RHODODENDRONS 1979-80
with
MAGNOLIAS and CAMELLIAS

The
Royal Horticultural Society
London

Acknowledgements

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RHS
Rhododendron, Camellia
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RHODODENDRONS 1979-80

with

Magnolias and Camellias

THE ROYAL HORTICULTURAL SOCIETY
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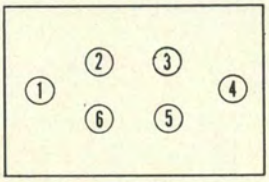

'E. T. R. CARLYON' ('J. C. WILLIAMS' x 'ADOLPHE AUDUSSON') white.

C. japonica 'VIRGINIA CARLYON'—red.

'GWAVAS'—('J. C. WILLIAMS' x 'THE MIKADO')

'TREGREHAN'—*C. williamsii* (*C. sal.* x 'MARJORIE MAGNIFICENT').

'CHINA CLAY'—'J. C. WILLIAMS' x 'MARJORIE MAGNIFICENT'.

'EDWARD CARLYON'—*C. sal.* x 'ADOLPHE AUDUSSON'.

FOREWORD

Owing to the fact that this book has been delayed by a variety of unforeseen circumstances, it would appear to be more appropriate for it to be dated 1979/80; this we have accordingly done.

This annual contains accounts of the Group tour in May, and of the gardens at Arduaine and at Eckford in Argyll. Mr Davidian has described a new Rhododendron species; Mr Lawrence Mills has described the "Early History of the Introduction and Cultivation of Rhododendrons in Great Britain", and the text is reproduced of Mr Richardson's lecture at Vincent Square on "Accelerated Rhododendron Production in the U.S.A.", at the time of the Rhododendron Show.

There are also Notes on Growing Rhododendrons in Malawi, on *Rhododendron zoelleri* and 'Summer Flame'; on the "Future of *R. lacteum*", and "Notes from Lamellen".

There is a Note on Camellias in Australia, and an article on the Carlyon Camellias is reproduced by permission of the American Camellia Society. By kind permission of "The Plantsman", an article by Mr Nigel Holman is reproduced on *"Magnolia heptapeta et alia?"*

There are two reviews of important new books and, 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 is also the usual long list of Additions to the International Rhododendron Register, mainly from the Western Hemisphere, and in this it is of interest to see that, for the first time, permission has been given for the re-use of a name first registered by the same grower 25 years previously for an entirely different hybrid, said to be no longer in existence and in any case never distributed.

E.W.M.M.

Rhododendrons: the Early History of their Introduction and Cultivation in Britain

LAWRENCE P. MILLS
B.Sc. degree thesis, slightly abridged, reproduced by kind permission of the Principal, Wye College (University of London)

Introduction

So much has happened in the rhododendron world since the flood of Chinese species that began with Wilson's expedition of 1900-02, that the work done before the introductions by Joseph Hooker (Himalayan expedition, 1847-1851) has been largely lost to view.

This study covers the period from the first rhododendron introduction in 1656 to about 1850; almost two hundred years that have received but little attention in rhododendron literature. It is nevertheless an important period during which the requisite conditions for the successful cultivation of rhododendrons were discovered, the means by which they may be propagated, and the principles of hybridization. By the middle of the nineteenth century the specialist nurserymen and many enterprising gardeners were remarkably well versed in these aspects of rhododendron cultivation, but the hybridists were somewhat limited in their scope by the small number of species available. However, this was soon to be rectified by the introductions of Sir Joseph Hooker and subsequent collectors, after which hybrids and hybridists arose in bewildering profusion.

From a study of the literature of the period, it is hoped to fill a gap in the history of the rhododendron in Britain.

John Gerard described and illustrated *Chamaerhododendros montana,* the Mountaine Rose Baie, in his herbal of 1597. The illustration appears to be of *Rhododendron ferrugineum,* a native of the European Alps, but not recorded to have reached Britain until at least 1739. Parkinson in *Paradisi in Sole* (1629), described and figured "Ledum Alpinum, sum Rosa Alpina, the Mountaine Sweet Holly Rose", and said "it is well worthy of a fit place in our garden". The description was confused, but the picture accompanying it is recognizably *Rhododendron hirsutum. R. hirsutum* is the first rhododendron of whose cultivation in Britain a record exists; it is listed in *Musaeum Tradescantianum* by John Tradescant, junior, 1656, as 'Balsamum alpinum, Ges: Camer: Sweet Mountaine Rose'. The book is a catalogue of the earliest English collection of rarities, including those in the field of natural history, and lists the plants in the Tradescants' garden. John Tradescant, senior, was a great traveller, naturalist and gardener; he established this collection, and a physic garden at Lambeth, London. He was a Huguenot refugee, which it has been suggested may be how *R. hirsutum* came to England. The sixteenth century Flemish botanist Charles l'Ecluse was one of the first men to bring plants from the wild to be grown in gardens; amongst these may have been *R. hirsutum.* This plant, along with others native to their homelands, may have been brought to England by the Huguenot

refugees. Thus rhododendrons may have been grown, either unrecorded or unsuccessfully, before 1656, which date – often quoted as the date of *R. hirsutum*'s introduction – is simply when Tradescant catalogued the plants in his garden.

Attempts to grow other European species, such as *R. ferrugineum*, may have been made; but these rhododendrons stood little chance of survival, since it was not until the latter part of the eighteenth century that it was realized that certain plants required acid conditions to thrive. It is interesting to note that in 1632 Jacob Bobart, the curator of Britain's first botanic garden – at Oxford – experimented with a bog garden in which to grow calcifuge plants, but there was no reference to rhododendrons.

First rhododendrons from the New World

An English missionary in Virginia, John Bannister, is reported to have sent plants of the swamp honeysuckle, *Azalea viscosa* (now *Rhododendron viscosum*) as gifts to Bishop Compton of London in 1680.

Peter Collinson was a Quaker haberdasher trading with the American colonies. He took a great interest in gardening, and through his contact in the Americas, John Bartram, whom he financed on many plant hunting expeditions, he introduced about one hundred and fifty trees and shrubs to Great Britain, including several species of *Rhododendron*. *Azalea nudiflora* (now *Rhododendron calendulaceum* or *R. speciosum*) was introduced by Collinson, probably in 1730.

Azalea canescens (now *Rhododendron canescens*) was discovered in 1730 by Catesby and introduced about 1734, perhaps by Collinson. It does not appear subsequently in the gardening encyclopaedias or early nurserymen's catalogues; possibly it proved temperamental and lost favour. John Abercrombie (1778) said about the 'Azalia; American Upright Honeysuckle' that "this genus furnishes our shrubberies with two hardy, deciduous flowering shrubs", two species were mentioned: *A. nudiflora* and *viscosa*.

It appeared that a second, and more successful, introduction was made in 1812 (Sweet, 1818). Sweet did not say by whom, but it seems likely to have been by a Mr Lyons, who was stated to have brought varieties of *Azalea calendulacea* from America in 1806 and 1812 (mentioned in *The Botanical Register*, 1816, f.145 and *Curtis's Botanical Magazine*, 1815, t.1721 respectively). William Marshall (1785) thought that out of the six species of azalea then recognized, only two were fit for the shrubbery; again *A. nudiflora* and *A. viscosa*.

The other species of *Azalea* that make up the six recognized by Marshall were *A. bicolor*, "two coloured"; *A. glauca*, "dwarf glaucous"; *A. hispida*, "tall glaucous". The English names are as given by Loudon (1829). These three species received no mention in the eighteenth century encyclopaedia investigated, but Adam Neale (1779) listed "*A. glauca*, glaucous leaved" as being grown in the stove-house of John Blackburne, Orford, Lancs., it being in ". . . a collection of long standing and known to most lovers of botany in this Kingdom". Sweet (1818) gave the introductory date as 1734 for all three species.

In 1736 *Rhododendron maximum*, known as the rose bay of the Carolinas, or American mountain laurel, was introduced by Peter Collinson (*Bot. Mag.*, 1786, t.951) and first grown in his Mill Hill garden. *R. maximum* was not widely planted however, probably because the flowers were not very exciting. Catesby reported in 1747 that the plants of *R.*

maximum had not yet bloomed, and that it seemed to be ". . . one of those American plants that do not affect our soil or climate". Collinson's specimen eventually flowered in 1756; in 1760 he reported that he had plants in flower from seed sown only seven years before. In the 1786 *Botanical Magazine* there was some discussion as to the distinction between it and *Rhododendron ponticum. Maximum* was said to bear forcing well, as did *ponticum,* ". . . but is not so well adapted for this purpose from the paleness of the flowers, which in this state become white . . .".

