in Treseders' catalogue. Nevertheless, by revealing to the general public the existence of plants hitherto only known to the specialist, this book for the very first time enables a serious attempt at selection to be made. If in this area there is an omission, it is

the incomplete list of the new Gresham Hybrids, plants which are probably destined to displace all but the newest generation of Soulangiana Hybrids, and which for the senior citizens provide something approaching "instant *campbellii*", since they produce near-*campbellii* flowers the second year from planting.

A particularly welcome feature of Mr Treseder's book is the great contribution made to it by Professor McDaniel and many other American authorities. The different climatic conditions of the U.S.A. and the great amount of work done there on the American species of *Magnolia*, will be of particular interest in Britain where little is known under this head. In fact the inclusion of this material as well as some Japanese contributions, make the book relevant in any part of the temperate world and not merely in Britain.

The "gardening" sections of bookshops are largely filled with second-rate books full of second-hand knowledge designed to be sold to those who are content with such things. This is a first-rate book by a leading authority which fills a long-standing gap amongst the monographs. It is a pity that in these days of high costs it could not be illustrated on the scale of Elwes on *Lilies* and its continuation. But the Stanley Smith Horticultural Trust is to be congratulated on the subvention which made this important publication possible. Sir Peter Smithers.

Hybrids and Hybridizers, Rhododendrons and Azaleas for Eastern North America. Edited by Philip A. Livingston and Franklin H. West. 256 pp. Illus. 1978. Harrowood Books, Newton Square, Penn. $31.

Hot dry summers and winter lows of 0° to -30°F. have traditionally limited gardens in the eastern United States to the ironclad rhododendrons developed by the Waterers. Based on *Rhododendron catawbiense* from the southern Appalachians, these rhododendrons adapted well to the extremes of climate. With few exceptions, the rhododendrons developed more recently in England and northwestern United States have not proven satisfactory in the east.

The better part of fifty years ago five men began their separate and lonely quests in search of those rhododendrons and azalea parents capable of producing large flowers and brighter coloured offspring which, most important of all, would adapt to the eastern climatic extremes. The achievements of these men have changed rhododendron gardening on the east coast of the States.

Biographical sketches of Charles O. Dexter, Joseph B. Gable, Benjamin Y. Morrison (Glen Dale and Back Acres azaleas), G. Guy Nearing and Anthony M. Shammarello were written by American Rhododendron Society members who knew each man well. The hybridizer's own correspondence and notebooks make interesting reading as the performance of species and new hybrids, the transmission of various characteristics, successes and failures are noted.

This book, which is sponsored by the American Rhododendron Society, covers 1400 hybrids and illustrates 108 of these in colour. It is replete with lists, charts, descriptions, hardiness ratings and evaluations, and covers briefly more than 40 contemporary eastern hybridizers. Here is an invaluable guide to rhododendrons suitable for colder climates.

In the Pacific Northwest, where climate is similar to that in England, the Glenn Dale azaleas and the early blooming rhododendron hybrids such as 'Dora Amateis', 'P. J. M.', 'Pioneer' and 'Windbeam' have already proven to be valuable additions to gardens. Faced with the com-

petition from new English hybrids and the best of the Northwest hybrids, the large flowered, May and June blooming eastern hybrids are not yet widely grown here. Molly Grothaus.

Obituary

Dr HAROLD FLETCHER, Ph.D., D.Sc., F.R.S.E., V.M.H.

An appreciation of Harold Fletcher's association with the R.H.S. has been written by our President and is published in *The Garden* for November 1978.

In this special year book I will try to remember and record the great debt we all owe to Harold for his valuable work over the years on the genus *Rhododendron*. Our first meeting was on June 25, 1938 when we lunched together in Edinburgh. This started a friendship which lasted for forty years, and grew stronger as the years passed, based partly on our joint interest in rhododendrons and the introduction of species from the wild. *Rhododendron fletcheranum* will keep his memory fresh but perhaps 'Curlew', a hybrid between this and *ludlowii* will be more widely grown.

Our greatest adventure together was in 1961, when with Sir Giles Loder we took an active part in the International Rhododendron Conference organised by the American Rhododendron Society at Portland, Oregon. Harold and I travelled together from Heathrow to San Francisco and between there and Portland with Sir Giles we saw much of what was being done on the west coast in the collecting and cultivation of rhododendrons. This journey culminated in giving talks at the conference. The undoubted highlight of the proceedings was Harold Fletcher's contribution entitled "Rhododendron Species and their Merit Rating". Everyone who listened will remember the masterly way in which this was delivered and the ovation it received. This lecture appears in full in the *Proceedings* of the conference published by the American Rhododendron Society.

A sequel to this is the lecture given at Vincent Square on May 1, 1962 entitled "Rhododendrons on the Pacific West Coast of America". Sir Giles and I were with Harold when he made many of the notes on which his lecture was based. I envied him the gift he possessed and also his training, whereby he could note that which was relevant to the subject. His questions to the American nurserymen and garden owners were so friendly yet incisive. This lecture, which provides information so valuable to students of rhododendrons, appears in full in *The R.H.S. Rhododendron and Camellia Year Book 1963*. I remember how excited he was when seeing in the Portland Rhododendron Test garden a specimen of *R. hemsleyanum*. To quote from the 1963 year book "a species I did not know was in cultivation either in America or Britain". In the 1961 year book, Harold gives details of the exhibits at the Scottish Rhododendron Show held in Edinburgh in 1960. This is more than a simple record of the awards gained by exhibitors, but as usual with his writings he gives his personal opinion of the show.

I have left until almost the last, mention of his greatest help to the majority of rhododendron growers. This of course is *The International Rhododendron Register* compiled by Harold Fletcher on behalf of The Royal Horticultural Society which was appointed The International Registrar at the Fourteenth International Horticultural Congress held in Holland in 1955. This Register was published in 1958.

I have always wondered just how Harold made a start on this, and I feel there are few who could face up to the initial work required, and which eventually resulted in bringing together the thousands of names of rhododendron hybrids with notes of their origin. It is the first work which I, in common with numerous others, turn to when seeking information. We bless him for making this so readily available. Harold's work in connection with rhododendrons and the preparation of the *Register* was recognised by the R.H.S. in 1964, when he was awarded the Gold Medal of the Veitch Memorial Trust.

His last great work was writing *A Quest of Flowers* which is an account of The Plant Explorations of Frank Ludlow and George Sherriff, published by the Edinburgh University Press in 1975. This is a fascinating book of 387 pages, but for those desirous of studying Ludlow and Sherriff's introduction of rhododendron species only, Harold Fletcher has written a special account which is printed in *Rhododendrons with Magnolias and Camellias* published by the R.H.S. in 1977.

There is much more which could be said. In other genera, particularly *Primula*, Harold has left to us so much original and authoritative information, and this will gain in importance for future students.

I treasure our friendship and his letters to me and our occasional chats on the telephone. I would say to my wife when coming away from Harold and Betty Fletcher's home in Edinburgh, "I just wish I could express what I wish to say like Harold does".

F. P. Knight, 23rd September, 1978

Dr T. S. FORSYTH

Dr T. Scott Forsyth who died at the age of 52 on 21 February, 1978, leaving a widow and three sons, will be sadly missed in many circles. He was first and foremost a general practitioner in a large practice in Haworth, Yorkshire. He held an appointment as clinical assistant in the accident and emergency department at Airedale General Hospital and lectured at regular intervals to their Vocational Training Scheme. Scott Forsyth was also instrumental in the designing of the Library and Reading Room facilities in the Post Graduate Medical Centre at this hospital. He was Medical Officer at the Sue Ryder Home near Keighley. This work he found very rewarding and he spent a great deal of time caring for the terminally ill and was thus kept exceptionally busy in his professional career.

His relaxation was centred on five major fields. He was very knowledgeable and had an authoritative grasp of classical music. He was exceptionally well read and his writings bear this out; William Dunbar being one of the major literary influences. Scott Forsyth was a past Captain of the Keighley Golf Club. He was Greens Convener for several years and improved the standard of the golf course by planting trees which would withstand the severe winds, but more important he raised the standard of the turf culture on greens and fairways by his horticultural expertise. He was a skilful and knowledgeable gardener and his garden in Haworth, the subject of a series of articles in *The Northern Gardener* over a period of five years under the general title of "Notes From an Acid Half Acre" which described his philosophy of gardening, was planned and planted on sound horticultural principles, and a profound knowledge of plants. His particular interest in the plant kingdom was the genus *Rhododendron* and he was co-author, with F.

Cyril Barnes, of the delightful monograph called "Rhododendron in the North". This was a survey of major gardens in the north of England and south of Scotland dealing with such factors as geographical, climatical and cultural influences in the growing of rhododendrons. It is in essence a guide to rhododendrons in cultivation in the north. Not only are the series treated in depth, but also each species and a great many varieties as well. This survey was carried out in 1967-70 and involved a vast amount of collating and research based on reports from many rhododendron enthusiasts. It was published by the Northern Horticultural Society of which Scott Forsyth was a member of Council, the Gardens Committee, and a very active Chairman of their Rhododendron Group. He was a member of the R.H.S. Rhododendron Group and of the American Rhododendron Society. His knowledge of *Rhododendron* species was exceptional for a non-botanist and he took great delight in researching the history of the hardy species.

His horticultural background was greatly influenced by the late Sir Herbert Maxwell whose estate at Monreith he used to visit regularly. He had also visited all of the major rhododendron gardens in Scotland and the north of England as well as many in the south-east of England, and was planning to visit those of the south-west on some future occasion. Wherever he went he recorded on film the rhododendrons of these various gardens and had almost completed a slide library of species hardy in British gardens. He was an excellent photographer, and in order to pursue this hobby he made, on his lathe at home, precision instruments for the microphotography of *Rhododendron* scales. Scott Forsyth was greatly influenced by the gardens of Glenarn, Blackhills, Arduaine, Brodick and Gigha, and this influence can be noted in some of the plantings at the Northern Horticultural Society's Garden at Harlow Car. His propagation techniques were simple yet very effective and he generously gave the products of his skills to enthusiastic growers, but in particular most of the plants raised by him from seed and from cuttings will be found at Harlow Car. Latterly, he was interested in the species in the Lapponicum series and was studying their geographical distribution as well as their taxonomy.

Robert J. Mitchell.

The Rhododendron Competition

March 21/22, 1978

R. N. STEPHENSON CLARKE

The exhibits at the early Rhododendron Competition were far more impressive than the cruel winds and snow of recent months, or the severe drought of 1976 might have schemed – all enhanced by the magnificent entries from Brodick Castle, and richness and splendour of their separate exhibit, mounted from an environment which stands apart like a higher planet from our own weather conditions being ameliorated by the Gulf Stream. All praise to John Basford, who deservedly achieved for the National Trust of Scotland a Gold Medal and gave us all a peep-show into the rhododendron magic of that distant Island of Arran, fourteen miles off the Scottish coastline by Ardrossan. He deserved a medal too.

This exhibit included two forms of *R. magnificum* × *sinogrande*, both cream and pink, *R. mollyanum* (which Dr Cowan, visiting the

Duchess of Montrose, recognised as not being a pink *R. grande*), *R. arboreum* KW21776, a brilliant coloured blood-red variety – collected on Mt. Victoria (Nepal), *R. giganteum* (KW collection) – medium pink and superior in all respects to the F.C.C. form under Forrest 19355, *R. grande* (*argenteum*) – from a young Brodick plant, *R. spinuliferum* 'Blackwater' (winner of the Roza Stevenson Cup 1977), *R. pocophorum* (excellent quality off a plant that came from Benmore Gardens via Dick Shaw), a fine *R. hemidartum* (KW collection), *R. sherriffii* (dark crimson from Sir James Horlick's collection on Gigha), *R. sulfureum* KW21002 (collected as Boothii Series), *R. hookeri*, *R. megeratum* and *R. lopsangianum* (L & S collection), among other fine items.

The good trade exhibit by Reuthe gained a Silver Medal – surely not capped by *R. eximium* (a hybrid we wondered) – and contained exquisite 'Leucacil', 'Suave' (seen by a friend at Gigha), 'Winter Beauty', and *R. cubittii* 'Ashcombe' F.C.C. which seems the same as many observed without a citation in our travels.

Hillier's stand received a Gold Medal but the rhododendrons therein were not unusual. Southdown Nurseries made a brave effort to overcome the ghastly conditions of the west country from February to March, gaining a meritorious Silver Gilt Medal, and Wills Fuchsias Ltd. stand contained nice 'Fragrantissimum', (Silver Medal).

The Species Classes (five entries) were much superior to those of 1976, and better supported. Brodick, showing *R. magnificum*, *R. macabeanum* (fine yellow truss), *R. grande*, and *R. giganteum* romped away with Class 1 (4 species – truss of each) from Borde Hill's "pot red gambit" of *R. smithii*, *R. delavayi*, *R. lanigerum* KW6258 and *R. barbatum*. Bodnant was third with excellent *R. strigillosum* (winner in Class 6), good *R. hookeri*, *R. arboreum* and a moderate *R. sutchuenense* (too mauve for my liking).

Lamellen's quartet included one of the gems of the whole competition, a white bell-funnel flowered *R. erubescens*, with perfect foliage.

Class 2 (a spray of any species) had nine entries and was won by the pink *R. mollyanum* (aforementioned) from Brodick – rather a strange visitor into such a class presenting a solid multi-truss aspect. Second was as fine a considerable branch of *R. oreodoxa* as I have seen (Hergest Croft) ahead of Lord Aberconway's fine *R. strigillosum*. The best of the rest appeared to be a strong branch of *R. barbatum*, that incidentally fell three times on the eve before with the promoters away in the pub – not the best conditioning for its five compact trusses.

Class 3 (any species – one truss) was a triumph for the Banks family from Hergest Croft, a long established garden but emerging stable in competition, eclipsing *R. magnificum* and fine *R. meddianum* var. *atrokermesinum* from Brodick with a particularly delicate pink-flowered *R. sutchuenense* – not very big cups but ideally suited to the neatest and tidiest possible foliage system below.

Class 4 for three cultivars of *R. arboreum*, (few of us can meet such requirements in March) was a match between Bodnant and Lamellen. There was a true var. *roseum* present, another known to me as "var. *roseum crispum*" with fimbricated lobes, a var. *campbelliae* (akin to *roseum*), a var. *cinnamomeum* and another variety nobody could or would name for me.

Class 5 Arboreum Series except *R. arboreum* produced another magnificent exhibit and clear winner from Borde Hill *R. lanigerum* KW6258 with a near faultless truss of 30 or more crimson (slightly maroon in

clear daylight) and good foliage winning from *R. delavayi* (rather aff. to me) and a quite good *R. lanigerum* from Stonehurst. It was nice to see a truss of *R. ririei* (Bodnant) in this Class, nicely presented – a difficult species to time right and particularly vulnerable to early frosts.

Class 6 (Barbatum Series) was one of the closest. There were 14 or 15 entries with no less than seven representatives of *R. barbatum* itself. The High Beeches form was adjudged the best – brightest colour but not as large or dense a truss as some (probably not from Hooker's collection) – Sandling Park showing LS & H 17525 collection, but the winner of the Class was *R. strigillosum* from Bodnant (shown as a spray in Class 2) with a fine *R. smithii* from Borde Hill a good third. We also liked *R. pachytrichum* (mauvish pink) – not often seen. I give no opinion about *R. bainbridgeanum* – exciting anyway to see one in flower – if there is such a species.

Class 7 Falconeri Series had no entry. It was not contested in 1977 and had only one entry in 1976 and in 1975.

Class 8 (Fortunei Series) – 9 entries – was another sterling victory for the Banks family with *R. sutchuenense* (referred to re Class 3) defeating the renowned *R. sutchuenense* from Borde Hill, very sizeable but paler shades of white/pink with light purple spots in the flower, which did better before a jury later, gaining an A.M. Major Hardy's *R. sutchuenense* was placed third, preferred to two good *R. praevernum*, and two *R. calophytum*, one said to be "var. pink crenault".

Class 9 Grande Series had only two entries, both from Brodick, *R. magnificum* being selected before *R. macabeanum*. The Grande Series had three entries from English gardens last year – but this Series was generally speaking behind schedule this spring.