Some Old World introductions

In the 1807 edition of Miller's gardening dictionary, now called *The Gardener's and Botanist's Dictionary,* additions were made by Thomas Martyn who mentioned here that Miller had grown *Rhododendron ferrugineum,* the Alpen Rose, in 1739. Perhaps he was not too successful, as there is no further mention of this rhododendron until the late 1700s. Sweet (1818) stated 1752 as the date of introduction, from Switzerland, as did subsequent writers. This is probably the date of a second introduction, of plants and/or seeds. *R. ferrugineum* is mentioned in Abercrombie's book (1778), in a list of deciduous kinds of rhododendron, with *R. hirsutum* and *R. chamaecistus,* for which seed propagation was recommended although ". . . their propagation may be tried by layers of the young wood". Marshall (1785) gave the English name as the "Ferruginous Dwarf Rose-Bay".

The date of introduction of the common mauve *Rhododendron ponticum* was universally stated to be 1763. However, an interesting question arose on the source of its first introduction. It is found, in the wild, in the extreme south-eastern and south-western parts of Europe. Sweet (1818) said it was introduced from Gibraltar in 1763; Street (1965) added that it had been found in Spain between Cadiz and Gibraltar in 1750, and cultivated by Claus Alstroemer, a pupil of Linnaeus. Wilding stated that it had been introduced from Armenia in 1763, noting how remarkable this was considering it also grew wild in Spain and Portugal (Wilding, 1923).

The "eastern" plants may have been first found by the German naturalist Pallas: T. Curtis (*Bot. Mag.,* Vol. 18, 1803, t.650) said that Pallas had not been able to procure a living specimen in bloom in the Caucasus (to the north of Georgia and Armenia) and added ". . . whether we really were first supplied with plants from Gibraltar – the one figured, now so common, has since been raised from seeds imported from Asia – we know not".

One could speculate then, that specimens from the Caucasus and regions to the south arrived in western Europe some years before 1763, and even before the Spanish plants were widely known. As Pallas perhaps found flowering plants only in the Pontus region near the Black Sea, *R. ponticum* was thus named. The plants from the two widely separated regions were soon recognized as the same species, and introductions occurred in 1763 from Spain and subsequently seed from Asia.

In 1767 what is now known as *Rhododendron rhodora* (syn. *R. canadense*) was introduced from North America as *Rhodora canadense,* Canadian Rhodora, by Sir Joseph Banks (*Bot. Mag.* Vol. 14, t.1800). Curtis listed as synonyms, *Rhododendrum rhodora corona tripetalis* and *Rhodora canadensis.* He remarked that it was hardy, and desirable due to its early flowering before the foliage had fully expanded. Also

that it could be flowered ". . . in great perfection" by gentle forcing.

The next introduction has now been transposed from the genus *Rhododendron* to that of *Rhodothamnus. Rhododendron chamaecistus* was listed by Sweet (1818) as having been introduced from Austria in 1786. However, Abercrombie must have known of specimens of this plant in Britain at least eight years earlier, as in *The Universal Gardener and Botanist,* 1778, he wrote, ". . . about six species [of *Rhododendron*] the principal of which in English gardens are the following deciduous . . . kinds . . ., *ferrugineum, hirsutum, chamaecistus* . . ." It was listed by Marshall (1785) as *Rhododendron chamaecistus,* Ciliated-leaved dwarf rose bay, a native of Mt. Baldus, near Salzburg, Germany. So the first introductions may have come from this region, on the border with Austria. Considering Sweet's date, an introduction was made about this time by Conrad Loddiges, who owned a nursery at Hackney. W. Curtis wrote in 1800 (*Bot. Mag.,* Vol. 14, t. 488) that Loddiges had raised several of these plants from seed ". . . sent to him ten or twelve years ago from Lambach, Austria, by a friend who collected them from the extreme tops of the Crain Mountains". It was considered difficult to cultivate. The botanists also appeared to have had some difficulty in classifying the plant; Curtis gave no less than seven synonyms including *Ledum; Chamaecistus; Chamae cistus; Chamaerhododendron; Cistus chamaerhododendron,* &c".

Rhododendron dauricum, the Daurian rhododendron (Loddiges, 1828) or, as known earlier, the dotted-leaved rhododendron (Sims, 1803), was introduced from Siberia in 1780 (Sweet, 1818) by Anthony Chaumier. This date was backed up by the fact that Abercrombie (1788) did not list the plant, whilst Marshall (1785) listed *R. dauricum.* Sims (1803) said that Pallas had found the plant peculiar to the sub-alpine tracts of eastern Asia, chiefly in the northern parts of Siberia where ". . . the sides of the mountains in the beginning of May are entirely empurpled with it". Although hardy, Sims recommended to move the plants under shelter as soon as blooms appeared – for they tended to flower too early due to our comparatively mild winters – when it would ". . . prove exceedingly ornamental in the very depths of winter". This first introduction of *R. dauricum* appeared to be of the deciduous variety. Loudon (1829) listed a second variety; *β atrovirens* (syn. *sempervirens*). Lindley figured and described the variety '*β*', and noted how different it was from the original variety '*α*' (*Bot. Reg.* 1817) that the leaves were darker green and did not change to browny red. This variety was supposed to have been introduced ". . . twenty years ago. . ." (1796-1797) from Russia by Thomas Bell.

Another American

John Fraser, a nurseryman of Sloane Square, Chelsea, often visited America and, with his son James, set up a horticultural business in Carolina in the 1790s. He appeared to have maintained both businesses throughout his stays in the U.S.A. (Hadfield?). In 1786 he introduced *Rhododendron punctatum,* the Carolina dotted-leaved rhododendron.

Sims (1822) said *R. punctatum* had been first described by Michaux under the name *R. minus,* and that it thrived best in sandy peat. Loudon (1829) listed this plant as variety *α*; dotted-leaved. A second variety *β* was listed as *R. punctatum; major,* "large-dotted-leaved". Loudon gave 1786 as its date of introduction, but may have been making a presumption when he did so, since Lindley in 1815 (*Bot. Reg.,* Vol. I) said *R.*

punctatum var. β had been ". . . very lately . . . raised from seed imported from America by Messrs. Fraser, . . . by whom the other variety was introduced in 1786". Variety β had larger flowers, free from spotting. Lindley thought it more promising than the older variety, as it had not ". . . the defect of becoming straggling and bare".

Azalea pontica; some interesting accounts

The honey-sweet smelling *Azalea pontica* (later known as *Rhododendron flavum,* and now *R. luteum*) was first discovered by Tournefort in 1700 on the eastern side of the Black Sea to north-eastern Turkey - Armenian region. Tournefort had named it *Chamaerhododendros pontica* (W. Curtis, 1799). Later, Pallas found it on Mount Caucasus, and in 1796, Anthony Hove – residing in Warsaw – found it on the north side of the Black Sea (Curtis, 1799). It is generally agreed that it was not introduced until 1793, from Turkey.

Curtis's figure and description (*Bot. Mag.* Vol. 13, t.433) were taken from a plant that had been flowered by means of artificial heat in the spring of 1798, at the nursery of Mr Watson of Islington. The plant had been introduced the same year by Hove. Curtis had no doubts that it was the *Azalea pontica* of Pallas, and the *C. pontica* of Tournefort. The best means of propagating ". . . this new denizen . . ." had not as then been ascertained, but Curtis supposed it could be treated as other azaleas.

Hove had found the plants on the northern side of the Black Sea, a region we know as the Ukraine, "near Oczakow" (present-day Ochakov) and elsewhere. "With the permission and approbation of Mr Hove . . ." some notes from his diary were inserted; which proved interesting reading. On June 9th, 1796, Hove found a few of this species in swampy ground next to the river Dnieper. They were beginning to "blow", and the locals called it the "stupifying shrub", some considering it ". . . highly efficacious in curing the venereal disease". June 20th found Hove on the estate of Count Stanislaus Sczensy Potocki, near the river Dniefter. Hove said he found plants from four to twenty feet high on peat earth. The common people regarded it as intoxicating and curative, here making much profit selling the honey their bees made from its flowers.

Sims in the *Botanical Magazine,* 1823, (Vol. 50, t.2383) referred to Curtis's account (t.433) for the history and description of the species, but felt he had to observe that, ". . . the excellent botanist . . ." Marschall von Bieberstein was very doubtful as to Hove's account of the abundance of *A. pontica* around "Otschakow". Von Bieberstein regarded the reports of great profits being made from the sale of the honey as ". . . entirely fabulous".

Little information is forthcoming regarding *Rhododendron chrysanthum* which was introduced in 1796 from Siberia or adjoining Manchuria. It was first figured in Salisbury's *Paradisus Londinensis,* according to Loudon (1829). Possibly the final introduction of the eighteenth century was *Rhododendron camschaticum* (variously spelt as: *camschaticum, camtschaticum, camtchaticum, kamtschaticum*). This was first figured in Pallas's *Flora Rossica,* Vol. I, t.33, 1784, and was introduced in 1799 from "Kamschatka". *R. camschaticum* is not one of the easiest rhododendrons to cultivate in Britain. It was first figured in the *Botanical Magazine* in 1908 (Vol. 134, t.8210) and it was said to be ". . . still comparatively rare after having been in cultivation for at least one hundred years".