Class 10 (Neriiflorum Series) was particularly hard to judge. The winner in eight entries was Brodick with *R. pocophorum* (aforementioned re their exhibit). Second – no doubt desperately close – was *R. mallotum* (A.M. 1933) Farrer 815 with superior foliage but its typical dark crimson truss is less striking; third was *R. sperabile* a vivid red – a light weight in such company and best shown as a spray. Lord Aberconway showed *R. neriiflorum* KW21086 (a pink form of var. *euchaites*) and Nymans a very nice *R. hemidartum*, I expected to see placed. There was one collapsing *R. floccigerum*, and a collector's piece *R. citriniflorum* var. *horaeum* (deepish crimson).

Class 11 (Thomsonii Series) was also a teaser with 8 entries and full of quality. Winner was *R. meddianum* var. *atrokermesinum* from Brodick, doubtless 'Bennan' and/or KW19452, second *R. eclecteum*, pink from Nymans (perhaps KW6900) and third *R. hookeri* from High Beeches, though I equally liked the Bodnant exhibit of *R. hookeri*. Interesting was *R. lopsangianum*, which I don't think is a spectacular species anyway and more interesting but in poor condition the rare and perhaps wondrous *R. eclecteum* white form KW6900, and an unusual pink/mauve form of *R. meddianum* from Bodnant.

Class 12 for various series of the lepidote section was won by the best member of the series *R. glaucophyllum* var. *luteiflorum* KW21556 'Glen Cloy' (A.M.) from Brodick – a subtler yellow than Lord Aberconway's exhibit, which was third to his pink form of *R. racemosum* (second). There was also *R. moupinense* (labelled *R. leucaspis*), *R. stewartianum* and a brighter pink *R. racemosum*, which seems an inexcusable fault.

Class 13 for any species, spray or branch or truss not already catered for, has been called The Boffins' Class, the Sweepers Stakes, and rudely

– the Odds and Sods Division. For the third year running it was won by Borde Hill – this time with *R. ciliatum*, whose degree of hardiness against frost increases with the height of its location and decreases in aromatic properties or fragrance. This is the high altitude type, probably LS & H 15835 – purplish mauve suffused with grey white. Second was a modest truss of *R. vellereum* KW5656 (at best an outstanding species) and third Major Hardy's *R. lukiangense*, a modest species by reputation but delightful to the eye here, and also shown well in this Class by Miss Edith Godman of South Lodge. There was also a spray of *R. fulvum*, a truss of *R. eritimum* var. *persicinum* and one *R. irroratum*.

The Hybrid Classes were above average, although it is still early days for such performers. Class 14 (four hybrids – one truss of each) was won by Lord Aberconway, who produced better overall foliage and a kingpin *R.* 'Choremia' (akin to *R.* 'Haemab') – really good bright scarlet truss. Major Magor showed four of his father's hybrids, *R.* 'Maya', *R.* 'Arbcalo', *R.* 'Barbsutch' and *R.* 'Arbla' (syn. 'Endeavour').

Class 15 (any hybrid – one spray or branch) with 13 entries was one of the best supported in the Show and full of quality. I mention first 'Shilsonii' shown by Robert Strauss of Stonehurst because I think it had the edge over 'Bo-Peep' from Nymans (placed first), and their 'Bric-a-Brac' (clean white flowers) third. A fourth prize was given to Borde Hill's 'Cornsutch' a young, virile and considerably pink trussed spray. There were several 'Seta', the best from Bodnant, 'Tessa' from Nymans, two *R.* × *praecox* and two 'Christmas Cheer'.

Class 16 (any hybrid – one truss) was deservedly won by 'Arbcalo' from Lamellen, white and pink suffused bell flowers with a conspicuous claret blotch (whitest on the top of the lobes). It was my selection as the best Hybrid in the Show – excellent as the Boscawens' 'Nestor' (scarlet flowers) – *barbatum* × *thomsonii* – was in second place (A.M. 1969). Third was 'Nobleanum Album' (Hergest Croft) – a very clear and clean white flower indeed, and good fourth 'Shilsonii' from Stonehurst. 'Mrs Henry Shilson' (Bodnant) had very good foliage, but the pink flowers seemed rather papery. There were 9 entries in this Class.

Class 17 (hybrid – one parent Arboreum Series). There were ten entries, Bodnant winning with *R. arboreum* × *barbatum* from 'Mrs Henry Shilson' and Borde Hill's 'Anne Clarke' A.M. 1977 (cream white flowers) = *R. arboreum* var. *roseum* × *sutchuenense*, a small truss with considerable size of leaf.

Class 18 (hybrid – one parent Fortunei Series) was won by Major Magor's 'Maya' A.M. 1940 (*R. ririei* × *sutchuenense*, a most successful cross) from 'Cornsutch' (a deeper colour than the Borde Hill exhibit in Class 15 being mauvish to maroon pink – probably only an older plant grown on different soil). Third was 'Anne Clarke'.

Class 19 (hybrid – one parent Barbatum or Thomsonii Series) produced six entries and was won by High Beeches with 'Nestor' from the best of three 'Shilsoni' (from Lamellen) and the winner of Class 17 *R. arboreum* × *R. barbatum*.

Class 20 (any elepidote hybrid not already provided for) produced no entries – though Brodick Castle had two suitable entries on their private stand.

Class 21 (any lepidote hybrid) mustered 11 entries. The most interesting exhibits were 'Golden Oriole' (Sir Giles Loder, Leonardslee) lovely butter yellow flowers among too much bud – it looked the winner

only on the second day, and 'Golden Oriole Talavera' with paler yellow flowers shown by that great enthusiast Mr Urlwin-Smith. The judges placed *R.* × *praecox* from High Beeches first – which afterwards got the high award of F.C.C., Bodnant's *R.* × *cilpinense* second, and Borde Hill's 'Bo-Peep' third.

Class 22 and Class 23 were both won by Major Hardy of Sandling Park with *R. scopulorum* (KW6354 no doubt) and *R. cubittii* respectively – who also got second in Class 22 with a lighter yellow flowered *R. burmanicum* (KW21721 Inverewe) which we compared with the darker yellow and very tender form seen on Reuthe's trade stand. In Class 23 Mr Urlwin-Smith showed 'Harry Tagg', which no doubt came from a seedling off a Brodick plant that survives there out of doors.

Six rhododendrons were sent up to the Committee for awards, of which only *R.* 'Werei' (a very variable hybrid with me) showed too much optimism. *R. magnificum* × *R. macabeanum* could not have failed on quality. The unluckiest failure was *R. arboreum* – from seed taken in Nepal (Schilling . . .) and raised under glass in a cold house by Alan Hardy in Kent. Its colour is hard to describe – (brick-red, to maroon to blood-red) – the stamens being like taut lengths of fishing gut, effective within such fine trusses set in such good leaves (cleanish undersides) – certainly no relation to *R. arboreum* 'Goat Fell' (blood-red) from Brodick.

An Award of Merit was given to an unusual greenhouse hybrid shown from Kew *R. lochae* × *R. laetum* – raised by Mr D. M. Stanton, Australia – which had very tubular funnel orange-red flowers with spreading lobes – the latter parent from New Guinea.

As aforementioned *R.* × *praecox* gained a First Class Certificate for High Beeches – it must be an exceptional form; and *R. sutchuenense* an A.M. for Borde Hill, said to be from Wilson's W1252 collection, to be named 'Seventh Heaven' after a less than unanimous family vote.

Finally, I would like to thank Walter Magor for giving me the opportunity to write up the rhododendron side of this excellent Show, Mrs Karin Ritchie for taking down my long notes at the Show; Mr John Basford for a wealth of information and sound opinion, and several others who answered a series of questions not under oath.

The Rhododendron Show

May 3/4, 1978

R. N. STEPHENSON CLARKE and ANN MAGOR

SPECIES

The standard of competition was a welcome surprise after months of extreme and variable weather patterns, the entries being generally far superior to those in 1977. Many classes contained a nucleus of excellent entries and there was an above-average ratio of clear-cut, even astoundingly good winners.

The Show will be remembered for the emergence of Arduaine (the Messrs Wright) as a formidable competitor, the return of the south east complex of major gardens to the prize-winning lists, despite 48 hours of

Fig. 12 Exhibit by the Wessex Rhododendron and Camellia Group at the Rhododendron Show

rain preceding the Show and prolonged drought hangovers, and the return of Exbury (Mr Edmund de Rothschild) back on to the scene. Most praise perhaps to Glendoick (Peter Cox) who transported exquisite exhibits over considerable distances with uncanny flair and skill. Penhale (Mrs Colville) from distant Cornwall also surmounted this handicap.

On any conceivable points system Bodnant (Lord Aberconway and The National Trust) was the Victor Ludorum. In addition to the mentions in my main text they won: —

Class 9, Boothii Series (with *R. megeratum*), Class 11 Cinnabarinum Series (with *R. concatenans*), Class 14 Falconeri Series except *falconeri, fictolacteum* and *rex* with *R. decipiens* strong brownish red truss – rarish (in my grandfather's notes deemed a form of *R. falconeri* and certainly not a hybrid). Class 23 Neriiflorum Subseries (with *R. neriiflorum* var. *euchaites*), Class 44 Saluenense Series with *R. saluenense* (good deep purple), Class 51 with *R. yunnanense* var. *chartophyllum* (white with no appreciable rash). All three Classes (Classes 34, 35, 36) for the Deciduous Azalea Series, although in Class 34 *R. reticulatum* (Borde Hill) was perilously close to *R. albrechtii* – almost a question of angles.

The Rothschild Challenge Cup for 8 species, one truss of each (5 entries) was won by Arduaine, showing *R. fictolacteum* (miraculous white flowers with a distinctive basal blotch – one of the best things in the whole Show), *R. sphaeroblastum* (also winner of Class 27), *R. niveum* (also winner of Class 7 – q.v.), *R. macabeanum* (also winner of the Grande Series), nice *R. hodgsonii* and *R. arboreum cinnamomeum* plus *R. johnstoneanum* and *R. campanulatum* (both less impressive). Second by an eyelash came Blackhills showing *R. sphaeroblastum*, the rare *R. nakotiltum*, their wonderful *R. phaeochrysum* (also winner of Class 11 – an ultra-strong field), *R. niveum* (also smallish truss), *R. smithii* (over in the south), good *R. campanulatum* but disappointing *R. basilicum*. Bodnant in third place and Exbury in fourth were hardly in touch with the two leaders.

All congratulations to Sandling Park (Major A. Hardy) who won Class 2 for three species, one truss of each with *R. hodgsonii* (P.C. form perhaps), *R. phaeochrysum* (KW4843) and their enormous white *R. rex* with gargantuan leaves, like a flying machine over the powerful Corsock triumvirate of *R. lacteum, R. phaeochrysum* and *R. sutchuenense* (darkish mauve-pink form – a species well over in the south), third was Penhale with *R. thomsonii* (also a winner in Class 32) and *R. haematodes* (also winner of Class 22).

Class 3 Three Species (restricted entry) was won by Arduaine, who will be unable to enter in this class again.

Class 4 for the MacLaren Cup (14 entries), any species, one truss, was very hot stuff and was deservedly won by Corsock (Mr Peter Ingall) with a truss of his lovely *R. lacteum*, a dream in yellow set over leaves, to my mind unique in their mystics. Second was Blackhill's *R. phaeochrysum* with *R. niveum* from Arduaine third (small but well-shaped truss), and fourth *R. uvarifolium* (Borde Hill) describable as "*roseum*" – origin strictly unknown, as good as some have seen of this variable species. Also excellent were *R. rex* (Sandling Park) Highly Commended, *R. nakotiltum, R. metternichii* 'Ho Emma' (winner of its Class) and *R. thomsonii* (Penhale). Two representatives of the Grande Series were also present, though neither better than high standard (a reflection of the weather records).

Class 5 Roza Stevenson Cup (best spray of any series), with 16 entries, was a difficult one to judge as it contained no exhibit jointly "remarkable – unusual – top condition" a good axiom of guidance in past deliberations over this sought after trophy.

In my view *R. traillianum* (Blackhills, Mr Sylvester Christie) came nearest to this criterion as every white flower was clean and clear, the spray was delightfully shown and on the Form Book it is not quoted as such a good species. It was placed second with a remarkably deep form of *R. arboreum* var. *roseum* with long dark green leaves (Nymans, The Countess of Rosse and The National Trust) taking third berth and *R. argyrophyllum* pink form (Bodnant) a fourth. The rarest exhibit in the Class was *R. iodes* (Borde Hill) (Commended), a little beyond its best – a vase of which later gained a unanimous A.M. and stirred up resource to the Scientific Committee. Also present was a spray of *R. lacteum* (perhaps not ordained for this service), *R. floribundum* (Nymans – rather boisterous and vigorous in habit), *R. sperabile* (not this species), *R. heliolepis* (again wrongly labelled) and the unlucky *R. augustinii* (Mrs Potter), faultless if not an unusual exhibit.

The surprising winner of this Class was a massive spray of *R. morii* from Exbury. I can only refer the judges in retrospect to the *R. morii* shown by Bodnant in Class 8 Barbatum Series transfigured into such a formation and leave the matter at that.

Nymans took first and second places in Class 6, Arboreum or its subspecies, with *R. arboreum* var. *cinnamomeum* and *R. arboreum* (though there was nothing outstanding in the 13 entries). Class 7 (Arboreum Series remainder) went to *R. niveum* (Arduaine – smallish but well-formed truss); *R. delavayi* F21969 crimson to slightly maroon red being more interesting, in third place.

There was a fine winner of Class 8 Barbatum Series (10 entries) in *R. pseudochrysanthum* shown by Glendoick. Bodnant was second with *R. morii* (W10955), a third prize to *R. smithii* (Blackhills) – a vital flower in the truss missing – and another good *R. morii* was fourth. Also present was one *R habrotrichum* and one *R. crinigerum* (labelled *R. glischrum*). Class 10 Campanulatum was Glendoick again with a delicately attractive *R. lanatum* (a quite hardy species but difficult to grow) – *R. campanulatum* (second) and an unusually fresh *R. campanulatum album* (Borde Hill) third – poor foliage.

Arduaine easily won Class 12 with a cream-coloured *R. falconeri* and their fine *R. fictolacteum* (praised in Class 1) easily won Class 13 from Exbury's (probably R59225 Cherry Tip).

In Class 15 Glendoick continued its run of exquisite winners with *R. vernicosum* 'Sidelaw' – second being Corsock's darkish form of *R. sutchuenense* with a lighter truss from Blackhill's in third. Also in this Fortunei Series Class (seasonably worth winning) was *R. orbiculare* (very good, from Bodnant) and *R vernicosum* Hu 15104.

Borde Hill's *R. uvarifolium* (*"roseum"*) beat one other entry in Class 16 by a long distance.

Class 17 Grande Series was dominated by *R. macabeanum* in the order Arduaine, Nymans, Borde Hill. Two *R. sinogrande* were shown, but the Class otherwise was not very well supported. In 1976 this Class was a major event.

Class 18 Irroratum Series (a long one) had only six entries, but quality was high. The scarlet red *R. venator* KW6285 (Borde Hill – winner 1976) won from *R. araiophyllum* (Blackhills – not my idea of this

species) and a good *R. irroratum* (Glendoick), the unlucky entrant being Leonardslee with *R. irroratum* 'Polka Dot'.

Class 19 Lacteum Series was a tough one (11 entries). First was *R. phaeochrysum* (Blackhills) from their own *R. traillianum* with *R. phaeochrysum* KW4843 (Sandling Park) third. Also present was the creamish and compact form of *R. wightii* (Lady Adam Gordon, Littleworth), a more usual pendulous and yellow *R. wightii* (origin Gill of Falmouth) and *R. nakotiltum* between pale yellow and cream white flowers.

Alan Hardy won Class 20 (Maddenii ss. Megacalyx) with *R. megacalyx*, from Lady Adam Gordon's *R. lindleyi* – also shown for third place by Peter Cox, who went better in Class 21 with a lovely spray of *R. inaequale* C & H 30 (like rhomboidish white stars) from *R. ciliicalyx* (Arduaine – perhaps from outdoors) and *R. burmanicum*, deeper yellow form (Sir Giles Loder, Leonardslee). An interesting exhibit in the 12 entries was *R. roseatum*, listed as not in general cultivation, but qualified *R. parryae* by the astute Peter Cox.

Class 22 and Class 24 were both duels, in the former *R. haematodes* (Mrs Colville) beat *R. haematodes* (Mrs Potter), slightly darker red – both good. In the latter Class *R. sanguineum* ssp. *haemaleum* (Sylvester Christie) beat the same species marked R59498 (not such good foliage). I hear the drought had been hard on the Neriiflorum Series generally.

In Class 25 (Ponticum Series, one truss) there were only 4 entries (all excellent), *R. metternichii* 'Ho Emma' (Borde Hill) reversing 1977 form over *R. degronianum* (Blackhills) with *R. caucasicum* C & H from Glendoick third. *R. hyperythrum* completed the instructive quartet.

In the two classes covering the wide Taliense Series the results were Class 26 (subseries Roxieanum and Wasonii), *R. roxieanum* var. *oreonastes* (Glendoick – a beautiful presentation of a dwarfish member, white flushed rose) convincingly first, second *R. inopinum* (not the form seen in two Sussex locations) and third *R. iodes* with the rarish *R. globigerum* unplaced. Class 27, Adenogynum and Taliense Subseries. It was *R. sphaeroblastum* (Arduaine) first, with *R. balfourianum* and *R. sphaeroblastum* (both Blackhills) second and third. It was nice to see among the nine entries *R. doshongense* with pink stripes down their exterior lobes.

In the Thomsonii Classes there were the following verdicts: Class 28 Spray of Campylocarpum, Mrs Potter won with var. *elatum* (straight branch upright form) from orthodox forms of High Beeches and Penhale. In Class 29 Spray – remainder Campylocarpum Subseries, a pretty spray of *R. caloxanthum* Farrer 987 (Borde Hill) won from their other entry, the very rare *R. panteumorphum* (probably F21836, not *telopeum* as in the textbooks). Class 30 was won by *R. dasycladum* (Nymans) – probable synonym *rhaibocarpum*. In Class 32 Subseries Thomsonii, Mrs Colville's choice form of *R. thomsonii* continued to repel all challengers; this time the runner-up was a nice truss from Leonardslee. *R. eclecteum* (shown by Nymans) was placed third, but was in fact *hylaeum* – as the judges should have known.

In Class 37 Anthopogon Series Peter Cox must be congratulated on his lovely *R. primulaeflorum* var. *cephalanthoides*. In Class 38 Campylogynum, the winner was shown by the Boscawens, beating an exhibit marked KW21481. In Class 39 a traditional spray of *R. edgeworthii* KW7137 beat *R. edgeworthii* KW20839 (at first glance the latter looks rather akin to white *R. inaequale*). Borde Hill, the victor would like to

confess that both entries originated from Sandling Park – but the former survives even outdoors in mid-Sussex in sheltered leeways.

Class 40, Glaucophyllum Series, was full of interest, but some of the exhibits were not fully out and there was no outstanding entry. *R. glaucophyllum* (Bodnant) was preferred to *R. glaucophyllum* (Nymans) – their *R. tsangpoense* getting third place. I particularly liked *R. glaucophyllum* var. *tubiforme* (Robert Strauss, Stonehurst) and I noted one *R. charitopes* and a species remarkably akin, which I happen to know on Davidian evidence is not.

Class 41 Heliolepis Series was again strong with some nice sprays to enjoy. Here *R. rubiginosum* (Arduaine) beat *R. rubiginosum* (Corsock) with *R. desquamatum* Farrer 875 third. Bodnant's *R. rubiginosum* got a Highly Commended.

A good blue-mauve *R. cuneatum* (Nymans) F27119 – the tallest growing member – took the Lapponicum Series (Class 42). *R. hippophaeoides* 'Bei-Ma-Shan' was second and *R. russatum* (Mrs Potter) – near to blue – third. Also present in the 12 entries were *R. rupicola* (Bodnant) fourth prize and *R. polycladum* F25555, *scintillans* aff., a rare species not, I am told, in the good Edinburgh collection.

In Class 45, Racemosum, there were six sprays, Glendoick's winning from Borde Hill's, whilst in Class 46 for the series remainder *R. spiciferum* (Sir Giles Loder, Leonardslee) was deemed better than Bodnant's same entry. A third *R. spiciferum* was marked *R. hemitrichotum*, but this species was actually present under KW4050. This Class was one of the very few not as strong as in 1977, when *R. spinuliferum* and *R. pubescens* KW3953 clashed – but that date was earlier.

There were seven entries in the Augustinii Class 48 with three possible selections. The decision was first Penhale – flower colour favouring Oxford slightly with a brownish rash – second Exbury – lighter lilac blue (possibly var. *chasmanthum*) – third the exquisitely blue form shown by Mr Winter for Mrs Potter.

Class 49, Oreotrephes, saw a walkover for Peter Cox – this species was late this year in the south, but in Class 50 *R. bauhiniiflorum* KW 7731 (Borde Hill) won from Lady Adam Gordon's *R. ambiguum*.

Class 52 for a species of the Yunnanense Subseries other than *yunnanense* or *oreotrephes* was better supported; these tend to overlap and yield intermediates in behaviour and colour. The winner from Nymans was a very good form of *R. rigidum* approaching *R. bodinieri*, *R. davidsonianum* occupied second, third and fourth places (one of these was var. *charianthum*).

In Class 53 for a Malesian species, the only entry was *R. javanicum*, an orange-red epiphyte, from Glendoick.

Class 54 is always interesting, as it provides for all species not covered by previous distinctive classes. The winner was *R. hanceanum* var. *nanum* from Leonardslee with typical yellow flowers and dwarf habit – a floating subseries of the Triflorum Series. Second was *R. pemakoense* from High Beeches that should have been in Class 43, where it would have had a walkover; there were also *R. ovatum* and *R. leptothrium* in this catchall Class.

In Class 102 for dwarf rhododendrons suitable for the rock garden, it was fitting to see 'Razorbill' (*R. spinuliferum* × unknown) get first prize, as it also gained an A.M. Class 103 for any rhododendron plant in bloom was won by 'Marion Street', fimbricated pink flowers with a yellowish blotch.

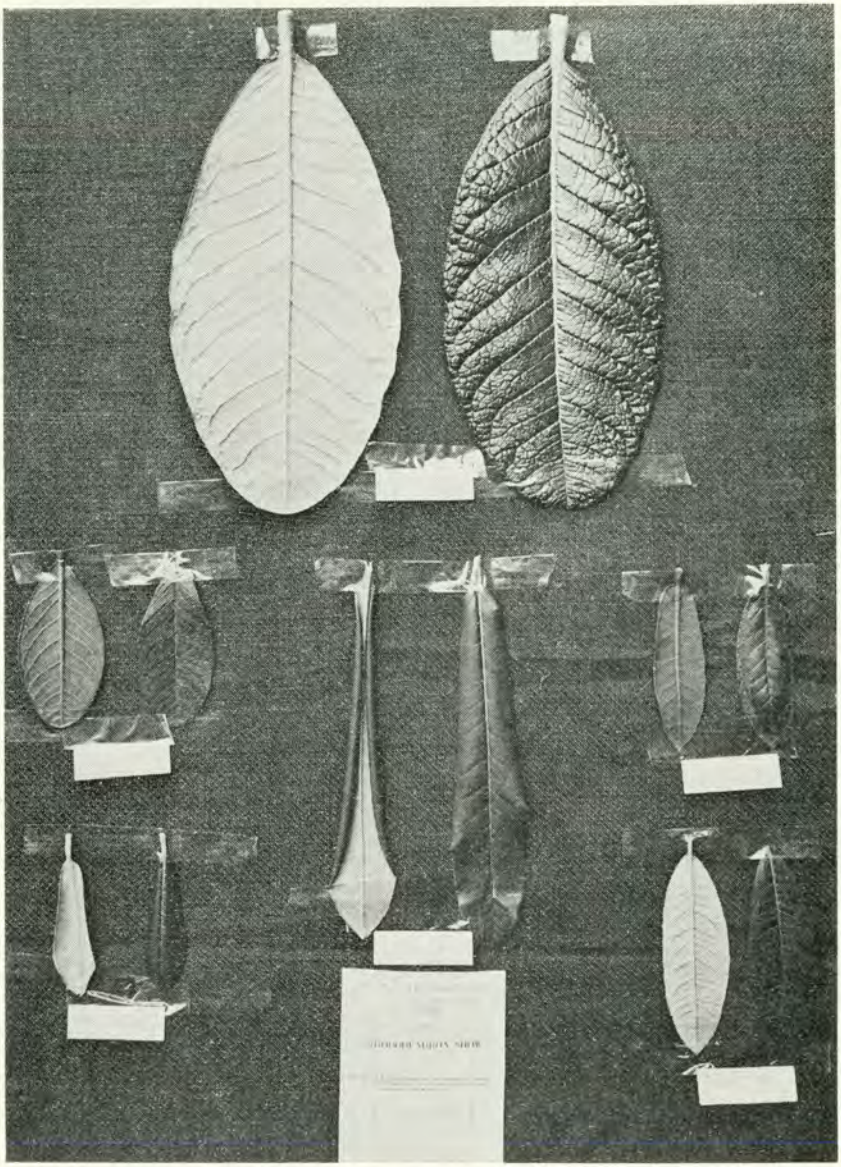

Fig. 13 An exhibit of leaves by E. de Rothschild

The foliage Class was won by Exbury from Arduaine, third being an entry from Sussex which so nearly became a giant killer.

In addition to awards mentioned in above, Mr Arthur George of Hydon Nurseries received an A.M. for his 'Blue Chip' ('Blue Diamond' × *russatum*) and Geoffrey Gorer of Sunte House an A.M. for *R. veitchianum*.

There were five entries in Class 61 for eight hybrids, which was won by Bodnant, showing a selection of red hybrids of which 'Red Queen', 'Hiraethlyn' and a very pretty *R. arboreum* × *R. griffithianum* were particularly good. Mrs Hopwood, who has recently taken over the well known garden at Tremeer, was placed second, showing a greater variation in her exhibit with a very good yellow 'J. B. Stevenson', 'Barclayi Robert Fox', 'Lionel's Triumph' and a very well shown truss of 'Loderi Fairyland'.

Class 62 for three hybrids was won by Major Hardy from four other entries, with 'Mariloo', 'Luscombei' and 'Lionel's Triumph': Miss Godman was placed second with her very attractive *R. irroratum* × Loderi and 'Pink Coral' × *R. arboreum*. Class 63, restricted entry of three hybrids, was won by Mr J. A. Fox showing 'Elizabeth', an *R. barbatum* cross and *R. calophytum*. Class 64 for three sprays was won by the High Beeches with magnificent sprays of 'Little Jessica', 'Horsham' and 'Boddaertianum'. Class 65 for which the Loder Challenge Cup is awarded, attracted 15 entries, and was won by 'Marion Street' ('Stanley Davies' × *R. yakushimanum*), shown by Heathermead Nurseries, who also had a stand exhibiting this hybrid, 'White Glory' shown by Sir Giles Loder was second, with 'Little Jessica' from the High Beeches third. Bodnant, once again showing entirely red hybrids, won Class 66 for hybrids raised in the exhibitor's garden, with 'Red Queen', 'Choremia', 'Coreta', 'Red Wing', *R. thomsoni* × *R. fortunei* and *R. arboreum* × *griffithianum*; Exbury showing 'Queen of Hearts', 'Lionel's Triumph' and 'Mary Soames' was second; with Lamellen third showing a *R. lacteum* cross, a *R. vernicosum* cross, a *R. detonsum* cross and 'Thomdeton'.

Bodnant won Class 67 for three sprays in the garden of the exhibitor with 'Peace', 'Matador' and 'Red Queen'. In Class 68 Bodnant were placed first, second and third with an unnamed red hose-in-hose hybrid, 'Shirleyi', and 'John Tremayne', 'Loderi Fairyland' shown by Mrs Hopwood was the only entry in Class 69. There were eight entries in Class 70 with Bodnant being placed first and second with 'Hiraethlyn' and 'Cornish Cross'. Class 71 was won by Leonardslee with 'Cornubia' × *R. griffithianum*, with Major Hardy's 'Yvonne' a close second. Class 72 was won by Exbury's 'Luscombei' from Borde Hill's 'Gladys'. Class 73 was disappointing with only two entries, both of which had flopped. Class 74 attracted six entries and was won by 'Logan Damaris' shown by Tremeer from Mrs Kilworth's 'Unique', with 'Damaris' shown by Exbury third.

In Class 75, Bodnant were placed first and second from five other entries with 'Choremia' and 'Hiraethlyn'. Class 76 was won by an attractive truss of 'Glory of Leonardslee' × *R. thomsonii*, shown by Leonardslee, from 'Barclayi Robert Fox', shown by Mrs Hopwood, with Borde Hill's 'Pride of Leonardslee' third, in a class of nine. In Class 78 there were seven exhibits with 'Ruddigore' and 'Matador' from Bodnant placed first and third, and 'Elizabeth' from Leonardslee second. Bodnant's 'Laura Aberconway' won Class 79 from Mrs Colville's 'Siren'. In Class 80 Mrs Hopwood's 'Lionel's Triumph' narrowly beat Major Hardy's with 'Mariloo' third. There were six exhibits in Class 82, with Bodnant's 'Bodnant Yellow', an extremely attractive plant, winning this class from a rather pink form of 'Alison Johnstone'. Class 83 for a spray or truss of a hybrid, of which one parent is a species of the Maddenii or

Edgeworthii Series, attracted five entries and was won by an attractive large spray of 'Folies Bergère' from Leonardslee from a very fine truss of an unnamed hybrid from Bodnant, which looked as though *R. megacalyx* was one of the parents. 'Augfast' shown by Mrs Colville was of a particularly deep colour, to win Class 84 from 'St Breward' from Leonardslee with 'Augfast' shown by Mrs Potter third, this form had larger bells than the winning form but fewer bells to the truss; also being shown was another good *lapponicum* hybrid from Penheale, 'Penheale Blue', In Class 86 'Elizabeth' from Penheale won from 'Blush' shown by Bodnant. Glendoick were the only exhibitors in Class 87 which they won with 'Phalarope'. In Class 88 all five exhibits were 'Yellow Hammer'. Major Magor's 'Clio' won Class 89 from Leonardslee's 'White Wings'. 'Blue Diamond' completely dominated Class 90 where it was placed first, second and third. 'Ramilles' × 'Chiron', a large scarlet hose-in-hose truss, won Class 91 from three other exhibits. Bodnant was the only entry in Class 92 with 'Bodnant Yellow' × 'Lady Chamberlain'. A very attractive spray of a yellower form of 'Alison Johnstone' won Class 93 from a spray of *R. thomsonii* × *R. fortunei*. In Class 94 there were only two exhibits, 'Caerhays John' and 'Caerhays Philip' both shown by Major Hardy; 'Caerhays John' appears to have smaller bells in a more compact truss, with the petals being more pointed and slightly serrated. Class 95 for any species shown by a novice, was won by Miss Hilliard showing *R. orbiculare*; the following class for any hybrid shown by a novice was won by Mr and Mrs Glass with a truss of 'Prince Camille de Rohan', with Miss Hilliard's 'White Wings' placed second. Exbury were the only entry for Class 101 in which they showed the azaleas 'Kiritsubo', 'Orange Beauty' and 'Kirin'.

THE TRADE STANDS

A Banksian Silver Gilt Medal went to the enterprising Wessex Branch of the Rhododendron & Camellia Group, whose exhibit included the choice dwarf rhododendrons *R. microleucum* (white flowers) and *R. hypenanthum* (yellow flowers); similar awards went to W. B. & D. M. Naishman of Beauclere near Leigh; and to the rhododendron stand of Messrs Reuthe, who also gained the Rothschild Cup for the second year running. On this stand I noticed particularly *R. glomerulatum, R. vaseyi, R. hypenanthum, R. iteophyllum* and hybrids 'Princess Anne', 'Ightham Yellow', 'Elspeth', 'Sauve' and 'Marion Street'.