1803 saw the first introduction of *Rhododendron caucasicum*. It was first received in Britain by Sir Joseph Banks as a gift from the Russian collector, Count Puschkin. The German nurseryman Conrad Loddiges received seeds of this plant from the botanic garden in St Petersburg about the same time. It was first figured in Britain in the *Botanical Magazine* for 1808 where Sims said that Pallas had doubted if *R. caucasicum* and *R. chrysanthum* ought not to be considered as mere varieties, so great he thought the affinity between the two species. Pallas had discovered it in the most elevated parts of Mount Caucasus, near the perpetual snow line (about 8000 feet). This information had been communicated by Loddiges, who had flowered the plant in August 1807. Loddiges remarked how it was less "shy" than *R. chrysanthum*, which he had not been able to flower perfectly although he had had it longer in his possession.

Rhododendron arboreum; a "magnificent species" and an inspiration to breeders

There is the same doubt about the date of the introduction of *Rhododendron arboreum*, the Indian tree rhododendron (Smith, 1804). It was the first of the vast flood of rhododendrons which was to come later from south-eastern Asia. Three varieties had been introduced by about 1825, and this may have added to the confusion.

The first to reach Great Britain was the scarlet tree rhododendron with blood red flowers that so excited the horticulturists. This " . . . most magnificent . . ." of rhododendrons was first noticed by Captain Hardwicke in 1796 on a tour in Sireenagur, growing ". . . in a mountainous tract called the Sewalic chain, which separates the plains of Hindostan . . . from the Himmaleh mountains . . .", so quoted Smith (1804), who, incidentally, was the purchaser of the Linnaean herbarium.

R. arboreum was said to be found generally in oak forest, on a "rich black vegetable earth". Smith was obliged to Captain Hardwicke for the description and drawing, made on the spot, and hoped ". . . that the seeds which that gentleman has liberally distributed in England will enrich our collections with this noble tree".

Bean, W. J. and Prain, D., writing in the *Rhododendron Society Notes, 1917*, thought that seed of *arboreum* had been sent to England in 1796 or 1797, although neither of the Aitons in *Hortus Kewensis*, last published in 1814, mentions this species. Further, they pointed to an error in Smith's account – detected by Don in 1825 – Hardwicke's *arboreum* did not come from the Sewalics but from Kumaon, where at a later date one of Wallich's native collectors found the tree again.

Various later dates have been quoted: 1811, the date of the introduction of seed by Wallich referred to in 1834 by Sir William Hooker, who recorded that a white flowered variety, raised in the conservatory of Robert Baxter, at Dee Hills, Chester, had flowered in 1831, and was named *R. arboreum album*, from seed "sent by Dr Wallich to Mr Shepherd of Liverpool about twenty years ago". Wallich is also said to have sent seed to Liverpool University in 1815 from plants discovered in Bhutan the previous year; plants from this seed flowered ten years later, and are said to have triggered off the surge of interest in rhododendron growing and hybridising. In the *Botanical Magazine* for 1841 the introduction of seed from Nepal by Wallich in 1820 is recorded.

R. arboreum flowered at The Grange, Northington, near Alresford in

Hampshire in 1825, and also in the same season at the gardens of Highclere, the seat of Lord Carnarvon, near Newbury. J. R. Gowen mentioned in a letter to Lindley (*Bot. Reg.* xvii, 1831) that the *R. arboreum* at Highclere had also been introduced by Wallich (presumably 1815) but they could not bloom it as early as they wished, for breeding purposes. Gowen said they visited The Grange, where a specimen of *R. arboreum* was seen in bud. Blossoms from this plant were later received at Highclere for pollination; this was in the spring of 1826, so the plant at The Grange must have flowered late in 1825.

The third variety of *R. arboreum* was forma *roseum* which had rose coloured flowers, and was first figured in 1829 (*Bot. Reg.* xv, f.1240). Lindley said it differed from the scarlet tree rhododendron in having ". . . bright rose flowers, and a little tomentum on the underside of the leaves". Lindley had actually mentioned this in 1825 (*Bot. Reg.* xi, f.890) when he said there was also in Britain a variety of the *R. arboreum* (there figured) with leaves "ferruginous beneath".

Mr Lyons introduced two varieties of *Azalea calendulacea* from North America; the first, *A. calendulacea,* orange coloured (Loudon, 1829) was introduced in 1806. Synonyms for this variety were found as follows: *A. calendulacea, β, crocea* (Sims in *Bot. Mag.,* Vol. 41, t.1721, 1815); *A. calendulacea, cuprea,* "copper coloured" (Lindley, 1816 and Loddiges, 1828).

The second variety, *A. calendulacea* (*β*) *flammea* (flame coloured) (Loudon, 1829) arrived in 1812. It was synonymous with Lindley's *A. calendulacea α* (1816), and the *A. calendulacea* of Loddiges (1828).

William Bartram claimed to have found the flame coloured variety in 1774, as was shown by a specimen in the possession of Sir Joseph Banks (Sims, 1815). Sims commented that ". . . in a genus which is numerous, and so exceedingly disposed to run into varieties it is extremely difficult to find good specific characters". Whether the true *A. calendulacea* was introduced in this period was not ascertained.

The illustration in the *Botanical Magazine* (t.1721) of the orange variety was made from a plant brought over by Lyons; Sims had also received specimens from Fraser's American nursery and from Loddiges. Lindley in 1816 noted that he had only met with plants of the flame coloured variety at Lee and Kennedy's. Loddiges (1828) grew this variety with success in a peat and loam bed.

Azalea indica; ". . . long anxiously sought for by cultivators of curious and scarce plants". (Sims, 1812).

The existence of many beautiful varieties of the Indian azalea had evidently been known in Britain before their introduction. Kaempfer had sent word of over twenty varieties that were cultivated in Japan, whetting the appetites of the above-mentioned cultivators. In 1812 Sims (*Bot. Mag.,* t.1480) was surprised that this shrub ". . . so famed for its elegance" was still so rare in Europe. What was so surprising was that *A. indica* had been cultivated in Holland by Mr J. van Beverninck since 1800. In the 1812 account Sims believed there to be only three or four plants in England.

The species *indica* had been first cultivated by Mr Anderson, superintendent of Mr James Vere's collection after introduction about 1808 (Loudon, 1829). By 1812 only Vere's plant had produced flowers. Mr Anderson was successful in ". . . recovering and increasing . . " this plant, and Loddiges stated that all the plants then in cultivation in Eng-

land were derived from it. He mentioned the difficulty of getting the plants back alive from China and Japan; that they had a great aversion to sea air, and could not tolerate the want of fresh water often occurring on ship-board. We may guess that plants could have been killed en route when they were irrigated with sea water for want of fresh.

Generally the beauty of *indica* was much acclaimed: Sims esteemed the "exquisite brilliancy" of colouring, declaring that ". . . but for want of fragrance, nature had not produced anything more lovely". Loddiges said it was a "superb plant . . ."

Lindley (1824) listed twenty-five varieties from the best authorities, hoping that this list would ". . . serve to excite some enterprising collector to use his endeavours to procure them." Four varieties were then in cultivation; "common single red, double purple, pure white, orange". Lindley figured the white *A. indica alba.*

The main source of hardiness in early Hardy Hybrids: *Rhododendron catawbiense*

This rhododendron was discovered by John Fraser and his father. Native to the mountains of Virginia and Carolina, particularly near the source of the Catawba river, where the Frasers found it in 1808, *catawbiense* arrived in England in 1809 (Sims, 1814). It is said to have been introduced for the Emperor Paul of Russia. In England, it was first cultivated by Lee and Kennedy, with whom it flowered in 1813. The 1814 *Botanical Magazine* figure (t.1671) was drawn at that nursery in June, 1813.

It seems that the flowers were something of a disappointment to collectors, having been represented as scarlet, and turning out to be a rose colour. Sims (1814) said they were ". . . hardly more shewy than those of *R. maximum*". He thought the flowers were more attractive when only partly expanded; since he had noted at Messrs Malcolm and Sweets' nursery in the spring of 1813 that the petals were more intensely coloured externally than within. *Rhododendron catawbiense* was to be very useful in hybridizing, as it introduced great hardiness to all its progeny, enabling rhododendrons to be grown in all parts of Britain.

Rhododendron molle (*a parent, with Rhododendron japonicum, of the Mollis hybrids*)

R. molle (long known as *sinense*) was introduced from China in 1823 as *Azalea sinensis*, the Chinese yellow azalea (Loddiges, 1824). According to Lindley (1829) it was received by Loddiges of Hackney and a Mr Wells of Redleaf. Writing in 1824, Loddiges said it had flowered in May last (1824), when he noted that the blossoms were more of the *Rhododendron* shape than *A. pontica.* Loddiges had not then multiplied the plant, but expected it would increase by layers and cuttings. He kept his specimen in the greenhouse, potted in peat and loam.