In conclusion, I wonder which is the most unenviable task at the Show – being a judge, or examining the many exhibits as a reporter under constant interruptions, despite many degrees of kind assistance and many old and new acquaintanceships.

Whilst bodies of learned boffins are already steamrolling out revived and/or new systems of classification for the species, many competitors in the "Show Business" are still struggling to familiarise themselves with the old system as recorded in the *R.H.S. Species Handbook Part I 1967* – the Rule Book of Competition – if one is lucky enough to possess a copy. Radical changes at this stage will only cause major confusion and there is a point in all subjects where science ends and religion begins.

As for those who put odd exhibits in wrong classes or muddle up names, please remember that the judges work against the clock and may be compassionate rather than sticklers. It is no good blaming the floor stewards for odd oversights in rectifying errors. In their defence I do know that several entries go in within the last minutes, and that there are last second switches. It is all perhaps the fun of the fair.

The Camellia Competition and Show, 1978

GEORGE AYLING

I have been taken to task severely for my decision only to mention the winners of first prizes last year (*not* by the Editor). The idea was to economise in space, but as it has apparently caused some disappointment I will revert to the former system this year because after all the competitors, be they ever so few, are the people who really matter and the precious contents of those boxes which are carried so carefully into the Hall represent a year's work, a fact which I have had to point out to various over-helpful taximen thus earning looks which could be interpreted as "This geezer's barmy" or "Look mate, I've got work to do".

As to weather, this year it had done its very worst before both events. No need to go into details, we shall all remember it for a very long time. The Competition was fairly well off for entries and if the quality was not outstanding, well, the cost of fuel is not what it used to be. The Show, being more at the mercy of the elements, had more moss on display than I have seen for many years and even that had a brown and withered look. However the competitors were courageous, and fittingly the judges were generous and thus everyone enjoyed the annual get-togethers just the same.

Camellias were also scarcer than usual on the trade stands. South Down Nurseries included a display of *williamsii* hybrids mostly of Caerhays' breeding on Competition day, and James Trehane and Sons had well finished stands composed entirely of all types of camellia plants on both occasions.

The International Camellia Society put up smaller displays this year but the quality of the blooms was such that many firsts must have been won if they had been entered for competition.

Sir Giles Loder put up one of his splendid displays of camellias at the intermediate Show but even he seemed to have had more trouble with the climate than usual.

Now for results.

The Camellia Competition, 21st March 1978

Class 1. Three sprays, any three cultivars of *japonica*. 1st. Sir Giles Loder, Leonardslee, Sussex. Flamingo, Guest of Honor, Grand Slam. 2nd. Sir G. Loder. Princess Lear, Haku Rakuten, Drama Girl. 3rd. R. Strauss, Ardingly, Sussex. Faith, Drama Girl, Mrs D. W. Davis.

Class 2. One spray, any semi-double *japonica*. 1st. Sir Giles Loder. Gladys Wannamaker. 2nd. R. Strauss. Coral Pink Lotus. 3rd. Sir G. Loder. Guest of Honor.

Class 3. One spray, any anemone-formed or paeony-formed *japonica*. 1st. Sir Giles Loder. Richard Nixon. 2nd. Sir G. Loder. Barbara Woodrooff. 3rd. Sir G. Loder. Little Bit.

Class 4. One spray, any rose-formed or formal double *japonica*. 1st. R. Strauss, Cheryl Lynn. 2nd. The Duke of Devonshire, Chatsworth. Alba Plena. 3rd. Sir Giles Loder. Vulcan.

Class 5. One spray *reticulata*. 1st. The Countess of Rosse, Nymans, Sussex. Buddha. 2nd. Sir Giles Loder. Lila Naff. 3rd. Sir G. Loder. Shot Silk.

Class 6. One spray, *saluenensis*. 1st. Sir Giles Loder.

Class 7. One spray, any other species. 1st. The Countess of Rosse. *rosaeflora*. 2nd. Major E. W. M. Magor, St. Tudy, Cornwall. *cuspidata*.

Class 8. One spray each, any three hybrids. 1st. Sir Giles Loder. Leonard Messel, Felice Harris, Vallee Knudsen. 2nd. Sir G. Loder. Brigadoon, Bonnie Marie, Grand Jury.

Class 9. One spray, any single flowered × *williamsii*. 1st. The Countess of Rosse. Bow Bells. 2nd. Countess of Rosse. J. C. Williams. 3rd. Sir Giles Loder. J. C. Williams.

Class 10. One spray, any semi-double × *williamsii*. 1st. R. Strauss. Anticipation. 2nd. Sir Giles Loder. Elegant Beauty. 3rd. Sir G. Loder. Brigadoon.

Class 11. One spray, any paeony-formed, rose-formed or formal double cultivar ×*williamsii*. 1st. R. Strauss. Debbie. 2nd. Sir Giles Loder. Debbie.

Class 12. One spray, any hybrid other than × *williamsii*. 1st. Sir Giles Loder. Satan's Robe. 2nd. Sir G. Loder. Leonard Messel. 3rd. R. Strauss. Forty Niner.

Class 13. A camellia plant in bloom. No entry.

Class 14. One bloom each, any three single flowered *japonica*. 1st. R. Strauss. Clarissa, Rogetsu, Evelyn. 2nd. Sir Giles Loder. Showa-asaraku, Showa-ni-hikari, Sakura-Gari. 3rd. The Duke of Devonshire. Jupiter, Charlotte Rothschild, Sieboldii

Class 15. One bloom, any single-flowered white *japonica*. 1st. The Duke of Devonshire. Charlotte Rothschild. 2nd. R. Strauss. Rogetsu. 3rd. Mr D. N. Farnes, Hornchurch, Essex. Alba Simplex.

Class 16. One bloom, any single-flowered self-coloured *japonica*. 1st. Sir Giles Loder. Sakura-Gari. 2nd. R. Strauss. Sylva. 3rd. Miss Godman, South Lodge, Sussex. Gertrude Preston.

Class 17. One bloom, any single-flowered variegated *japonica*. 1st. R. Strauss. Clarissa. 2nd. Sir Giles Loder. Yamata Niahiki. 3rd. The Duke of Devonshire. Sieboldii.

Class 18. One bloom each, any three semi-double *japonica*. 1st. R. Strauss. Coral Pink Lotus, Mrs D. W. Davis, Drama Girl. 2nd. Sir Giles Loder. Guest of Honor, Gladys Wannamaker, Mrs D. W. Davis. 3rd. Mr R. H. Ellis, Horsham, Sussex. Guilio Nuccio, Adolphe Audusson, Grand Slam.

Class 19. One bloom, Drama Girl. 1st. Sir Giles Loder. 2nd. R. Strauss. 3rd. R. H. Ellis.

Class 20. One bloom. Mrs D. W. Davis. 1st. Sir Giles Loder. 2nd. R. Ellis. 3rd. The Duke of Devonshire.

Class 21. One bloom, any semi-double white *japonica*. 1st. Sir Giles Loder. Silver Anniversary. 2nd. Sir G. Loder. Shiro Botan. 3rd. The Duke of Devonshire. 4th. Mr R. S. Hood, Southampton. Haku Rakuten.

Class 22. One bloom, any semi-double self-coloured *japonica*. 1st. R. Ellis. Dr Tinsley. 2nd. R. Ellis. Tiffany. 3rd. R. Strauss. Hana Fuki. 4th. Sir Giles Loder. Grand Slam.

Class 23. One bloom, any semi-double variegated *japonica*. 1st. Sir Giles Loder. Adolphe Audusson. 2nd. R. Strauss. Miss Charleston Variegated. 3rd. Sir G. Loder. Geisha Girl. 4th. Sir G. Loder. Ville de Nantes.

Class 24. One bloom each, any three anemone- or paeony-formed *japonica*. 1st. Sir Giles Loder. The Pilgrim, C. M. Wilson. Kick Off. 2nd. R. Ellis. Faith, Hawaii, Barbara Wilson. 3rd. R. Strauss. Faith, Gus Menard, Mathotiana Supreme. 4th. Sir G. Loder. Richard Nixon, Tomorrow, Evelina.

Class 25. One bloom, any anemone- or paeony-formed white *japonica*. 1st. Sir Giles Loder. The Pilgrim. 2nd. R. Strauss. Gus Menard. 3rd. Sir G. Loder. Shiro Chan.

Class 26. One bloom, any anemone- or paeony-formed self-coloured *japonica*. 1st. D. Farnes. Elegans Sport. 2nd. Sir Giles Loder. Grand Slam. 3rd. R. Ellis. C. W. Wilson. 4th. Sir G. Loder. Princess Lear.

Class 27. One bloom, any anemone- or paeony-formed variegated *japonica*. 1st. R. Ellis. R. L. Wheeler. 2nd. Sir Giles Loder. Kick Off. 3rd. Sir G. Loder. Richard Nixon.

Class 28. One bloom each, any three rose-formed or formal double *japonica*. 1st. R. Strauss. Betty Sheffield Supreme, Twilight, Cardinal Variegated. 2nd. The Duke of Devonshire. Mathotiana, Mathotiana Rosea, Imbricata. 3rd. Sir Giles Loder. Vulcan, Flowerwood, Carter's Sunburst.

Class 29. One bloom, rose-formed or formal double white *japonica*. 1st. R. Strauss. Alba Plena. 2nd. The Duke of Devonshire. Alba Plena. 3rd. Miss Godman. Imbricata Alba.

Class 30. One bloom, any rose-formed or formal double self-coloured *japonica*. 1st. The Duke of Devonshire. Mathotiana. 2nd. D. Farnes. C. Hovey. 3rd. R. Strauss. Cheryl Lynn.

Class 31. One bloom, any rose-formed or formal double variegated *japonica*. 1st. D. Farnes. Contessa Lavinia Maggi. 2nd. R. Ellis. Betty Sheffield. 3rd. Sir Giles Loder. D. Olga Andresen.

Class 32. One bloom each, any six *japonica*. 1st. R. Strauss. Drama Girl, Grand Prix, Mrs D. W. Davis, Twilight, Rogetsu, Miss Charleston. 2nd. Sir Giles Loder. Betty Sheffield Supreme, Guest of Honor, Evelina, Kick Off, Tomorrow, Grand Slam. 3rd. Sir G. Loder. Richard Nixon, Drama Girl, Ballet Dancer, Mathotiana Supreme, Haku Rakuten, Betty Sheffield.

Class 33. One bloom each, any three *japonica* (restricted). 1st. D. Farnes. Drama Girl, Hawaii, C. M. Wilson. 2nd. R. Ellis. Cara Mia, Mrs D. W. Davis, unlabelled. 3rd. R. Ellis. Beau Harp, Grace Bunton, Dr Tinsley.

Class 34. One bloom, any *japonica* (restricted). 1st. D. Farnes. Hawaii. 2nd. D. Farnes. Adolphe Audusson. 3rd. D. Farnes. Betty Sheffield Sport.

Class 35. One bloom, *reticulata* wild single form. 2nd. The Duke of Devonshire.

Class 36. One bloom, *reticulata* Captain Rawes. 1st. The Duke of Devonshire. 2nd. D. Farnes.

Class 37. One bloom, any *reticulata* other than wild single or Captain Rawes. 1st. Sir Giles Loder. Chang's Temple. 2nd. Sir G. Loder. Arch of Triumph. 3rd. Sir G. Loder. Lila Naff. 4th. Sir G. Loder. Mouchang.

Class 38. One bloom each, any three hybrids. 1st. R. Strauss. Interval, Royalty, Debbie. 2nd. Sir Giles Loder. Satan's Robe, Francie L., Debbie. 3rd. Sir G. Loder. Fire Chief, Leonard Messel, Exaltation.

Class 39. One bloom, any single-flowered hybrid of *reticulata*. 2nd. R. Strauss. Barbara Hillier.

Class 40. One bloom other than single of *reticulata*. 1st. Sir Giles Loder. Francie L. 2nd. R. Strauss. Forty Niner. 3rd. R. Ellis. Milo Rowell.

Class 41. One bloom, any hybrid other than of *reticulata*. 1st. The Duke of Devonshire. Debbie. 2nd. R. Strauss. Debbie. 3rd. Sir Giles Loder. Brigadoon.

Class 42. One bloom, any hybrid (restricted). 1st. D. Farnes. Anticipation. 2nd. D. Farnes. Debbie.

The Camellia Show, 18th April 1978

Class 1. One spray each, any six camellias. 1st. R. Strauss. Gloire de Nantes, Guilio Nuccio, Inspiration, Mme V. de Bisschop, Tricolor, J. C. Williams.

Class 2. One spray each, any three camellias. 1st. R. Strauss. *saluenensis, williamsii,* Magnoliaeflora. 2nd. Mrs MacDonald, Thames Ditton, Surrey. Preston Rose, Donation, Margherita Coleoni.

Class 3. One spray each, any three *japonica*. 1st. R. Strauss. Donckelarii, Tricolor, Magnoliaeflora. 2nd. The Hon. E. Boscawen, Handcross, Sussex. Magnoliaeflora, Alba Simplex, Lady Clare.

Class 4. One spray, any single-flowered *japonica*. 1st. Sir Giles Loder. Tricolor.

Class 5. One spray, any semi-double flowered *japonica*. 1st. Mr E. de Rothschild. Magnoliaeflora. 2nd. E. de Rothschild. Drama Girl. 3rd. Mr P. H. Buckley, London, W.8. Mme V de Bisschop. 4th. R. Strauss. Lady Clare.

Class 6. One spray, any anemone- or paeony-formed *japonica*. 1st. P. Buckley. Elegans. 2nd. Sir Giles Loder. Altheaflora.

Class 7. One spray, any rose-formed or formal double *japonica*. 1st. Mrs Macdonald. Margherita Coleoni.

Class 8. One spray *cuspidata*. No entry.

Class 9. One spray, *reticulata,* wild form. 1st. Sir Giles Loder.

Class 10. One spray, any double or semi-double *reticulata*. 1st. Sir Giles Loder. Confucius.

Class 11. One spray, any hybrid of *reticulata*. 1st. Sir Giles Loder. Leonard Messel. 2nd. R. Strauss. Inspiration. 3rd. Sir G. Loder. Barbara Hillier.

Class 12. One spray, *saluenensis*. 1st. R. Strauss. 2nd. Sir Giles Loder. 3rd. Sir G. Loder.

Class 13. One spray, any single × *williamsii*. 1st. R. Strauss. *williamsii*. 2nd. Sir Giles Loder. Golden Spangles.

Class 14. One spray, × *williamsii* Donation. 1st. Sir Giles Loder. 2nd. Mrs MacDonald. 3rd. R. Strauss.

Class 15. One spray, any semi-double cultivar of × *williamsii* other than Donation. 1st. Mrs MacDonald. Margaret Waterhouse. 2nd. R. Strauss. Citation.

Class 16. One spray of × *williamsii* other than single, semi-double or Donation. 2nd. Sir Giles Loder. Inchmery × *saluenensis*.

Class 17. One spray, Cornish Snow. 1st. Sir Giles Loder.

Class 18. Any other hybrid of *saluenensis*. No entry.

Class 25. One bloom each, any twelve camellias (The Leonardslee Bowl). 1st. Surgeon-Captain Lock, Kingsbridge, Devon. Adolphe Audusson, Donation, Guilio Nuccio, Elegant Beauty, Citation, Leonard Messel, Crimson Robe, Grand Jury, Bonnie Marie, Anticipation, Grand Prix, Francie L. 2nd. E. de Rothschild. Tricolor Sieboldii, Salutation, Joseph Pfingstl, Pink Ball, Madame Le Bois, Lady Clare, Elizabeth, White Swan, Alex Hunter, Devonia, Preston Rose, Marchioness of Exeter.

Class 26. One bloom each, any three single-flowered *japonica*. 1st. E. de Rothschild. Jupiter, Charlotte Rothschild, Hatsu Zakura. 2nd. Mr J. W. M. Graham, Par, Cornwall. Charlotte Rothschild, Jupiter, no label. 3rd. Surgeon-Captain Lock. Unknown, Mattie Cole, White Swan.

Class 27. One bloom. Alba Simplex or Devonia. 1st. Mrs MacDonald. 2nd The Hon. E. Boscawen. 3rd. E. de Rothschild.