In 1829 Lindley listed it as a variety of *A. pontica*, i.e. *A. pontica* var. *sinensis.* Thereafter, *R. molle* does not seem to have been mentioned again in the literature till 1850. Loudon gave no mention of it in his *Encyclopaedia of plants* (1829), and no text or plate was found in the *Botanical Magazine* before 1850. Then there appears to have been a second introduction by Fortune in 1845. We do not know exactly how many plants were received by Messrs Loddiges and Wells in 1823; from Loddiges' account it seemed that he only had one plant, and if Mr Wells also suffered thus, there may have been a lack of general availability

accounting for the few reports, and the requirements for a second introduction.

Probably the hardiest rhododendron introduced from the Himalayas was *Rhododendron campanulatum*, sent by Wallich from Nepal in 1825.

First flowerings appear to have taken place in the later 1830s. In 1840 William Hooker (*Bot. Mag.*, t.3759) said: "This superb plant has, we believe, very rarely produced its blossoms in this country . . .". The specimen figured was from a plant that flowered at the Upton and Newton Nursery Grounds near Chester. Mr Dickson, of the nursery, said that the plant had been standing outside for the last seven years, and during the unusually severe winter of 1838 had remained uninjured. In consequence of moving to a new nursery site, the plant was lifted in November, 1838 and placed in a large tub. The following spring it bloomed magnificently; it was then four and a half feet high and nine to ten feet in circumference.

In the same year, 1825, a Mr Blair introduced *Rhododendron lapponicum* from Canada (Hooker, W., 1831). *R. lapponicum* was first flowered in July, 1830 by Mr Cunningham, of the nursery at Comely Bank, Edinburgh, where Hooker said it could be seen under a hand-glass with *Andromeda hypnoides* – introduced simultaneously with *lapponicum*.

The final introductions of the period under review are *Rhododendron zeylanicum, R. brookeanum, R. javanicum* and *R. jasminiflorum*.

Rhododendron zeylanicum arrived in England from Ceylon in 1832. The first mention was found in the *Gardener's Chronicle* (July 26, 1845, p. 513) when an enthusiastic collector of rhododendrons who had ". . . taken some pains to procure all the known species . . ." wrote to Lindley concerning the distinction between the "Ceylon rhododendrons", *R. nobile, R. rollissonii* and *R. zeylanicum*, which he had believed to be a distinct and genuine species. Lindley replied that these were ". . . only different names for the same thing." He considered *R. rollissonii* to be identical with *R. nobile*, which was then considered a genuine species (*Gard. Chron.* 29, p. 546, 1845, also p. 607, 1845).

To bring the history of these Rhododendrons' classification up to date – in the 1833 *Botanical Magazine, R. nobile* Wallich (1828) and *R. rollissonii* Lindley (1843) – which was redescribed by Booth in the 1850 *Gardener's Chronicle* as *R. zeylanicum* – were considered to be synonyms of the *R. nilagiricum* of Zenker, then thought to be a separate species. Now, however, *R. nilagiricum* is considered to be a subspecies of *R. arboreum*; *R. nobile* is thought possibly to be a hybrid of *R. campanulatum* but *R. zeylanicum* is recognised as a genuine species.

The epiphytic *R. brookeanum* was sent from Borneo by Hugh Low in 1845, named after Sir James Brooke, Rajah of Sarawak. *R. javanicum* and *R. jasminiflorum* in 1846 were sent from Java and Sumatra by Thomas Lobb.

Then in the *Gardener's Chronicle* in 1847 came the report of the departure of Dr Joseph Hooker's "Botanical Mission to India". He embarked in the steam frigate "Sidon" at Portsmouth on November 11, 1847, en route for Calcutta. It was expected that he would arrive at the end of December, when he would spend two or three months investigating the plains of Bengal ". . . then Dr Hooker will journey northwards, perhaps to Sikkim . . .".

Rhododendron cultivation: The practical side

Little information on how the early cultivators of rhododendrons

treated their plants is found until the botanical and gardening dictionaries, "kalendars", "directors", and exotic magazines seemed to become popular publishing material in the later decades of the eighteenth century and the nineteenth.

In 1788, Abercrombie remarked that the azalea would do in "any common soil, but better in moist shade". He found that they set no seed – the species were *viscosa* and *nudiflora* – and said that it was therefore common to layer the young shoots in autumn or spring. Seeds were imported from America, and their germination aided by the hot-bed; similarly for rhododendron seed.

A steady increase in the general interest in *Rhododendron* cultivation, together with other exotics, could be linked with the development of the green- and stovehouses especially, which enabled the more tender species to be grown and flowered, safe from the spring frosts, often quoted as being the enemies of, and drawbacks to, growing early flowering species outside.

Abercrombie, on *Rhododendron* culture, said ". . . they are all of foreign growth, . . . redolent of mountains, rocky, shady places . . . generally in moist situations . . .". He realized that near natural conditions were best.

The practice of layering azaleas was evidently well established by the late eighteenth century. Marshall (1785) described how this was accomplished and also advocated division of suckers. For propagation of rhododendrons, seed was invariably the recommended method, although Abercrombie said one may try layers of the young wood. Grafting was not mentioned in any eighteenth century literature investigated. By the 1840s it was quite common, but exactly when the method was first employed on rhododendron is not recorded.

Marshall recommended mixtures for "container culture", not a new term, and seed raising. He stressed the importance of keeping the rhododendron roots moist, and that transplanting could be successfully accomplished with large plants if care were paid to this, and the preservation of a good root-ball.

In 1811, Thomas Haynes, "Propagator of Trees, Shrubs and Plants, Oundle, Northants" wrote and published *Interesting Discoveries in Horticulture &c.* in which he gave a most comprehensive account of the culture of "American and other Bog Soil Plants". He gave one of the first accounts of azalea propagation by cuttings – under hand-glasses – and from his description we gather semi-hardwood cuttings were advocated; the most efficient method for clonal propagation, as used commercially nowadays.

That certain soils greatly facilitated the successful cultivation of the rhododendron was now well established. Bog earth, peat, rich loam and sand were the ingredients widely recommended at the turn of the eighteenth century. Where a soil was found to be inhospitable to rhododendrons, the removal of a depth of soil, and its replacement with such a mixture as mentioned above was advised.

Little, if any, soil chemistry appears to have been practised until the 1840s and 1850s. Acidity and alkalinity were not mentioned until the mid-nineteenth century; and as to the main causes of the alkalinity to which the rhododendron is averse, namely chalk or lime, we could find no reference until the 1860s. However, even without a complete knowledge of the principles underlying such matters, the cultivators of the

rhododendron had the practical aspects well in hand by the early decades of the nineteenth century.

Witness reports in the *Gardener's Chronicle* of outstanding specimens or exhibitions seen: for example, in the edition for 29 May 1841, an exhibition staged by Michael Waterer (of Knaphill) in a marquee on the Kings Road, Chelsea, was described; ". . . Rhododendrons, Azaleas and Kalmias in full flower . . . beneath a tent one hundred and fifty feet long, by thirty wide" presented ". . . a magnificence of appearance much more easy to imagine than to describe. No poet ever painted a flower garden so perfectly beautiful as this . . . the centre is occupied by tree rhododendrons, the growth of twenty-five or thirty years, bending down beneath the weight of their heaps of flowers . . .".

Early Hybrids and Hybridists

The first hybrid recorded resulted from an accidental crossing of *Rhododendron nudiflorum* with *R. ponticum*, at Mr Thompson's Mile End Road nursery at the turn of the nineteenth century. By 1814 this 'Azaleodendron', now known as *Rhododendron odoratum* or *R. azaleoides*, was in the collection of the Royal Botanic Garden, Edinburgh. Sweet (1818) listed it as *Rhododendron subdeciduum* Thompson's Hybrid.

Purposeful breeding began with *Rhododendron maximum, R. ponticum, R. caucasicum* and *R. catawbiense*. Colour was to come a little later with *R. arboreum*. One of the earliest breeders was the Reverend William Herbert, the author of *Crosses and Hybrid Intermixtures amongst Plants*. Herbert crossed *R. ponticum* with *R. catawbiense, R. arboreum* with *R. maximum, R. caucasicum*, and the American azaleas. He recognized the importance of breeding for the later flowering habit, urging the use of *R. maximum* to counteract the "bad" influence of *R. arboreum* in this respect.

Herbert's crosses – white flowered American *azalea* × *R ponticum* = *Azalea hybrida enneandra*, and *A. viscosa glauca* × *R. maximum* = *R. hybridum* – were figured in *Bot. Mag.* t.2308, 1822 and *Bot.Reg.*, f.194, 1817, respectively.