Class 28. One bloom, Jupiter or Sylva. 1st. E. de Rothschild.

Class 29. One bloom, Hatsu Zakura. 1st. E. de Rothschild.

Class 31. One bloom, any single white *japonica* not specified above. 1st. R. Strauss. Charlotte Rothschild. 2nd. E. de Rothschild. White Swan. 3rd. Surgeon-Captain Lock. White Swan.

Class 32. One bloom, any single-flowered self-coloured cultivar not previously specified. 1st. Mrs Barbara Griffiths, London, S.E. 22. Name unknown. 2nd. Surgeon-Captain Lock. Mattie Cole.

Class 33. One bloom, any single variegated *japonica* not previously specified. 1st. The Hon. E. Boscawen. No name. 2nd. Surgeon-Captain Lock. Name unknown.

Class 34. One bloom each, and three semi-double *japonica*. 1st. E. de Rothschild. Mercury, Dr Tinsley, Mars. 2nd. Surgeon-Captain Lock. Guilio Nuccio, Lady Clare, Grand Prix. 3rd. R. Strauss. Lady Clare, Tricolor, Guilio Nuccio. 4th. Mrs Tame, Northwood, Mddx. Adolphe Audusson, Magnoliaeflora, Tricolor.

Class 35. One bloom, Adolphe Audusson. 1st. Mrs MacDonald. 2nd. Surgeon-Captain Lock.

Class 38. One bloom, Guilio Nuccio. 1st. Surgeon-Captain Lock.

Class 39. One bloom, Lady Clare. 1st. E. de Rothschild. 2nd. R. Strauss. 3rd. Sir Giles Loder. 4th The Hon. E. Boscawen.

Class 40. One bloom, Magnoliaeflora. 1st. E. de Rothschild. 2nd. Mrs Tame.

Class 41. One bloom, Nagasaki. 1st. E. de Rothschild.

Class 42. One bloom, any semi-double white *japonica* not previously specified. 1st. P. Buckley. Mme V. de Bisschop. 2nd. E. de Rothschild. Flora. 3rd. Surgeon-Captain Lock. Dear Jenny

Class 43. One bloom, any semi-double self-coloured cultivar of *japonica* not previously specified. 1st Surgeon-Captain Lock. Grand Prix. 2nd. E. de Rothschild. Mars. 3rd. E. de Rothschild. Drama Girl.

Class 44. One bloom, any semi-double variegated *japonica* not previously specified. 1st. R. Strauss. Tricolor. 2nd. Mrs Tame. Tricolor.

Class 45. One bloom each, any three anemone- or paeony-formed *japonica*. 1st. Surgeon-Captain Lock. Blackburniana, Altheaflora, R. L. Wheeler. 2nd. P. Buckley. Preston Rose, Elegans, unknown. 3rd. E. de Rothschild. Preston Rose, Platypetala, Altheaflora.

Class 46. One bloom, Elegans. 1st. P. Buckley. 2nd. Mrs B. Griffiths. 3rd. Mrs R. L. B. Haywood, London, S.W. 3.

Class 49. One bloom, any anemone- or paeony-formed self-coloured *japonica* not previously specified. 1st. Sir Giles Loder. Altheaflora. 2nd. Mrs P. Eunson, Chorleywood, Herts. Tiffany. 3rd. Mrs MacDonald. Preston Rose. 4th. E. de Rothschild. Hana Tachibana.

Class 50. One bloom, any anemone- or paeony-formed variegated *japonica* not previously specified. 1st. Sir Giles Loder. Little Bit. 2nd. E. de Rothschild. Platypetala.

Class 51. One bloom each, any three rose-formed or formal double *japonica*. 1st. Surgeon-Captain Lock. Caleb Cope, Betty Cuthbert, Pink Champagne.

Class 52. One bloom, Contessa Lavinia Maggi. 1st. Mrs B. Griffiths. 2nd. Mrs Griffiths.

Class 53. One bloom, Rubescens Major. 2nd. J. W. M. Graham.

Class 60. One bloom, rose-formed or formal double self-coloured *japonica* not previously specified. 1st. P. Buckley. Unknown. 2nd. E. de Rothschild. Marchioness of Exeter. 3rd. E. de Rothschild. Unknown.

Class 62. One bloom each, any six cultivars of *japonica*. 1st. Surgeon-Captain Lock. Altheaflora, Adolphe Audusson, Lady Clare, Drama Girl, Lady Loch, Grand Prix. 2nd. E. de Rothschild. Lady Clare, Apollo, Grandiflora Alba, Drama Girl, Joseph Pfingstl, unlabelled. 3rd. Mrs Tame. Adolphe Audusson, Magnoliaeflora, Kelvingtoniana, Lady Clare, Paolina Guichardini, seedling.

Class 65. One bloom each, any four other than *japonica*. 1st. Surgeon-Captain Lock. Elegant Beauty, Anticipation, Crimson Robe, Leonard Messel.

Class 66. One bloom each, any three × *williamsii* other than single. 1st. J. W. M. Graham. Julia Hamiter, Anticipation, Elsie Jury. 2nd. Surgeon-Captain Lock. Anticipation, Bonnie Marie, Elegant Beauty. 3rd. Mrs P. Eunson. Elsie Jury, Anticipation, Debbie.

Class 68. One bloom, any double, paeony-formed or semi-double *reticulata*. 1st. Sir Giles Loder. Noble Pearl. 2nd. Viscount Sudley. Royalty. 3rd. Surgeon-Captain Lock. Crimson Robe.

Class 69. One bloom, *saluenensis*. 1st. R. Strauss. 2nd. E. de Rothschild. 3rd. Sir Giles Loder.

Class 70. One bloom, any single cultivar × *williamsii*. 1st. Surgeon-Captain Lock. St Ewe. 2nd. R. Strauss. Francis Hanger. 3rd. Sir Giles Loder. J. C. Williams.

Class 71. One bloom × *williamsii* Donation. 1st. The Hon. E. Boscawen. 2nd. E. de Rothschild. 3rd. Sir Giles Loder.

Class 72. One bloom × *williamsii* other than a single cultivar, or Donation. 1st. Mrs P. Eunson. Debbie. 2nd. Surgeon-Captain Lock. Elegant Beauty. 3rd. Sir Giles Loder. Inchmery.

Class 73. One bloom Salutation. 2nd. E. de Rothschild.

Class 74. One bloom, Leonard Messel. 1st. Surgeon-Captain Lock. 2nd. The Hon. E. Boscawen.

Class 75. One bloom, Grand Jury. 1st. Surgeon-Captain Lock.

Class 76. One bloom, any hybrid not previously specified. 1st. E. de Rothschild. Anticipation. 2nd. Surgeon-Captain Lock. Inspiration. 3rd. R. Strauss. Inspiration.

THE ARRANGEMENT

Class 80. 1st. Surgeon-Captain Lock. A pyramid in pink and white with camellia foliage only. Cultivars used – E. G. Waterhouse, Elizabeth Rothschild, Cornish Snow, Berenice Boddy. 2nd. Mrs MacDonald. A triangular effect in a flat dish. Red and pink with camellia foliage only. Cultivars used – Margherita Coleoni, Preston Rose. 3rd. Mrs A. Holland, Balcombe, Sussex. A bunch effect in the crown of a lady's broad-brimmed straw hat. Cultivars used were Lady Clare and Magnoliaeflora with escallonia and camellia foliage. For me, this entry at last brought this class somewhat into line with arrangement classes for other flowers.

Truro Show

March 30/31, 1978

ANN MAGOR

Emerging from one of the worst winters in memory, with both snow and devastating north-easterly gales, Truro City Hall was ablaze with colour for the last two days of a very bleak March.

The Magnolia Classes were very well supported, with the pink *M. campbellii* and *M. mollicomata* dominating all the classes – the white-flowered species being particularly sensitive to weather conditions, but all competitors must be congratulated on their exhibits.

Over the years we have come to expect quality from Mr Nigel Holman and once again we were not disappointed; in Class 18 for three different species, hybrids or cultivars, he showed magnificent vases of

M. campbellii × *M. robusta* 'Hawk', which has very deep purple buds; an extremely attractive *M. mollicomata* seedling which has been given the varietal name 'Treve Holman'; and an eyecatching seedling of *M. campbellii alba*, the outside of the petals being several degrees darker in colour than the pale inside. Trewithen's *M. mollicomata* was placed first in Class 19 with Mr Holman's *M. mollicomata* 'Lanarth' seedling a very close second. A beautiful bloom of a seedling of *M. robusta* won the class for a single bloom of a magnolia from Chyverton's *M. campbellii alba* seedling and a bloom of *M. mollicomata* from Trewithen.

The most dominant genus in the Show was without doubt *Camellia*, with forty classes allotted to them. Class 47 for twelve different camellias, one bloom of each, attracted eight entries; Mr M. Petherick of Porthpean included in his winning exhibit 'Pagoda', 'Primavera', 'Captain Rawes', and 'Warrior'. Mr Penrose was second with Trewithen third. Class 48 for six different camellias, to include three or more species or hybrids, one bloom of each, was won by Mr Petherick – outstanding amongst his six were 'Leonard Messel' and 'Drama Girl'. Tregothnan was second and Mr Walters third. All the classes were well supported, with first class show blooms; one wonders how such flowers were able to develop after the appalling winds and frosts.

Compared with previous years, the rhododendron classes were disappointing by their lack of support. Class 62 for six species, one truss of each, only attracted one entry, which was from Lamellen and included *R. sutchuenense* var. *geraldii*, *R. calophytum* and of great interest to the judges a white form of *R. erubescens*. The following class for three species, one truss of each, was won by Lady Falmouth, showing a very fine form of blood-red *R. arboreum*, *R. macabeanum*, and *R. calophytum*. Class 65 for any species of the Falconeri or Grande Series, one truss of each, attracted more entries than any other of the rhododendron classes, with six *R. macabeanum* and two *R. sinogrande;* Trengwainton's F.C.C. form of *R. macabeanum* won this class. The class for any species of the Arboreum Series, was won by a perfect truss of *R. arboreum* (blood red); there were several forms of *R. arboreum* var. *roseum* and one very nice truss of *R. niveum*. Unfortunately, there were no entries in the classes for species of the Edgeworthii and Maddenii or Thomsonii Series. A very well grown *R. genesterianum*, shown by Major Bolitho and the National Trust from Trengwainton, won the class for any species of a series not mentioned in the foregoing classes. Class 72 for a spray of any species in the Falconeri or Grande Series, had three entries, all *R. macabeanum*, of which Trewithen's was outstanding. Perhaps the most interesting of the classes for sprays of species, was Class 79, which was convincingly won by the Award of Merit form of *R. parmulatum* 'Ocelot' from Tremeer, which is without doubt the best form I have seen; also of interest was *R. stenaulum* from Trengwainton, where it makes a magnificent plant grown outside. Class 81 for six hybrids, one truss of each, only attracted one entry, which was from Lamellen; particularly eyecatching were 'Arblact', 'Arbcalo' and 'Choremia'. Mrs Hopwood, who has recently taken over at Tremeer, won the next class for three hybrids, one truss of each, with two different clones of *R. calophytum* × *R. arboreum*, and a very fine 'Robin Hood', which also won the next class for any hybrid, one truss, from Lamellen's 'Arblact'. Class 85 for any hybrid raised by or in the garden of the exhibitor was won by 'Cornsutch' from Lamellen, from Tremeer's 'Artist'.

RHODODENDRON TRIALS AT WISLEY 1978

The following awards to Rhododendrons have been made by the Council of The Royal Horticultural Society after trial at Wisley. The number in brackets after the description of the plant was that under which it was grown in the trial.

HARDY HYBRID RHODODENDRONS

Princess Anne (R. hanceanum × R. keiskei). (Raised by Walter S. Reuthe; introduced and sent by Messrs G. Reuthe Ltd, The Nurseries, Jackass Lane, Keston, Kent) **A.M.** May 10, 1978. Plant 14 in. (35 cm) high, 20 in (55 cm) spread, vigorous, compact habit, very free flowering; leaves 1 in. (2.5 cm) long, ½ in. (1 cm) wide, fairly dull to medium dark green. Flower truss 1½ to 2 in. (3.5-5 cm) diameter, 1½ in. (3.5 cm) deep, compact, dome-shaped, 4 to 5 flowers per truss; corolla 1 to 1¼ in. (2-3 cm) diameter, ⅞ in. (2 cm) long, funnel-shaped, nearest to a colour paler than Yellow Group 2D, becoming almost translucent at margins, throat flushed very lightly with a colour slightly lighter than Yellow Group 4C. Flowering from May 4, 1978. (232)

Crowthorne (R. aberconwayi × R. souliei). (Raised, introduced and sent by The Crown Estate Commissioners, Crown Estate Office, The Great Park, Windsor, Berks.) **H.C.** May 10, 1978. Plant 5½ feet (1.65 m) high, 4¼ feet (1.28 m) spread, vigorous, upright, compact habit, very free flowering; leaves 3 in. (5 cm) long, 1½ in. (3.5 cm) wide, fairly dark, slightly glossy green. Flower truss 4½ in. (11.5 cm) diameter, 4 in. (10 cm) deep, compact, globular-shaped, 12 to 13 flowers per truss; corolla 2¼ in. (5.5 cm) diameter, 1⅜ in. (3 cm) long, very widely expanded, almost flat in shape, margins waved, white with a very faint flush of pink, upper lobe spotted with Red-Purple Group 59B. Flowering from May 9, 1978. (8)

'Doc' (R. yakushimanum × R. 'Corona'). (Raised and sent by Messrs John Waterer, Sons & Crisp Ltd, The Nurseries, Bagshot, Surrey; introduced by the Waterer Group.) **H.C.** June 1, 1978. Plant 2½ feet (70 cm) high, 2¾ feet (80 cm) spread, vigorous, upright, compact habit, free flowering; leaves 3¼ in. (8 cm) long, 1½ in. (3.5 cm) wide, medium dull green. Flower truss 3½ in. (8.5 cm) diameter, 3 in. (7.5 cm) deep, globular-shaped, 9 flowers per truss; corolla 1½ in. (3.5 cm) diameter, 1¼ in. (3 cm) long, funnel-shaped, margins waved, white, upper lobe spotted with a colour slightly paler than Red-Purple Group 68C. Flowering from May 28, 1978. (281)

EVERGREEN AZALEAS

Rhododendron 'Snow Hill' (R. Wadii × R. mucronatum). (Raised, introduced and sent by The Crown Estate Commissioners.) **A.M.** June 1, 1978. Plant 2 feet (6 0cm) high, 4 feet (1.2 m) spread, vigorous spreading habit; very free flowering; leaves 1¾ in. (4 cm) long, ¾ in. (1.5 cm) wide, medium dull green. Flower truss compact, 4 to 5 flowers per truss; corolla 2¾ in. (6.5 cm) diameter, 1¾ in. (4 cm) long, very fully expanded, funnel-shaped, white, with a blotch of pale greenish yellow. Flowering from May 30, 1978. (H.C. 1974.) (117)

Amendment

Rhododendron 'Star Shine' ((R. yakushimanum × 'Britannia') × (Loderi × R. yakushimanum)). A.M. May 5, 1977. The name of this rhododendron is registered as two words, and NOT as given on page 104 of *Rhododendrons 1977, with Magnolias and Camellias.*

AWARDS AT LONDON SHOWS

(Colour References are to the R.H.S. Colour Chart 1966)

CAMELLIAS 1978

Camellia 'Mandalay Queen' (reticulata 'Tali Queen' open pollinated). **A.M.** March 21, 1978, as a flowering plant for the cool greenhouse. Flowers rose form double, up to 16 cm across, Red Group 55B. Crossed and raised by Shade and Shadow Nursery (U.S.A.), exhibited by Dr J. A. Smart, Marwood Hill, Barnstaple, N. Devon.

Camellia 'Cornish Spring' (cuspidata × japonica 'Rosea Simplex') **P.C.** April 18, 1978, as a hardy flowering plant. Flowers semi-double, up to 6 cm across, Red Group 55C flushed 55B and with darker veining of 55A. Crossed, raised and exhibited by Miss Gillian Carlyon, Tregreham Camellia Nurseries, Par, Cornwall.