At that time such "intergeneric" hybrids were known as "mules". However, both Lindley (1817) and Sims (1822) thought that the genera *Azalea* and *Rhododendron*, being very closely allied in nature, might have been easily kept in one; ". . . the term "bigeneric hybrid" in this instance, is more of a formality than essential". (Lindley 1817). "The two genera indeed, though widely separated in the artificial system of Linnaeus . . . are apparently one in nature." (Sims, 1822.)

The "Highclere" Hybrids

About 1825 or 1826, some extensive experiments were instituted in the gardens at Highclere for the purposes of improving the colour of American azaleas, and the production of rhododendron hybrids with the greater stature and brilliance of flower of *R. arboreum*, combined with the hardiness of some of the American species.

Mr J. R. Gowen played a large part in the institution of these experiments and their subsequent supervision. Gowen has been wrongly described as head gardener to Lord Carnarvon, in fact he was a gentleman of independent means, and secretary of the R.H.S. from 1845 to 1850. The cultivation of the plants was in the care of Lord Carnarvon's gardener, James Carton.

Lord Carnarvon had long wanted to raise seedlings from crosses between the highly coloured and late flowering varieties of *Azalea.* To effect this Gowen selected *A. nudiflora* var. *coccinea major, A. nudiflora* var. *coccinea minor,* and the late flowering *A. rubescens.* The two varieties of *coccinea* were dusted with the pollen of a late flowering *A. pontica* on several successive mornings; no care being taken to deprive the mother plants of their anthers, since it had been ascertained that they were very unproductive of pollen.

The seed pods were gathered towards winter, kept in a drawer for some weeks, and sown in the first week of January. About four hundred seedlings were raised, and from a cross *A. rubescens* × *A. calendulacea* var. *triumphans,* another hundred seedlings.

Of the four hundred, three-quarters were similar in foliage, inflorescence and habit to *A. pontica.* The other quarter were more representative of the variety *coccinea* in habit. The inflorescence preserved little trace of *pontica,* also varying from either *coccinea.* The colours were more "lively"; crimsons, vivid pinks and scarlets.

The results of the cross *rubescens* × *calendulacea* were considered magnificent, generally following the type *calendulacea.* They were very late flowering, from pale yellow to orange, pinks, and beautiful mixed tints. Of those that flowered that summer, they were able to discriminate sufficiently to give name to about thirty varieties, each distinguished by beauty or fragrance (Gowen, 1830).

Of those listed by Gowen, a few are to be found in the "List of Hybrids Usually Available" (*Rhododendron Handbook*) e.g. Cartonii, Govenianum, and the cross is stated to be *catawbiense* × *nudiflorum.*

A year later (1831), the *Botanical Register* contained Gowen's account of the hybridizing with *R. arboreum.* Gowen said that three plants of hardy rhododendrons were selected early in the winter of 1825; they were containerized, and presumably placed in a conservatory. In spring 1826, Gowen received a "fine umbel" of *arboreum* flowers in a tin case; their pollen was used to fertilize the flowers of the hardy rhododendrons.

Over one thousand eight hundred seedlings resulted from these crosses, and these were widely distributed to nurseries and private gardens in England and Scotland.

Lord Carnarvon's plants flowered in a cool conservatory in a small quantity in the spring of 1831. The plants were said to be quite hardy, but were ". . . very excitable, shoot very early, and will therefore in early springs be liable to injury by late frosts".

Perhaps the most notable hardy hybrid to arise from these crosses was *R. altaclarense,* figured in 1831 as the Highclere *Rhododendron.* It was listed in the Stud Book as the cross *arboreum* × *catawbiense-ponticum.* This hybrid is the only one of the three hardy rhododendrons mentioned by Gowen as yet positively identified.

Rhododendrons and the Nurseryman

Very little information from the period before 1850 is forthcoming. At the beginning of the 1800s nurserymen made the most of the limited material. A kind of "built-in obsolescence" was recognized as a selling factor, and new varieties were often bred for the sake of novelty. Favourite rhododendrons for this treatment appeared to have been *R. nudiflorum* and *R. ponticum.* Curtis (1803) reported that great quantities of *R. ponticum* were forced for the London markets. Loddiges' catalogue for 1826 – then in the fourteenth edition – listed eighteen varieties of

ponticum and thirty-nine of *nudiflorum*. In 1842, T. Rivers of Sawbridgeworth listed twenty-six varieties of *ponticum*; from a "very dwarf" variety, *"contortum"*, at 1s 6d, to a double-flowered at 10s 6d.

One of the first nurserymen to have begun purposeful hybridizing of rhododendrons was Michael Waterer at Knaphill, with a crossing of a pink flowered variety of *R. maximum* with *R. catawbiense*. Waterer (*Gard. Chron.*, 1841) gave an account of the hybrid rhododendron exhibited in the Kings Road that year. Many hundreds were hybrids that had been ". . . cross fecundated again and again" since the original *maximum - catawbiense* cross. He had also crossed *arboreum* until it was quite hardy.

By 1832, Waterer had raised and given the name Nobleanum to the hybrids from a cross of *arboreum* with *caucasicum*. In the 1840s, Waterer raised another hybrid still widely grown today: 'Lady Eleanor Cathcart' (*arboreum* × *maximum*).

Another firm busy hybridizing rhododendrons at this time was Lee and Kennedy of Hammersmith, who produced Lee's 'Early Scarlet' and Lee's 'Dark Purple'.

The following is a list of rhododendron hybrids known to have been raised during this period:

Name	*Parentage*	*Raiser or Exhibitor*
Hybridum	maximum × viscosum	Herbert, 1817
Azaleoides	nudiflorum × ponticum	Thompson, 1820
Smithii Aureum (syn. Norbitonense Aureum)	(maximum × ponticum) × molle	W. Smith, Norbiton, 1826
Morteri	calendulaceum × nudiflorum	ex. 1829
Venustum (syn. Nobleanum Venustum)	arboreum × caucasicum	W. Smith, 1829
Cartonii	catawbiense × nudiflorum	Carton, 1825
Cunningham's White	caucasicum × ponticum album	Cunningham, 1830
Altaclarense (F.C.C. 1865)	arboreum × (catawbiense × ponticum)	Gowen, 1831
Russellianum (Cornish Early Red)	arboreum × catawbiense	Russell, 1831
Ornatum	ponticum × viscosum	Gowen, 1832
Pulcherrimum	arboreum × caucasicum	Waterer, 1832
Jacksonii	caucasicum × Nobleanum	Herbert, 1835
Nobleanum (A.G.M. 1926)	arboreum × caucasicum	Waterer, 1835
Aprilis	dauricum × ponticum	Herbert, 1843
Standishii	Altaclarense × maximum	Standish, 1844
Clivianum	arboreum album × catawbiense	Iveson, 1849
Towardii	Altaclarense × catawbiense	Standish & Noble, 1850
Lady Eleanor Cathcart	arboreum × maximum	J. Waterer, before 1850
Album Grandiflorum	catawbiense ×	J. Waterer, before 1851
Atrosanguineum	catawbiense ×	H. Waterer, before 1851
Barclayanum (syn. 'Le Poussin')		H. Waterer, before 1851
Fastuosum Flore Pleno (A.G.M. 1928)	catawbiense × ponticum	Gebr. Francoisi, Ghent, before 1846
Lee's Dark Purple	catawbiense ×	Lee, before 1851
Lee's Early Scarlet	catawbiense ×	Lee
Multimaculatum	ponticum ×	Waterer, before 1860
Boddaertianum	arboreum × campanulatum	van Houtte, 1863

Without the work of the hybridists, it is doubtful if the early species would have been grown with such enthusiasm. For, in more than any other plant it could be said – for some – that the rhododendron refutes the argument that the pure species found in the wild is superior to the man-made hybrid.

The Carlyon Camellias

JOHN T. GALLAGHER

From the American Camellia Society's Yearbook, 1976

The genealogical chart spread out between us. The bold family crest in slate black and brilliant red. Names and dates dissolving into people and faces, as I sat fascinated and enthralled listening to the family story of Miss Gillian Carlyon. William Carlyon, the scholar, too ill to marry and father an heir, dying alone in the house except for his sister Harriett. We were surrounded by his own books and sitting in his own library, his wonderful table clock cheerfully chiming away the hours. Harriett's pretty sewing box on the table in the window, looking just the same as it did in one of the early family portraits in another part of the house. For nothing has changed. Nothing has been thrown out. Everything is there right from the beginning, bills, records, books, documents.

Estranged, his brother Edward waited at Greenway nearby for the end. In recent years this house has been the home of Dame Agatha Christie and where she wrote many of her famous thrillers. Edward, jubilant at his good fortune in inheriting the Carlyon family home of Tregrehan embarked on major improvements by adding nineteen new rooms and around this period setting out the main design of the gardens. During the years 1800 to 1841 this work was continued, but then the family history becomes rather complicated. Edward's fourth son rushed off to New Zealand after marriage to the gamekeeper's daughter only to form yet another large estate on the North Island and being Miss Gillian's grandfather, he was to remain in New Zealand until his death.

After her grandmother's death, Miss Carlyon's family returned to Cornwall and Tregrehan in 1935. Tregrehan had not changed. Twelve gardeners tended the estate. The great stone lions gazed impassively as they do to this day, over the years of change and vagaries of family fortune.

During Hitler's war her father was to die of cancer while on active service in the army and the estate again passed on this time to her brother, Tristrem, a mining engineer, turned white hunter, who was killed in Tanganyika at the very early age of 28, just as he had turned from a hunter to conservationist.

"Well, I don't know what all this has to do with my camellias!" exclaimed Miss Carlyon. She may well be right, but I feel myself that a lot of the fun of having plants is just as much the stories of the people behind them and their introduction.

Miss Carlyon's interest in the gardens at Tregrehan and particularly her interest in camellias started after the war when the last gardener left the estate. It was impossible to obtain staff and the post-war colossal

cost of running such an estate now made her her own head gardener and propagator. Specializing in camellias, of which the gardens contain many of the older rarer cultivars, her initial enthusiasm was fostered by Professor E. G. Waterhouse, who was greatly interested in many of the older plants and answered many of her initial queries. Obviously the retention of every bill for every plant purchased for the gardens over so many years was a considerable help in the identification of the original names of many of the cultivars - what a lot of nomenclature problems would never have occurred had other gardeners been so prudent! Alas, the memories of old head gardeners and worse still, the "helping hands" are very unreliable.

Inspired by her two favourite camellias, 'Donation' and 'Leonard Messel', it was not long before Miss Carlyon's interest in hybridizing was aroused. A lucky break was to result in one of her first and best hybrids. Crossing *C. japonica* 'Rosea Simplex' with *C.* 'Salutation' pollen on three successive days, one solitary seed was obtained. The resulting seedling 'Tristrem Carlyon' has grown into a fine upright plant with good glossy foliage, showing *C. reticulata* presence. The new young growth is green. The flowers are very freely borne and of a rose madder in colour, paeony form. Newly rooted cuttings flower with just as much enthusiasm and vigour. Another seedling from her early work with *C.* 'Salutation' is a single open pollination seedling which has been named 'Nijinski' which has very distinct strap-like leaves, willow-like in growth habit, covered with semi-double pink flowers.

Two seedlings from Miss Carlyon's first series of crosses are very interesting also. The cross was *C. japonica* 'Rosea Simplex' × *C. cuspidata.* Both plants are now six feet high and one has been named 'Cornish Spring'. The flowers favour *C. cuspidata,* being small single, but they are bright pink in colour. Covered from head to foot in their pink blossom they make a wonderful addition to the woodland garden in the spring. The flowers are followed by the very bronze foliage typical of *C. cuspidata.* Both plants set many seed pods each year, but so far all the seed has proved sterile.

At this stage in her breeding programme Miss Carlyon was worried about the poor seed set from so many of her crosses. She devised a system of surrounding the flowers of the seed parents with electric light bulbs in polythene bags, reasoning that a steady higher temperature was the key to success. I must admit that this system does look alarming in the greenhouse - but it worked! Crosses of *C. saluenensis* × *japonica* 'Marjorie Magnificent' resulted in over 50 seedlings. Carefully screened only two were selected for naming. *C. williamsii* 'Marjorie Waldegrave', a medium dog rose semi-double pink, completely free from mauve, with good foliage and vigorous growth. The second, a beautiful apricot pink *C. williamsii* 'Tregrehan', upright in growth and opening fully semi-double to paeony form. The photograph shows a flower opening in a cup shaped form, similar to *C. japonica* 'Hana-Fuki', but the flowers do in fact open completely and this is a young flower. In mentioning her dislike of the purple tint in many hybrids it is interesting to note that in one of her recent crosses, *C. saluenensis* × *C. japonica* 'Tomorrow' she has relented enough to allow one of the seedlings which is a pretty lavender pink to be named *C. williamsii* 'Yesterday'!

Choosing only parents which pleased her, *C. saluenensis* × *C. japonica* 'Adolphe Audusson' has given *C. williamsii* 'Edward Carlyon' which can best be described as a weeping form of 'Donation', but with a richer

colour. Planted over a bank this camellia is most impressive. 'William Carlyon' is a plant worthy of the founder of the garden. It resulted from a cross of *C. japonica* 'Juno' × *C. williamsii* 'Donation' and has a spreading growth with excellent foliage. At first sight this single hot pink hybrid might well have been dismissed by many hybridists. Miss Carlyon has used it in the garden in a group of three plants which create an eye-catching cascade of colour each season.

During the same period of her hybridizing, Miss Carlyon used *C. williamsii* 'J. C. Williams' as a seed parent and *C. japonica* 'The Mikado' as pollen parent. *C. japonica* 'The Mikado' is a very reliable *japonica* and always flowers freely at a young age from cuttings. 'Gwavas' one of the resulting seedlings is one of Miss Carlyon's favourites. Varying from perfectly formal double as shown in the photograph to paeony shaped all over the plant, depending on the year, it is a strong upright grower, very late flowering, usually missing all the frosts. The dead flowers fall freely to the ground as its long flowering season progresses. So far this hybrid has not set any seed.

C. japonica 'C. M. Wilson' has proved another good pollen parent with *C. saluenensis*, giving the large semi-double silvery pink *C. williamsii* 'Jenifer Carlyon' again spreading in growth with good leaves showing off the flowers to advantage.

So often the most unexpected results of crossing plants provide the lucky break. It is as if nature cannot help but give a little stir and provide ample material for controversy among other hybridists who think they know better! In Miss Carlyon's case, she had been planning a complete breeding programme for a white *C. williamsii.* Among her next batch of seedlings resulting from a cross between *C. williamsii* 'J. C. Williams' × *C. japonica* 'Marjorie Magnificent', a pure white semi-double camellia emerged. As one of the natural resources is china clay, the name stuck and 'China Clay' was given an Award of Merit by The Royal Horticultural Society at one of its spring 1976 meetings.

As if this was not enough, another cross using *C. williamsii* 'J. C. Williams' as pollen parent crossed this time with *C. japonica* 'Adolphe Audusson' has produced a splendid semi-double to medium double white hybrid with great flower substance. Flowering very late with a very erect growth habit similar to 'Debbie', a row of these plants makes a wonderful sight. These are controlled crosses protected after pollination and are as great a surprise to their breeder as anyone else!

Camellia japonica itself has not been ignored. A seedling of *C. japonica* 'Aaron's Ruby' has given the much admired metallic red anemone *C. japonica* 'Daphne du Maurier', a near neighbour and friend. I asked if the great authoress grew her plant? "Of course! I planted it in her garden myself!" To my mind the loveliest *Camellia japonica* in Tregrehan is 'Virginia Carlyon'. This regal crimson velvet semi-double reminds me of *C. japonica* 'Guilio Nuccio' and I believe that it will be a show stopper when it is more widely grown. The foliage is completely different to 'Guilio Nuccio' of course, being more rounded and forming a vigorous bush. I must confess that I viewed the thought of this new *japonica* with my usual jaundiced eyes before I saw it, but now I am the very proud possessor of two plants and cannot wait to get my hands on the pollen "to have a go".

All the plants I have described so far are of some size and cuttings have been rooted from them, so that we are not just looking at one plant. In recent years very considerable numbers have been planted out

under lathe and in the light woodland of the gardens, where they are fed regularly and cared for.

What of the future? Miss Carlyon is not resting on the laurels of her outstanding success. I have already mentioned *C. williamsii* 'Yesterday'. Always interested in good red hybrids 'Belinda Carlyon' has emerged from *C. heterophylla* 'Barbara Hillier' and is a good single post office red very compact in growth from which she hopes to develop this line of breeding. 'Rosemary Sawle' is also from the same parent and its bushy habit and free seeding property should make it a useful breeder plant for the future.

It is rare that such a wide range of shrubs has been raised by one breeder in such a comparatively short time, and I must express my thanks to Miss Carlyon for all the help and tolerance she has shown to me in enabling me to photograph her plants and information she has provided on my many visits to her lovely home in Cornwall.

Accelerated Rhododendron Production,

or Growing Rhododendrons quickly in North Carolina and Florida

The text of a talk given to the Royal Horticultural Society in the Lecture Room at the New Hall on May 1st, 1979

TED RICHARDSON

Our nursery is a family operation in which we grow hybrid rhododendrons exclusively. Our aim is to produce plants of high quality in as

short a time as possible. All plants are grown in 3-gallon white plastic containers and are sold mostly to nurseries, garden centres, and landscaping people in the south-eastern United States. This region encompasses an area of great diversity of elevation, rainfall, and high and low temperatures. However, the extremes of wet and drought, and frigid and sultry conditions may be experienced at some time at any location in the region. Extreme temperatures may range from below 0°F. to over 100°F. While the average rainfall for the region is from 40 to 60 inches annually, there may be floods or there may be weeks of arid summer weather. It is therefore most important that varieties are selected according to their ability to perform under very broad and opposite conditions. We have found that of the varieties we have tried the ones which are more cold hardy are usually more heat tolerant as well.