Camellia 'Vallee Knudsen' (saluenensis × reticulata 'Buddha') **P.C.** March 21, 1978, as a flowering plant for the cool greenhouse. Flowers semi-double, up to 12 cm across, Red Purple Group 62A. Crossed and raised by Howard Asper (U.S.A.), exhibited by Dr J. A. Smart, Marwood Hill, Barnstaple, N. Devon.

RHODODENDRONS 1978

Rhododendron 'Praecox' F.C.C. March 21, 1978, as a hardy flowering plant. Flowers usually in clusters of 2 or 3, occasionally 5 or 6-flowered. Corolla 5-lobed, widely funnel-shaped up to 1.8 cm (1¾ in.) long, and 4.5 cm (2 in.) across, Purple Group 77C, suffused with deeper Purple Group 77B. Stamens 10, irregular, of equal length, filaments purple, anthers brown. Style held free, purple; stigma purple-red. Calyx 5 deeply divided, scaly, hair-fringed lobes, to 2 mm. Leaves elliptic up to 4.5 cm (2 in.) long and 2.5 cm (1 in.) across, dark glossy green above, paler and sparingly scaly beneath. Raiser not recorded; exhibited by The Hon. H. E. Boscawen, The High Beeches, Handcross, Sussex.

Rhododendron bergii 'Papillon' Forrest 25914. **A.M.** April 4, 1978, as a hardy flowering plant. Flowers in clusters of 5 to 7. Corolla widely funnel-shaped, 5-lobed, up to 3.5 cm (1½ in.) long and 5 cm (2 in.) across, strongly flushed Red-Purple Group 73A, paler towards rim; reverse with darker bars of Red-Purple Group 74C; upper corolla spotted with Red-Purple Group 60B. Stamens 10, irregular, held within or of equal length; filaments white, anthers yellow-brown. Style held free. Calyx rudimentary, green, scaly. Leaves narrowly elliptic to elliptic up to 6.5 cm (2½ in.) long and 3 cm (1¼ in.) across, both surfaces lightly scaly. Collector George Forrest, exhibited by R. N. Stephenson Clarke, Borde Hill, Haywards Heath, Sussex.

Rhododendron 'Blue Chip' (R. 'Blue Diamond' × R. russatum) **A.M.** May 3, 1978, as a hardy flowering plant. Flowers in 5 to 7-flowered axillary clusters forming a firm, rounded terminal truss up to 8 cm (3¼ in.) across; flowers widely funnel-shaped. Corolla 5 deeply divided lobes, up to 2 cm (⅞ in.) long and 4.5 cm (2 in) across, Purple-Violet Group 82C, reverse barred Purple Group 78, lightly hairy towards base. Stamens 10, irregular, held free; filaments purple, anthers brown. Style held free, reddish-purple. Calyx rudimentary, green, scaly, hair-fringed. Leaves narrowly elliptic to elliptic, up to 5.5 cm (2¼ in.) long and 2 cm (⅞ in.) across, dark green above; paler, scaly reverse. Crossed and raised by A. F. George, exhibited by Hydon Nurseries Ltd., Hydon Heath, Godalming, Surrey.

Rhododendron 'Brass Rubber' (R. auriculatum × R. griersonianum) **A.M.** July 11, 1978, as a hardy flowering plant. Truss loose, 8 or 9-flowered, flowers widely funnel-campanulate. Corolla 7-lobed, white, irregularly suffused Red Group 55A, colouring more strongly concentrated in throat and towards edges of corolla; reverse Red Group 54A, densely covered with glutinous hairs. Stamens 12, irregular in length, held within; filaments red, anthers brown. Style held free. Style and stigma red. Calyx irregularly lobed, to 3 mm (1⅛ in.), red, densely hairy. Leaves narrowly elliptic, up to 15 cm (6 in.) long and 4.5 cm (2 in.) across, reverse lightly covered with reddish-brown woolly indumentum; leaf veins prominent. Crossed at Bodnant about 1938, raised and exhibited by Lord Aberconway and The National Trust, Bodnant, Tal-y-Cafn, Colwyn Bay, Denbighshire, North Wales.

Rhododendron 'Colonel Remy' ('Hawk × campylocarpum) **A.M.** May 22, 1978, as a hardy flowering plant. Trusses compact, up to 13 flowers per truss. Corolla 5-lobed, openly campanulate, up to 3.5 cm (1½ in.) long and 6 cm (2½ in.) across, Yellow Group 2D with stronger colouring to Yellow Group 2B on reverse. Stamens 11, irregular, equal or held within; filaments yellow; anthers brown. Style yellow-green, glandular; stigma green. Calyx 5 deeply divided lobes, to 6 cm (2½ in.) in length, green, fringed with red glandular hairs. Leaves lanceolate-ovate, dull green above, paler under-surface. Crossed, raised and exhibited by Edmund de Rothschild, Exbury, Southampton, Hants.

Rhododendron 'Cuff-link' (parentage unknown) **A.M.** April 18, 1978, as a flowering plant for the cool greenhouse. Trusses loose, 5- to 6-flowered. Corolla tubular campanulate, 5-lobed, Yellow Group 2D with mottled blotch of Green-Yellow Group 1A in upper throat. Reverse scaly, with red-purple flush along each joined sepal. Stamens 10, irregular, held within; filaments white, anthers creamy yellow. Style held within, yellowish scaly. Calyx rudimentary, green. Leaves oblanceolate to oblong-oblanceolate up to 9 cm (3½ in) long and 4 cm (1½ in.) across, dark glossy green and scaly above; reverse pale green and densely scaly. Origin unknown, exhibited by G. Gorer, Sunte House, Haywards Heath, Sussex.

Rhododendron 'Diamond Wedding' (yunnanense × davidsonianum) **A.M.** May 22, 1978, as a hardy flowering plant. Flowers terminal and axillary in the upper leaves forming a full rounded truss, up to 24 flowers per truss. Corolla 5-lobed, widely funnel-shaped, up to 3.5 cm (1½ in.) long and 6 cm (2½ in.) across, white, suffused Purple Group 75D, reverse occasionally to 75C and with light spotting of Orange-Red Group 34B in upper throat. Stamens 10, irregular, held free. Filaments white, anthers brown. Style white, held free. Calyx rudimentary, green. Leaves narrowly elliptic to elliptic, up to 6.7 cm ($2^{7}/_{10}$ in.) long and 2.4 cm (2 in.) across, upper surface a dark glossy green, reverse paler; both surfaces sparingly scaly. Crossed, raised and exhibited by Major A. E. Hardy, Sandling Park, Hythe, Kent.

Rhododendron 'Donald Stanton' (lochae × laetum) **A.M.** March 21, 1978, as a flowering plant for the cool greenhouse. Flowers pendulous, in clusters of 9-10, 5-lobed, tubular funnel-shape, Red Group 46C, exterior sparingly scaly. Calyx rudimentary, red, scaly. Stamens 10, regular, held within; filaments red, anthers dark brown. Style held within, red. Leaves elliptic, 8.5 cm (3½ in.) long and 5 cm (2 in.) across, glossy, dark green above, paler beneath, both surfaces sparingly scaly. Crossed and raised by D. M. Stanton of Wollongong, N.S.W., Australia; exhibited by The Director, Royal Botanic Gardens, Kew, Richmond, Surrey.

Rhododendron eclecteum 'Kingdom Come' KW6869. **A.M.** April 4, 1978, as a hardy flowering plant. Flowers in loose trusses of 5 to 7. Corolla tubular-campanulate, up to 6 cm (2½ in.) long and 6.5 cm ($2^{3}/_{5}$ in.) across, 5-lobed, white flushed Yellow-Green Group 150D with slight spotting of red-purple in upper throat. Stamens 10, irregular, held within; filaments white at base, flushing to red-purple, with anthers black. Style held free. Ovaries prominent. Calyx 5 joined irregular reflexed lobes, to 6 mm, greenish white, darkening to red-purple at base. Leaves broadly elliptic to obovate, up to 8 cm (3½ in.) long and 5 cm (2 in.) across, dark green above, paler beneath, free of indumentum; petioles broad, flattened. Collected by F. Kingdon Ward, exhibited by R. N. Stephenson Clarke.

Rhododendron iodes 'White Plains' A.M. May 3, 1978, as a hardy flowering plant. Truss firm, rounded, 17- or 18-flowered; flowers funnel-campanulate. Corolla 5-lobed, up to 4 cm (1¾ in.) long and 5 cm (2 in.) across, white, reverse shading to Yellow-Green Group 150D at base of corolla; upper throat heavily spotted Red-Purple Group 57B. Stamens 10, irregular, held within; filaments white, hairy towards base, anthers dark brown. Style of about equal length, yellow-green. Calyx 5 joined deeply divided lobes, up to 3 cm (1¼ in.) in length, green. Leaves narrowly elliptic to lanceolate, up to 9 cm (3½ in.) long and 3 cm (1¼ in.) across, upper surface dark, dull green; reverse heavily felted with rust-coloured indumentum; mid-rib prominent. Collected by George Forrest, raised by Col. S. R. Clarke and exhibited by R. N. S. Clarke.

Rhododendron maddenii 'Ascreavie' (L & S 1141) **A.M.** May 22, 1978, as a flowering plant for the cool greenhouse. Trusses 3- to 5-flowered. Corolla widely tubular, 5-lobed, up to 6 cm (2½ in.) long and 11.5 cm (4½ in.) across, fragrant, white; reverse flushed Red-Purple Group 63 B-C. Stamens 16, irregular, of equal length or held within; filaments flushed; anthers light brown. Style scaly, flushed red-purple, held free. Calyx 5 deeply divided lobes, up to 1.2 cm (½ in.) long, pale green, scaly. Leaves narrowly elliptic to oblanceolate, up to 13 cm (5⅛ in.) long and 4.6 cm (2⅞ in.) across, dark green above, lightly scaly; reverse pale green, densely covered with reddish-brown scales. Collected by Ludlow and Sherriff, raised and exhibited by Major A. E. Hardy, Sandling Park, Hythe, Kent.

Rhododendron 'Marion Street' ('Stanley Davis' × *yakushimanum*) A.M. May 3, 1978, as a hardy flowering plant. Truss rounded, 14- to 16-flowered; flowers widely funnel-campanulate. Corolla 5-lobed, up to 4 cm (1½ in.) long and 5 cm (2 in.) across; white in throat, flushed shades of Red Group 56, reverse stained Red Group 55B, and with green spotting in upper throat. Stamens 10, irregular, held within, filaments white, anthers brownish-yellow. Style of equal length or held free, flushed red. Calyx rudimentary, green, pedicels and calyx densely covered with soft fine hairs. Leaves narrowly elliptic to elliptic, 7.5 cm (3 in.) long and 3 cm (1¼ in.) across, upper surface dark, pale green; reverse felted, brown indumentum. Crossed and raised by John Street, exhibited by Frederick Street, Heathermead Nursery, West End, Woking, Surrey.

Rhododendron 'Mrs Henry Shilson' (*arboreum*? × *barbatum*?) A.M. March 13, 1973, as a hardy flowering plant. Truss loose, rounded, 15-16 flowered. Corolla widely funnel-campanulate, 5.5 cm (2¼ in.) long and 6 cm (2⅜ in.) across; white, suffused Red-Purple Group 68C, with deeper veinal colouring of Red-Purple Group 68A. Stamens 10, irregular in length, held within, filaments white, anthers dark brown; style short of equal length, stigma red/orange. Calyx rudimentary, green. Leaves narrowly elliptic, up to 11 cm (4½ in.) long and 4.5 cm (1¾ in.) across, dark green above, silvery grey below. Raised by Samuel Smith, exhibited by The Hon. H. E. Boscawen.

Rhododendron 'Razorbill' (spinuliferum × unknown) **A.M.** May 3, 1978, as a hardy flowering plant. Crossed, raised and exhibited by P. A. Cox, Glendoick Gardens Ltd, Perth. (For description see *Rhododendrons 1976*, page 80.)

Rhododendron 'Snipe' (pemakoense × davidsonianum) **A.M.** April 29, 1975, as a hardy flowering plant. Flowers in loose 3- to 5-flowered terminal clusters; flowers openly funnel-shaped. Corolla 5-lobed, up to 1.5 cm (⅜ in.) long and 4.5 cm (1¾ in.) across; white, varyingly suffused with pale shades of Purple Group 77D and peripheral shading of Red-Purple Group 72C; upper throat lightly spotted Red-Purple Group 66B. Reverse flushed and barred with paler shades of Red-Purple Group 72C. Stamens 10, irregular, held free, filaments white, anthers brown. Style white, held free. Calyx 5-lobed, to 2 cm (⅞ in.) across, scaly, hair-fringed. Leaves narrowly obovate to oblanceolate, up to 3 cm (1¼ in.) long and 1.5 cm (⅜ in.) across, light glossy green, scaly above, paler and scaly beneath. Raised by P. A. Cox, exhibited by Capt. Collingwood Ingram, The Grange, Benenden, Cranbrook, Kent.

Rhododendron smithii 'Fleurie' A.M. April 4, 1978, as a hardy flowering plant. Trusses firm, rounded, comprising up to 25, 5-lobed, tubular-campanulate flowers, Red Group 46C. Stamens 10, irregular, held within; filaments white, anthers dark brown. Style greenish, held within. Nectaries prominent. Calyx 5 deeply divided lobes to 8 mm, glandular hairy at base. Leaves oblong-lanceolate, margins reflexed, up to 15 cm (6 in.) long and 5.5 cm (2¼ in.) across. Upper surface dark green with impressed main veins, reverse lightly covered with loose, brown woolly indumentum. Petioles and stems strongly bristly. Collected by T. J. Booth, exhibited by R. N. Stephenson Clarke.

Rhododendron sutchuenense 'Seventh Heaven' **A.M.** March 21, 1978, as a hardy flowering plant. Trusses 14-16 flowered, up to 18 cm (7¼ in.) across. Corolla widely bell-shaped, 8 cm (3¼ in.) long and 8 cm (3¼ in.) across, white in throat, suffused Red-Purple Group 69A with numerous small spots of Red-Purple Group 61B in upper throat. Base of outer corolla creamy-white. Stamens 16, irregular, brown anthered, held within. Style of equal length. Calyx 5 joined segments, up to 4 mm in length, pale green, each segment tip flushed red-purple. Pedicels strongly flushed red-purple. Leaves oblong-oblanceolate, up to 23 cm (9¼ in.) long and 7.5 cm (3 in.) across, dark green above, paler beneath. Collected by E. H. Wilson (prob. Wilson 1232), raised and exhibited by R. N. Stephenson Clarke.

Rhododendron tosaense 'Ralph Clarke' **A.M.** May 22, 1978, as a hardy flowering plant. A much-branched evergreen or semi-evergreen azalea, flowers singly or in pairs. Flowers funnel-shaped, up to 1.5 cm (¾ in.) long and 3.5 cm (1½ in.) across, Red-Purple Group 72C with some deeper staining of Red-Purple Group 72B; reverse corolla fading at base through Red-Purple Group 57D to white. Stamens 8, irregular, held free; filaments flushed red-purple; anthers purple-green. Style greenish, held free; stigma green. Calyx 5 deeply divided lobes, green, grey-pubescent. Collected by E. H. Wilson, raised by Colonel Stephenson Clarke, exhibited by The Countess of Rosse and The National Trust, Nymans Garden.

Rhododendron 'Anna Baldsiefen' ('Pioneer' selfed) **P.C.** April 4, 1978, as a hardy flowering plant. Flowers axillary, in clusters of 1 to 3, often forming short dense terminal racemes. Corolla funnel-shaped, up to 2 cm (⅘ in.) long and 3 cm (1⅕ in.) across, white in throat, variably flushed and stained with Red-Purple Group 66B and C. Stamens 10, irregular, held within or of equal length. Filaments white, anthers red-purple. Style held free. Calyx rudimentary, green, scaly. Leaves elliptic, upper surface dark glossy green; reverse paler; both surfaces lightly scaly. Crossed and raised by W. Baldsiefen (U.S.A.), exhibited by Crown Estate Commissioners, The Great Park, Windsor, Berks.

Rhododendron cinnabarinum subsp. tamaense 'Triangle' (KW21003) **P.C.** May 22, 1978, as a flowering plant for the cool greenhouse. Flowers terminal or axillary in upper leaves forming a full but loose truss of up to 24-26 flowers. Corolla 5-lobed, openly campanulate, up to 2.4 cm (1 in.) long and 3.8 cm (1½ in.) across, white deep in throat, flushed shades of Purple Group 75 with slight spotting of Red-Purple Group 60 in upper throat. Stamens 10 or 12, irregular, of equal length or held within; filaments white, anthers brown. Style white, held free. Calyx green, rudimentary, scaly. Leaves elliptic, up to 3 cm (1¼ in.) long and 5 cm (2 in.) across, upper surface dark dull green, reverse glaucous, lightly scaly. Collected by F. Kingdon Ward, raised and exhibited by Major A. E. Hardy.

Rhododendron 'Indiridiva' ('Crest' × 'Snow Queen') **P.C.** May 22, 1978, as a hardy flowering plant. Trusses firm, rounded, up to 10 flowers per truss. Corolla 7-lobed, widely funnel-campanulate, up to 5.5 cm (1⅘ in.) long and 10 cm (4 in.) across, Yellow Group 2D, deepening in throat to Yellow Group 2B with markings of Yellow-Green Group 152 and 153 in upper throat. Stamens 14-16, irregular, held within; filaments yellow-green, anthers light brown. Style of equal length, yellow-green; stigma green. Calyx rudimentary, glandular-hairy, green. Leaves oblong, up to 15.5 cm (6¼ in.) long and 7.3 cm (3 in.) across, dull above, pale green reverse. Crossed, raised and exhibited by Edmund de Rothschild.

Rhododendron 'Silver Wedding' (edgeworthii × cubittii) **P.C.** May 22, 1978, as a hardy flowering plant. Truss loose, usually 3-flowered. Corolla 5-lobed, openly funnel-shaped, up to 6.5 cm (2½ in.) long and 10 cm (5 in.) across, white, lightly flushed shades of Red Group 53 and Greyed-Purple Group 186. Upper throat spotted and suffused Greyed-Yellow Groups 160 and 162. Stamens 10, irregular, held within; filaments white, anthers dark brown. Style of equal length, scaly towards base, yellow-green. Calyx 5 irregular lobes up to 8 mm long, hair-fringed, flushed red. Leaves narrowly elliptic, up to 11 cm (4½ in.) long and 4 cm (1⅘ in.) across, upper surface glossy, reverse paler, lightly scaly. Crossed and raised by G. A. Hardy, exhibited by Major A. E. Hardy.

ADDITIONS TO THE INTERNATIONAL RHODODENDRON REGISTER 1977/78

The following list contains names registered during the period 16 July 1977/15 July 1978.

Alexander Evergreen Azalea — (previously considered to be unacceptable (see 1975 Year Book) but now a valid and accepted name.) *nakahari* × Kin-no-sai). Truss 1-flowered. Corolla Nickerson 5R 6/11 - 5/13 with light spotting on 3 lobes 5R 4/12. Int. 1970. Crossed (1962) by Dr Tsuneshige Rokujo, raised, introduced and registered by Mary Louisa B. Hill, Vineyard Haven, Mass.

Alfred Coates — (*discolor* × *eriogynum*). Truss approx. 13-flowered. Corolla Rose Madder 23/2. Crossed (c. 1938), raised by Alfred Coates, introduced and registered (1977) by The Director, Royal Botanic Gardens, Kew, Wakehurst Place, Sussex.

Amber Gem — (Fawn × Jalisco). Truss approx. 10-flowered. Corolla Red Group 49C shading to between Orange Group 25C & D, with strong, red-orange fan-shaped sector; buds Red Group 38A-B. Crossed (1959) by Del W. James, raised, introduced and registered (1977) by Arthur and Maxine Childers, Rhodoland Nursery, Oregon.

Andrew Luettgen Evergreen Azalea — (both parents unnamed). Truss 2- to 3-flowered. Corolla white. Crossed (1968), raised, introduced and registered (1978) by W. David Smith, Shangri-la Gardens, Spring Grove, Pennsylvania.

Anna Kehr Evergreen Azalea — (Triumph × Rosebud). Truss 1- to 3-flowered. Corolla Red Group 55C. Crossed (1961), raised, introduced (1978) and registered by Dr August E. Kehr, Silver Spring, Maryland.

Annie Dring — (Loderi King George × Corona). Truss 14-flowered. Corolla Red-Purple Group 57C-62A, basal blotch of Greyed-Purple Group 187A to Red Group 50A. Crossed (1967) by W. V. Joslin, U.S.A., raised and introduced by Harry Dring, B.C., Canada, and registered (1977) by Mrs Lillian Hodgson, Vancouver, British Columbia.

Ascreavie — (form of *maddenii*). Truss 3- to 5-flowered. Corolla White, reverse flushed Red-Purple 63B-C. Collected by Ludlow and Sherriff (L & S 1141), raised, introduced and registered (1978) by Major A. E. Hardy, Hythe, Kent. A.M. 1978.

Barbara Coats Azalea — (*kaempferi* × Nanki Poo). Corolla magenta pink. Crossed (1963) and raised by A. F. George, introduced (1978) and registered by Hydon Nurseries Ltd., Surrey.

Barryb — (*catawbiense* × *maximum*). Truss 14-flowered. Corolla between strong reddish purple 2.5 RP 4/10 (Nickerson) and deep reddish purple 2.5 RP 3/8 with vivid greenish yellow 7.5 Y 8/12 dorsal blotch; reverse deep reddish purple 2.5 RP 3/8; buds deep reddish purple 2.5 RP 3/8. Crossed (1968), raised, introduced and registered (1978) by W. David Smith, Shangri-la Gardens, Pennsylvania.

Barry Bittinger Evergreen Azalea

(both parents unnamed). Truss 2- to 3-flowered. Corolla white. Crossed (1968), raised, introduced and registered (1978) by W. David Smith, Shangri-la Gardens, Pennsylvania.

Bess Hallock Evergreen Azalea

(parentage unknown). Truss 2- to 3-flowered. Corolla Spiraea Red 025/1 (H.C.C.) with very few darker spots. Crossed (1965), raised, introduced (1976) and registered (1977) by G. Albert Reid, Linwood, New Jersey.

Big Savage Red Azalea

(Mars selfed). Truss 16-flowered. Corolla Red-Purple Group 57D, with white dorsal flare containing a few spots; reverse with darker central lobe veins. Crossed (?1956) and raised by Henry Yates, introduced, named and registered (1977) by Mrs Henry Yates, Frostburg, Maryland.

Bill Browning

(form of *mallotum*). Farrer 815. Truss 12-flowered. Corolla crimson. Collector Farrer. Raised and introduced (1933) by Col. S. R. Clarke, registered (1978) by R. N. S. Clarke, Borde Hill, Sussex. A.M. 1933.

Brass Rubber

(*auriculatum* × *griersonianum*). Truss 8- or 9-flowered. Corolla white, irregularly suffused Red Group 55A, colouring more strongly concentrated in throat and towards edges of corolla; reverse Red Group 54A, densely covered with glutinous hairs. Crossed at Bodnant about 1938, raised, introduced (1978) and registered (1978) by Lord Aberconway and The National Trust, Bodnant, North Wales. A.M. 1978.

Colehurst

(*houlstonii* × Van Nes Sensation). Truss 14-flowered. Corolla Red Group 56A with creamy white centre. Crossed, raised, introduced and registered (1978) by V. J. Boulter & Sons, Victoria, Australia.

Colonel Rémy

(Hawk × *campylocarpum*). Truss up to 13-flowered. Corolla Yellow Group 2D with stronger colouring to Yellow Group 2B on reverse. Crossed, raised, introduced and registered (1978) by Edmund de Rothschild Exbury, Hants. A.M. 1978.

Concord

(*yakushimanum* × The Master). Corolla white with green blotch in upper throat. Crossed (1966) by A. F. George, raised, introduced (1978) and registered by Hydon Nurseries Ltd., Surrey.

Crown of Gold

(both parents unnamed). Truss 8-flowered. Corolla Red Group 36B, throat Chartreuse Yellow. Crossed (1966), raised, introduced and registered (1977) by Mrs Halsey A. Frederick, Jr., Bryn Mawr, Pennsylvania.

Cuff-link

(parentage unknown). Truss 5- to 6-flowered. Corolla Yellow Group 2D with mottled blotch of Green-Yellow Group 1A in upper throat. Origin unknown. Raised, introduced and registered (1978) by Geoffrey Gorer, Haywards Heath, Sussex. A.M. 1978.

Desert Sun

(*houlstonii* × Veta). Truss 10-flowered. Corolla Red Group 52B, centre Yellow-Orange Group 23C. Crossed, raised, introduced and registered (1978) by V. J. Boulter & Sons, Victoria, Australia.

Diamond Wedding

(*yunnanense* × *davidsonianum*). Truss to 24-flowered. Corolla White suffused Purple Group 75D, reverse occasionally to 75C and with light spotting of Orange-Red Group 34B in upper throat. Crossed, raised, introduced (1978) and registered (1978) by Major A. E. Hardy, Kent. A.M. 1978.

Donald Stanton

(*lochae* × *laetum*). Truss 9- to 10-flowered. Corolla Red Group 46C. Crossed and raised by D. M. Stanton of Wollongong, N.S.W., Australia, introduced and registered (1978) by The Director, Royal Botanic Gardens, Kew. A.M. 1978.

Dress Parade

(parentage unknown). Truss 9-flowered. Corolla Red-Purple Group 63D, with chartreuse throat. Crossed (1964) by Roy Kersey, raised, introduced and registered (1977) by Mrs Halsey A. Frederick, Jr., Pennsylvania.

Emma Reid Evergreen Azalea

(parentage unknown). Truss 3-flowered. Corolla China Rose 024/1 (H.C.C.) with some darker spotting on upper lobes. Crossed (1966), raised, introduced (1976) and registered (1977) by G. Albert Reid, Linwood, New Jersey.

Ethel-Mae

(*chapmanii* × *mucronulatum*). Terminal inflorescence of 3-4 buds, each usually 10- to 12-flowered. Corolla Red-Purple Group 68C with 70A blotch and spotting in dorsal lobe sector. Crossed (1953), raised, introduced (1965) and registered (1977) by Charles Herbert, Phoenixville, Pennsylvania.

Faith Henty

(Elizabeth × Earl of Athlone). Truss 5- to 7-flowered. Corolla Red Group 46C. Crossed, raised, introduced and registered (1978) by V. J. Boulter & Sons, Victoria, Australia.

Fleurie

(form of *smithii*). Truss 25-flowered. Corolla Red Group 46C. Collected and introduced by T. J. Booth, raised and registered (1978) by R. N. Stephenson Clarke, Borde Hill, Sussex. A.M. 1978.

Fran Labera

(Helen Everitt × unnamed seedling). Truss 8- to 11-flowered. Corolla white to cream or slightly yellow at times, with a few pea green veins extending into throat. Crossed (1961), raised, introduced (1977) and registered (1977) by Henry and Selma Fuller, Easton, Ct.

Helene Huber

(probably *fortunei* hybrid × Dexter hybrid). Truss 14- to 16-flowered. Corolla Red-Purple Group 73B with Greyed-Yellow 162B dorsal lobe blotch and spotting. Crossed (1925-42) by Charles O. Dexter, raised by Swathmore College and Charles Herbert, introduced (1970) and registered by Charles Herbert, Phoenixville, Pennsylvania.

Hydon Snowflake

(*microleucum* × Chikor). Truss 3-flowered. Corolla white. Crossed (1965) and raised by A. F. George, introduced (1978) and registered by Hydon Nurseries Ltd., Surrey.

Indiridiva

(Crest × Snow Queen). Truss up to 10-flowered. Corolla Yellow Group 2D, deepening in throat to Yellow Group 2B with markings of Yellow-Green Group 152 and 153 in upper throat. Crossed, raised, introduced and registered (1978) by Edmund de Rothschild, Exbury, Hants. P.C. 1978.

Jane Geiselman Evergreen Azalea

(unnamed hybrid × Marjorie). Truss 2- to 3-flowered. Corolla strong purplish pink 7.5 RP 7/10 (Nickerson) with slight dorsal yellowish cast in throat; reverse deep purplish pink 7.5 RP 6/12; buds deep purplish pink 7.5 RP 6/12. Crossed (1967), raised, introduced and registered (1978) by W. David Smith, Shangri-la Gardens, Pennsylvania.

Jean Leppo

(*catawbiense* × *maximum*). Truss 17-flowered. Corolla moderate pink 10 RP 8/5 (Nickerson) with very slight strong yellow SY 7/10 blotch; reverse strong purplish pink 7.5 RP 7/10; buds strong purplish red 7.5 RP 4/11. Crossed (1969), raised, introduced and registered (1978) by W. David Smith, Shangri-la Gardens, Pennsylvania.

Jean Read Azalea

(*kaempferi* × Princess Ida). Corolla pink; red eye. Crossed (1963) and raised by A. F. George, introduced (1978) and registered by Hydon Nurseries Ltd., Surrey.

July Jester Deciduous Azalea

(*prunifolium* S. D. Coleman × *cumberlandense* Scarlet Salute). Truss 5- to 6-flowered. Corolla Red Group 40B with indistinct Orange-Red Group 30B blotch. Crossed (1961), raised, introduced and registered (1978) by Dr David G. Leach, North Madison, Ohio.

July Jewel Deciduous Azalea

(*prunifolium* S. D. Coleman × *cumberlandense* Scarlet Salute). Truss 5- to 7-flowered. Corolla Orange-Red Group 33A with fugitive Orange-Red Group 30A blotch. Crossed (1961), raised, introduced and registered (1978) by Dr David G. Leach, Ohio.

July Jingle Deciduous Azalea

(*prunifolium* S. D. Coleman × *arborescens*). Truss 6- to 7-flowered. Red Group 54D, suffused Red 52C in centre of lobes, with faint pale orange dorsal blotch. Crossed (1961), raised, introduced and registered (1978) by Dr David G. Leach, Ohio.

July Jubilation Deciduous Azalea

(*prunifolium* S. D. Coleman × Cream Puff). Truss 6- to 7-flowered. Corolla Red Group 40D, flushed Red 40C, with diffuse Orange Group 25C dorsal blotch. Crossed (1961), raised, introduced and registered (1978) by Dr David Leach, Ohio.

July Julep Deciduous Azalea

(*prunifolium* S. D. Coleman × Cream Puff). Truss 6- to 7-flowered. Corolla Red Group 40D (ageing to Orange-Red Group 32D), with diffuse dorsal orange suffusion. Crossed (1961), raised, introduced and registered (1978) by Dr David G. Leach, Ohio.

Kathryna

(*catawbiense* × *maximum*). Truss 23-flowered. Corolla strong purplish red 7.5 RP 5/12 (Nickerson) with heavy dorsal blotch dark red 2.5 RP 3/7 with peripheral spotting; reverse moderate purplish red 5 RP 4/10; buds deep purplish red 7.5 RP 3/9. Crossed (1967), raised, introduced and registered (1978) by W. David Smith, Shangri-la Gardens, Pennsylvania.

Kingdom Come

(form of *eclecteum* KW6869). Truss 5- to 7-flowered. Corolla White, flushed Yellow-Green Group 150D with slight spotting of red-purple in upper throat. Collected and introduced (1927) by F. Kingdon Ward, raised by Col. S. R. Clarke, and registered (1978) by R. N. Stephenson Clarke. A.M. 1978.

King's Destiny

(unknown seedling × Purple Splendour). Truss 11-flowered. Corolla Purple Group 77B, dark purple blotch and spotting above blotch; throat dark purple. Crossed (1966), raised, introduced and registered (1977) by Mrs Halsey A. Frederick, Jr., Pennsylvania.

King's Favor

(Purple Splendour × A. Bedford). Truss 12-flowered. Corolla Purple Group 78B, with golden yellow spotted blotch on dorsal lobe; buds dark purple. Crossed (1966), raised, introduced and registered (1977) by Mrs Halsey A. Frederick, Jr., Pennsylvania.