Our nursery is located on the eastern ridges of the Appalachian Mountains in the State of North Carolina. This is on latitude 36°N. and is at an elevation of 2,100 feet above sea-level. From here the terrain slopes to the Atlantic Ocean 350 miles to the east. The mountains rise to over 6,000 feet to the west and north and help to reduce the harshness of cold polar outbreaks.

We started propagating rhododendrons in 1962. For several years, when cuttings were taken from the rooting beds, they were grown in greenhouse conditions in plastic quart pots for the first winter and then planted into larger containers the following spring. Because of the short frost-free growing season in the mountains of western North Carolina, it was difficult to grow two flushes during the summer and still have the plants harden off before fall freezes. We were continually losing one-year-old plants of many varieties because of bark split following early cold snaps. Under this system of growing, about four years were required to produce an average 15 to 18 inch plant.

For the past eight years a very different system of producing 3-gallon rhododendrons has been practised. Cuttings are made in late June or as soon as the new flush of growth has matured. They are placed under intermittent mist in a fibreglass covered greenhouse. The rooting beds are six inches deep, three feet wide, and seven feet long. These are filled with either a 50-50 mixture of peat-perlite or 100% pine bark with particle size ranging from dust up to three-eighths of an inch. The filled beds weigh about 500 pounds each and are handled with a forklift tractor.

Stock plants for the obtaining of cuttings are maintained in an open field. Our soils are mostly heavy clay and require significant modification for successful root growth. The incorporation of sand and organic material is very beneficial. However, planting on beds raised a foot or so above ground level is essential. These beds are then mulched with 3 inches of pine needles.

Propagation is pretty much standard for the industry. Cuttings are collected and placed in plastic bags preferably while the leaves are wet with dew. Each cutting is reduced to about 2½ inches in length and surplus leaves are removed to reduce transpirational area. A dip into a Benlate fungicide solution follows. A sliver of bark is removed from the basal one inch of the stem and the stem is then dipped in a talc powder containing 1% IBA (indole-3-butyric acid). Since propagation is done during the summer, temperature of the rooting medium is likely to be higher than 70°F. at all times. Therefore, heating cables are not used in the rooting beds.

During the last week of October, the rooting beds are stacked in a truck and transported 750 miles south to near West Palm Beach, Florida. This is on latitude 27°N. and far down south on the east coast of the peninsula. This trip takes about 16 hours. The winter nursery is located about two miles inland. At this point the Gulf Stream is about one mile off shore as it starts its journey northward and then eastward. This warm water greatly moderates the south Florida climate to the point that winters are very similar to springtime in western North Carolina. One can expect two or three very light frosts during the entire winter. Damage has been avoided at these times with the use of overhead sprinklers.

Upon arrival in Florida, the rooted cuttings are potted directly into 3-gallon containers in a medium of 100% pine bark – the same as that used in the rooting beds. Containers are placed on the ground in rows six pots wide so that individual plants may receive attention from a twelve inch aisle on either side of the rows.

Weed control has always been by manual removal until the current crop on which we have twice applied Ronstar (oxadiazon) at the rate of two pounds active material per acre with very fine success. Ronstar comes to us in a granular material which is applied with a cyclone type seeder.

Plants are irrigated daily as needed and fertilizer is applied through the irrigation water at the rate of about 25 pounds per acre per day. We alternate using 15-45-5 and 21-7-7 (% Nitrogen – % Phosphorus – % Potassium). The ground water used in Florida has a pH 7.4 and is very high in calcium. Contrary to the usual belief that rhododendrons require a low pH, we have had pH as high as 7.2 in the bark medium with the plants doing fine. We do apply minor and trace elements according to need as indicated by foliar analyses.

By the first week of May the plants have three flushes of growth and the risk of damaging frost in the mountains of North Carolina is small; so the plants are stacked six high in ten trailer trucks and returned to the North Carolina nursery. Here they are spaced at twenty inches apart and kept growing through the summer for another two or three flushes. By September 1 most varieties make strong 15 to 18 inch plants and the root system has filled the 3-gallon pot of bark. Perhaps half the plants set flower buds at the end of this summer. However, we don't strive to load them with buds as we believe that the added water requirement of the flowers is not in the customer's interest in getting the plant established with new root growth into the surrounding soil.

About half of the crop is sold during September, October and November. The remainder is carried through the winter in opaque plastic covered houses for spring sales. Since most of our plants go to the general public rather than to rhododendron collectors, we grow mostly the proven hardy and adaptable varieties such as English 'Roseum', 'Nova Zembla', 'America' and 'Catawbiense Album'. Then we have a group somewhat less hardy but still adequate for the region. These are 'Gomes Waterer', 'Kate Waterer', 'Blue Peter', 'Blue Ensign', 'Chionoides', 'Scintillation', 'Janet Blair' and several newer American hybrids. 'Cynthia' is about as tender as is practical to grow. Most of the hardy types do not exhibit flowers of good clear colours such as one sees throughout England. Neither can one find plants of the age and great stature of the early planting of the great English gardens.

This system of growing has proved very beneficial to us. The time required to grow a saleable crop has been greatly reduced, bark split from early freezes has been eliminated as the bigger, more mature wood is less susceptible, and the challenge of finding a better and more efficient way of producing rhododendrons has been most rewarding.

Arduaine Revived

EDMUND A. T. WRIGHT

Arduaine today is very different from the garden described by Sir Ilay Campbell in the 1966 *Rhododendron and Camellia Yearbook*. When my brother and I acquired the property in the autumn of 1971, there was little evidence of the large-scale rescue operation mentioned by Sir Ilay in his article. There can be no doubt that it was a short lived attempt to repair some of the havoc wrought during the previous years of neglect. The great gale in January, 1968 contributed further to the devastation, the "Wood" was strewn with fallen trees, others supported by their neighbours were leaning dangerously. It was quite apparent that years of work lay ahead of us, and even now, some seven years later, there are areas that have still to be dealt with.

When James Arthur Campbell died in 1929 he left an embryo garden, and so it had remained; little had been done in the intervening years and many of the garden's natural features had still to be developed. It was fortunate that he planted a wide range of trees and shrubs including a great many rhododendrons, mainly species. Not all of these were planted in the best situations, and several have caused us problems in the extensive alterations we have made to the original lay-out. The years have also taken their toll, and many rare plants have for one reason or another been lost. But a large number have flourished in the mild climate of coastal Argyll, and wonderful specimens of these can be seen throughout the garden.

I do not propose to elaborate on the history of Arduaine, these details can be referred to in Sir Ilay Campbell's excellent article in the 1966 *Yearbook*. On this occasion I will endeavour to bring readers up to date with the garden as it is today, and describe some of the alterations that have been made during the last seven years.

Visitors enter the garden on its eastern boundary. Very often the first thing one notices is the change in atmosphere; the protection afforded by the trees and shrubs can be quite surprising. In front of us, the main path leads off in a westerly direction, and we look over the area in which the lawns and water garden are situated to the "Wood". At a slightly lower level on the left is a small lawn. A newly constructed flight of steps and gravel path lead off through beds of rhododendrons and other shrubs towards the sea. Much alteration has been made here in the last six months; gone is the tangle of *Pernettya* and heathers, previously a haven for rabbits. Several plants that have been re-sited include *R. sulfureum, R. luteiflorum, R. genestierianum, R. caloxanthum* and *R. glaucophyllum*. Quite a number of additional young plants can be seen, mainly species, and all recently planted.

We now proceed down the main path, which is flanked on the right by a border of old azaleas, containing a much admired *R. narcissiflorum.* Then we come to a sweetly scented rhododendron, a pure white form of *R. decorum.* Next is a plant that always attracts attention when in flower, *R. campylocarpum elatum,* a lovely thing, from which we have managed to root a few cuttings. Now we come to that beautiful hybrid *R.* 'Lady Chamberlain', the branches weighed down with flower during May.

A little further on and we begin to see the start of our major alterations. Gone is the fence that enclosed the vegetable garden, the old fruit trees and bushes have been taken out and the paths and plots grassed over. Now one looks across a large lawn to a mixed bank of trees and shrubs. There are many diversions possible but we shall continue along the present path. The small glasshouse contains a number of tender rhododendrons, all very small and in due course destined for planting outside. The old yew hedge which grew on the seaward side of the path has been removed and the whole area is much improved. Several things are worth mentioning, *R. impeditum* which spreads out over the path, *R. trichostomum* (a nice pink form), and three huge bushes of *R.* 'Blue Diamond'. Opposite the glasshouse is a magnolia; this had never flowered until our second season here, it then produced three flowers, glistening pink like a small *M. campbellii.* Since then it has not flowered, but this year there are about fifteen buds, and we are hoping to identify it.