Len Beer

(form of *glaucophyllum*). Truss 4- to 8-flowered. Corolla White Group 155A. Collected (1971) Beer, Lancaster & Morris Expedition, Nepal, raised, introduced and registered (1977) by P. A. Cox, Glendoick Gardens Ltd., Perth.

Lockington Pride

(Morio × Mrs E. C. Stirling). Truss 13-flowered. Corolla Red-Purple Group 65C; red centre and red spots on upper lobe. Crossed, raised, introduced and registered (1978) by D. Dosser, Droumana, Victoria, Australia.

Luise Verey

(*yakushimanum* × Glamour). Truss 17- to 18-flowered. Corolla Red-Purple Group 58C; reverse 58B; crimson on upper throat. Crossed (1968) by A. F. George, raised, introduced (1978) and registered by Hydon Nurseries Ltd., Surrey.

Marg Sawers

(Morio × Mrs E. C. Stirling). Truss 18-flowered. Corolla Red Group 55C. Crossed, raised, introduced and registered (1978) by D. Dosser, Victoria, Australia.

Midnight

(Cup Day × Purple Splendour). Truss 16-flowered. Corolla Red-Purple Group 71D, heavily spotted with red on upper lobe. Crossed, raised, introduced and registered (1978) by K. Van de Ven, Olinda, Victoria, Australia.

Millie Mac Deciduous Azalea

(mutant form of *austrinum*). Truss 17- to 20-flowered. Corolla Orange-Red Group 34B, middle area of lobes Yellow-Orange Group 17B; white margin; upper lobe middle area Yellow-Orange Group 17A. Collected (1950), mutant discovered (1966), raised, introduced and registered (1977) by Floyd T. McConnell, Mobile, Alabama.

Ming Toy

(Medusa × Crest). Truss 7- to 9-flowered. Corolla Yellow Group 6C - 6D, clear and transluscent, occasional slight orange shading where lobes overlap; buds Greyed-Orange Group 170A. Crossed (1962), raised, introduced and registered (1977) by Arthur and Maxine Childers, Rhodoland Nursery, Vida, Oregon.

Narnia

(*aurigeranum* × *zoelleri*). Truss 8- to 9-flowered. Corolla Yellow Orange bicolour; opens with Buttercup Yellow 5/1 (H.C.C.) throat, lobes Orange 12/1, tips Nasturtium Red 14; matures to Saffron Yellow 7 throat, lobes and tips Orange 12/1; reverse all yellow. Crossed (1968) by Tom Lelliott, Australia, raised by Strybing Arboretum and William A. Moynier, introduced (1975) and registered (1978) by William A. Moynier, Los Angeles, California.

One-o-One Knaphill Azalea	(Cecile selfed). Truss 1-flowered. Corolla brighter than Red Group 43D, marbled or veiled Red Group 43C; Yellow-Orange Group 23A blotch on dorsal two lobes. Crossed (1955), raised, introduced and registered (1977) by Arthur and Maxine Childers, Rhodoland Nursery, Oregon.
Pamela Miles Azalea	(*kaempferi* × Tit-Willow). Corolla pale pink. Crossed (1963) and raised by A. F. George, introduced and registered by Hydon Nurseries Ltd., Surrey.
Papillon	(form of *bergii*, Forrest 25914). Truss 5- to 7-flowered. Corolla strongly flushed Red-Purple Group 73A, paler towards rim; reverse with darker bars of Red-Purple Group 74C; upper corolla spotted with Red-Purple Group 60B. Collected and introduced (1925/1926) by George Forrest, raised by Col. S. R. Clarke, and registered (1978) by R. N. Stephenson Clarke, Borde Hill, Sussex. A.M. 1978.
Pia Lehmann	(*spinuliferum* × *cubittii*). Truss 2- to 4-flowered. Corolla greenish-white at base of tube, Yellow Group 4D shading through white to rims Red Group 54D - 54B; yellow and pink spotting in upper throat. Crossed (1964) by A. F. George, raised, introduced (1978) and registered by Hydon Nurseries Ltd., Surrey.
Pieces of Gold	(both parents un-named). Truss 10-flowered. Corolla Orange Group 27C with pink overcast, light brownish spotting on inner half of dorsal lobe; throat chartreuse. Crossed (1968), raised, introduced and registered (1977) by Mrs Halsey A. Frederick, Jr., Pennsylvania.
Pistil Packin Mama Deciduous Azalea	(form of *occidentale* (a pistillate form of the species occurring in the wild)). Truss 10- to 12-flowered. Corolla Yellow-Green Group 145C, slightly tinged pink, style Red Group 53B. Collected (1974), introduced (1975) and registered (1977) by Howard J. Slonecker, Milwaukie, Oregon.
Pistil Pete Deciduous Azalea	(form of *occidentale* (a pistillate form of the species occurring in the wild)). Truss 17- to 21-flowered. Corolla Yellow-Green Group 150D; style Red Group 54B. Collected (1974), introduced (1975) and registered (1977) by Howard J. Slonecker, Milwaukie, Oregon.
Polly Clarke	((*socrianum* × Rima) × Crest). Truss 10-flowered. Corolla Yellow Group 3D; deeper in the bud. Crossed (1964) by A. F. George, raised, introduced (1978) and registered by Hydon Nurseries Ltd., Surrey.
Pomo Princess	(probably *grande* × *arboreum*). Truss 13-flowered. Corolla Red Group 52B fading to 52D at margins and to White Group 155D in throat, with single Greyed-Purple Group 187B nectary, some 53D spotting. Seed ex. Wisley (1956), raised by John S. Druecker and Eugene R. German, introduced and registered (1978) by Eugene R. German, Fort Bragg, California.

Pride of Kings — (A. Bedford × Purple Splendour). Truss 9-flowered. Corolla Red-Purple Group 72B with Brown Group 200A blotch on dorsal lobe; satiny royal purple throat; edging and reverse Purple Group 79A. Crossed (1967), raised, introduced and registered (1977) by Mrs Halsey A. Frederick, Jr., Pennsylvania.

Ralph Clarke Evergreen or semi-evergreen Azalea — (form of *tosaense*). Flowers singly or in pairs. Corolla Red-Purple Group 72C with some deeper staining of Red-Purple 72B; reverse fading at base through Red-Purple Group 57D to white. Collected by E. H. Wilson, raised by Col. Stephenson Clarke, introduced and registered (1978) by The Countess of Rosse and The National Trust, Nymans Garden, Sussex.

Return to Paradise — (Sappho × un-named (identity unknown)). Truss 16-flowered. Corolla White Group 155D with golden tan spotting on dorsal lobe. Crossed (1966), raised, introduced and registered (1977) by Mrs Halsey A. Frederick, Jr., Pennsylvania.

Rhodoland's Silver Mist — (form of *yakushimanum*). Truss 11- to 13-flowered. Corolla White with green spotting on dorsal lobe. Seed collected (1961) on Yakushima, Japan, by Dr. Frederick Serbin. Raised, introduced and registered (1977) by Arthur and Maxine Childers, Rhodoland Nursery, Oregon.

Sally Fuller — (Helen Everitt × un-named seedling). Truss 7-flowered. Corolla white with a hint of rose; buds light pink. Crossed (1961), raised, introduced (1977) and registered (1977) by Henry and Selma Fuller, Easton.

Salmon Jubilee — (Jock × ?). Truss 5- to 9-flowered. Corolla soft scarlet buds turning to salmon as flower opens. Crossed (1965), raised, introduced (1977) and registered (1977) by Lady Marion Philipps, Picton Castle, S. Wales.

S. D. Coleman — (form of *prunifolium*). Truss 5- to 6-flowered. Corolla Red Group 43B. Origin unknown. Raised by S. D. Coleman and Dr David G. Leach, introduced 1967 (as species) and registered (1978) by Dr David G. Leach, North Madison, Ohio.

Notes:

(i) The use of initials for cultivar names published after January 1st, 1959 is not recommended under the Horticultural Code. However, Dr Leach has pointed out that S. D. Coleman (scholar of native azaleas, from Fort Gaines, Georgia, U.S.A.) was never known by the names Stephen Daniel, or Dan, but always as "S. D." In view of this it has been agreed that it would be appropriate to make an exception in this particular case, the initials "S. D." being treated as the equivalent of a Christian name, in accordance with the practice of calling Mr Coleman "S. D." during his lifetime.

(ii) The name 'S. D. Coleman' was first registered in 1956 by W. G. Leach (see Register) for an azalea never distributed, the only plant/stock since destroyed by fire, and the entry should now be amended as above.

Seventh Heaven — (form of *sutchuenense*) (prob. Wilson 1232). Truss 14- to 16-flowered. Corolla white in throat, suffused Red-Purple Group 69A with numerous small spots of Red-Purple Group 61B in upper throat; base of outer corolla creamy-white. Collected and introduced by E. H. Wilson, raised and registered (1978) by R. N. Stephenson Clarke, Borde Hill, Sussex. A.M. 1978.

Shamrock — (*keiskei* (dwarf form) × *hanceanum* (Nanum Group)). Truss 8- to 9-flowered. Corolla Yellow-Green Group 150c with slight Yellow Group 144c spotting. Crossed (1971), raised, introduced (1978) and registered (1978) by Dr Robert L. Ticknor, North Willamette Experiment Station, Oregon State University.

Silver Jubilee — (Mrs W. C. Slocock × Coronation Day). Truss 14-flowered. Corolla Yellow Group 2D fading to Green-White 157B-C; crimson markings in upper throat. Crossed (1967) by A. F. George, raised, introduced (1978) and registered by Hydon Nurseries Ltd., Surrey.

Silver Wedding — (*edgeworthii* × *cubittii*). Truss 3-flowered. Corolla White, lightly flushed shades of Red Group 53 and Greyed-Purple Group 186; upper throat spotted and suffused Greyed-Yellow Group 160 and 162. Crossed, raised, introduced and registered (1978) by G. A. Hardy, Hythe, Kent. P.C. 1978.

Snipe — (*pemakoense* × *davidsonianum*). Corolla white, varyingly suffused with pale shades of Purple Group 77D and peripheral shading of Red-Purple Group 72C; upper throat lightly spotted Red-Purple Group 66B. Reverse flushed and barred with paler shades of Red-Purple Group 72C. Raised, introduced (1975) and registered (1978) by P. A. Cox, Glendoick Gardens Ltd., Perth. A.M. 1975.

Spring Snow — (*chrysanthum* × *metternichii* var. *pentamerum*). Truss 7- to 10-flowered. Corolla white, no markings; lilac pink streak on centre reverse of lobes, disappears with age. Crossed (1952, University of Washington Arboretum), raised, introduced (1960) and registered (1977) by Brian O. Mulligan, Kirkland, Washington State.

Swen — (*yakushimanum* × Mars). Truss approx. 15-flowered. Corolla between Red-Purple Group 57A and 57B with white flare on dorsal lobe, slowly fading in centre to white but retaining broad edging and median lines of original colour; reverse Red-Purple Group 57D with darker 57A-B median lines and edging. Crossed (1970) by Willard Swenson, raised by Willard Swenson and Arthur and Maxine Childers, introduced and registered (1977) by Arthur and Maxine Childers, Rhodoland Nursery, Oregon.

Torcia — (Knaphill Azalea) (Cecile selfed). Truss 13-flowered. Corolla Red Group 52D, lightly veined 52B, shading at extreme lobe tip to Orange-Red Group 35D; complete dorsal lobe Orange 25A, lightening on outer edges to Yellow-Orange Group 23A. Reverse lighter of same colours. Crossed (1955), raised, introduced and registered (1977) by Arthur and Maxine Childers, Rhodoland Nursery, Oregon.

Touch of Gold — (un-named (identity unknown) × un-named (identity unknown)). Truss 7-flowered. Corolla Orange Group 27C with golden chartreuse throat. Crossed (1966), raised, introduced and registered (1977) by Mrs Halsey A. Frederick, Jr., Bryn Mawr, Pennsylvania.

Triangle — (form of *cinnabarinum* subsp. *tamaense*). Truss 24- to 26-flowered. Corolla White deep in throat, flushed

	shades of Purple Group 75, slight spotting Red-Purple Group 60 in upper throat. Collected by F. Kingdon-Ward (KW. 21003), raised, introduced and registered (1978) by Major A. E. Hardy, Hythe, Kent. P.C. 1978.
Violet Longhurst Azalea	(*kaempferi* × Princess Ida). Corolla bright rosy purple. Crossed (1963) and raised by A. F. George, introduced (1978) and registered by Hydon Nurseries Ltd., Surrey
Wallowa Red (syn. Red Hot) Deciduous Azalea	(parentage unknown). Truss 10- to 12-flowered. Corolla Red Group 46A; no blotch or spotting. Crossed (1961) by J. S. Yeates, raised and introduced (c. 1968) by Arthur O. Wright, Sr., and registered (1977) by Howard J. Slonecker, Milwauke, Oregon.
White Plains	(form of *iodes*). Truss 17- to 18-flowered. Corolla White, reverse shading to Yellow-Green Group 150D at base of corolla; upper throat heavily spotted Red-Purple 57B. Collected by George Forrest, raised by Col. S. R. Clarke, introduced and registered (1978) by R. N. S. Clarke, Borde Hill, Sussex.
Winning Post	(Marion × Coronation Day). Truss 12-flowered. Corolla Red-Purple Group 57C. Crossed, raised, introduced and registered (1978) by V. J. Boulter & Sons, Olinda, Victoria, Australia.

CORRECTIONS AND ADDITIONS

to previous registrations

Anna H. Hall	(Leach 1963) *not* Anna Hall.
Arthur Stevens	should read: A.M. 1976. Exhibited by Crown Estate. Crossed, raised and intro. (1967) by Hillier. (see *1976 Year Book*).
Bonnie Brae	pollen parent should read: Gable's Red Head.
Glamora	correct Japanese parents to Tamagiku and Wako.
Greta	correct Japanese parent to Getsutoku; 1-2 flowers in cluster.
Hoppy	(Waterer 1972) should read: truss 18 fl., white upper lobe spotted Yellow Group 12 B-C.
Irresistible	(Pryor, U.S.D.A.) add: (syn. My-O) (see *1967 Year Book*).
J. H. Agnew	a synonym of John Henry Agnew.
Kirsty	(1976) add: (Rock No. 59636).
Lady Louise	correct Japanese parent to Tamagiku; cross made in 1957.
Orchid Beauty	seed parent Mrs L. C. Fischer (not Fisher).
Peach Fuzz	pollen parent Mrs L. C. Fischer (not Fisher).

Peking	parentage should read: (*catawbiense* var. *album* × Hawk 9) × etc. . . .
Pink Globe	parentage should read: (*catawbiense* (Gables red selection) × etc. . . .
Pink Queen	(reg. 1972) should read: raiser Loder (about 1930), intro. and reg. Knap Hill Nursery Ltd.; fls pale pink (white with very pale pink veining and margins lightly flushed Red-Purple Group 73C) with slight smudged spotting in throat on upper segment. A.M. 1972 (after trial at Wisley).
Ravels	(1977) should read: (Leah Yates × Pink Twins).
Red Lion	parentage should read: (Tally Ho × *catawbiense* (Gables red selection).
Robin Hill Frosty	correct Japanese parent to Tamagiku; Red Group 55A blotch (not spotting).
Royal Blazer	Purple Group 79D spotting (not blotch on dorsal lobe).
S. D. Coleman	delete 1956 entry; substitute new (1978) registration.
Trumpeter	(1973) parentage should read: ((red *catawbiense* hybrid × (*griersonianum* × Romany Chal)) × (Mars × *catawbiense* var. *rubrum*)).

Index

* Denotes award after trial at Wisley

Rhododendrons listed in the Additions to the International Rhododendron Register pp. 99-107 are not included in the Index.

Advertisers' Index

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The Group exists to encourage all members of the R.H.S. who have a particular interest in Rhododendrons and Camellias. In addition to publishing this annual book, the group also arrange meetings for lectures and discussions as well as visits to places of interest.

Further details of the Group's activities may be obtained from:

Mr J. Waugh Owens

Jubilee Lodge Yarpole nr. Leominster Herefordshire

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£1.50