We now approach a junction in the path; on the left is the start of the Water Garden. At the foot of a short flight of steps, a spring gushes from the rocks into a small pool; this in turn overflows and runs away by means of a stream which feeds the various ponds situated at lower levels. In the vicinity are several plants worthy of mention. Just by the pool is a fine specimen of *Pieris formosa forrestii,* so often a disappointment to gardeners in the south, due to the young growth being spoilt by the weather, something that seldom happens with us. *Rhododendron* 'Cornubia' overhangs the path, and just behind it is an old plant of *R. hodgsonii.* This is now going back, but a young shoot has come up strongly from the base and will soon be taking over; several natural seedlings that have come up round the plant look true.

In 1966 Sir Ilay Campbell would have turned right, but now we can continue straight on into what was then a wilderness, passing two small ponds. Looking over the second one we can see a fine *R. niveum,* with blooms of a very deep colour. Having crossed over the bridge, we should pause and look back at the tree which overhangs the path; this is *Davidia vilmoriniana,* sometimes known as the "Handkerchief Tree", said to be the best example in Scotland, and certainly worthy of that title. It never fails to cover itself with hundreds of the white bracts. Alongside the bridge is what can only be described as a thicket of *R. barbatum.* Originally, a large plant which for some reason died, the thicket has grown from natural layers and now gives wonderful protection to one of our famous rhododendrons, *R. zeylanicum,* reputed by eminent visitors to be the finest plant of this species in cultivation. It is one of several in the garden, and was grown from seed sent to Arduaine from Ceylon. Next to it is a large plant of the tender *R. kyawi,* which has come through the severe weather of last winter unscathed. I recently saw a plant of this species in a friend's garden at Tarbert, which had been killed by the frost.

On the right of our present path are several interesting rhododendrons. Under the *Davidia* are two large plants, one is *R. facetum*, the other *R. eriogynum* (distinguishable, the author told us, by their labels. Ed.). A little further round is quite a good *R. thomsonii*, and behind that is our best form of *R. falconeri*; this is one of many in the garden and part of it is going back. It has a perfect and well-shaped truss of a glistening creamy-yellow. Close to it is *R. irroratum*, which I think could well be the form known as 'Polka Dot'. Close to the path is *R. lanigerum*, a fine bright red.

The path now turns left on to the garden road. To the north it is bounded by a steep rocky bank, with the "Wood" above that. This bank has now been cleared of the existing trees and undergrowth, a retaining wall has been built alongside the road, and planting of the bank has begun. It is, however, extremely dry and things will be difficult to establish. About half way along is a fine *Magnolia, M. hypoleuca* (*obovata*). When in flower, the huge creamy blossoms with deep red centres are very fragrant and scent the whole area during June, July and August. This magnolia is supreme among our scented plants. The perfume can often be discerned several hundred yards away. Across the road is a newly constructed sunken path. This was excavated to take in one of the old drainage ditches which was not particularly attractive, after having been cleared of the tangle that grew there. The area is now planted with dwarf rhododendrons, primulas and hostas and in a year or two this will be a great improvement.

We are now approaching the start of the woodland. At this point the road is joined by another which comes up from the shore. Two plants of particular note can be seen. One is *R. auriculatum* which, despite opinion to the contrary regarding its flowering in Scotland, can be seen in flower every August practically without fail. Towering above it is a magnolia, *M. campbellii*. This is the pink form and its flowers can best be seen from the high ground behind it, although it is now producing buds at a lower level since the light and air has been let in. Close by is another plant of *M. campbellii*. This was lost in the surrounding trees. It has never flowered, but now that it has been brought into the open we have great hopes of perhaps seeing the white flowered form.

Before entering the "Wood", I will give a brief description of the state in which we found it, and of the work that has been done over the last seven years. It is doubtful if much thinning had ever been attempted. The trees are predominantly larch, with a few *Acer*, cherry, *Pinus, Abies*, birch and the odd *Ulmus* and *Tilia*. The majority have grown tall and thin and are between ninety and a hundred feet high. Under this dense canopy were planted many fine rhododendrons, and of course they have suffered badly from lack of light. Indeed, many of them have never flowered, while others produced at the most only a few blossoms yearly. The first winter was spent clearing the floor of the "Wood", and opening up paths that had been choked for years. The second winter saw us felling a few trees here and there and continuing the removal of undergrowth and rubbish. During this time we visited several other local gardens, and noted how essential good light was to the growing of rhododendrons in the west of Scotland. Drastic action was called for if we were ever going to see some of our best plants in full flower, but felling trees in a wood full of rhododendrons is not an easy task, particularly when the trees are some ninety feet or more high. In the last five years the trees have been carefully

thinned, and the light has flooded in, together with some criticism. We were letting in the wind, was the gist of a conversation heard at the 1977 Rhododendron Show. Well, in reply I would just say this, in our woodland there is a huge plant of *R. fictolacteum*, which we were told had never flowered. In the winter of 1976-77 we opened up the area round the plant and let in the sun. We entered blossom from that bush in the 1978 Show, and in his report of the Show Mr Stephenson Clarke referred to it as one of the best things in the whole Show. It was used in our winning entry in Class 1; it won in its own Class, and this performance was repeated at the Glasgow Show a week later. Needless to say, we are still felling trees, and this spring will see several of our old rhododendrons in flower for the first time.

The "Wood" is entered by a small glen. On the southern side the trees have been cleared and a certain amount of replanting has taken place. Plants in this area include *R. johnstoneanum, R. wardii, R. cinnabarinum* and near the top of the glen a fine young plant of *R. sinogrande*. The last mentioned was planted by us in the winter of 1972; it now stands at over 10 feet and leaves were measured in the presence of Mr Davidian, 31½ inches long and 11 inches in width. On the opposite side, which is a continuation of the dry bank mentioned earlier, some work has still to be done before replanting can take place. There is however a huge *Trochodendron aralioides* at the foot of the glen and several rhododendrons further up, *R. sperabile, R. searsiae, R. smithii* as well as others. At the top of the glen the road turns back on itself. The large bush growing between the roads is *R. griffithianum*, one of several in the vicinity. The path now leads off to the left through a grove of mixed rhododendrons. Several *R. arboreum* are present, *R. grande, R. macabeanum, R. eritimum* var. *gymnogynum* and *R. diaprepes*. Towards the end of the grove on the left-hand side is our famous *R. giganteum*. When this flowered in the spring of 1936 it caused quite a stir, as it was the first to flower in the western hemisphere and the second in cultivation in the world. A truss of blossom was sent to Dr Cowan in Edinburgh, and was used for the description in the *Botanical Magazine*. This is a plant that has responded to our thinning of the trees. It started flowering again last year, and this spring it has excelled itself, although spoilt by the frost in early March. Close by is a good form of *R. hodgsonii*, which was severely damaged by a falling tree in 1972.

We now turn north. On our right is a very fine *R. sinogrande*, probably as good a plant as you will see anywhere. This again has benefited from the light and is now producing flowers freely. The fine old *R. oreodoxa* that grew close by has gone back badly, but two layers from it are growing away well and have started to flower. The seldom seen *R. galactinum* is present and just behind that is a good form of *R. fulvum*. Others in the vicinity are *R wightii* and *R. falconeri*. Continuing along the path we come to one of our newly-created glades. Quite a number of young plants have recently been set out and behind them can be seen the previously mentioned *R. fictolacteum* and also *R. macabeanum*. In 1966 Sir Ilay Campbell referred to a plant of *R. rex* which grew here; seek it not – reluctantly it was cut down and consigned to the bonfire last autumn when we could stand its obvious distress no longer.

We now approach the highest part of the "Wood". On the right is a plant of *R. phaeochrysum*, and, dwarfing it, a huge specimen of *R.*

shilsonii. Across the path is *R. zaleucum*, a little further on *R. sperabile*, *R. balfourianum* var. *aganniphoides* and a very fine form of *R. meddianum* var. *atrokermesinum*, one of two in the vicinity slightly differing in certain characteristics. Then a couple of *R. augustinii* and two old plants of *R. habrotrichum*, the progeny of which can be seen self-sown in various places nearby.

At this point there is a short path leading up to the perimeter of the garden and fine views of several of the islands of the Inner Hebrides. The main path now descends through a long glade, previously thick with larch and the habitat of ferns, moss and little else. At the start of the glade is *R. rex*, also another form of *R. eritimum* var. *heptamerum*. I suppose I should be referring to *anthosphaerum* rather than *eritimum*, but as Mr Davidian once said to me when standing in front of a plant of *lanigerum*, "why call it *lanigerum*, Mr Wright!, *silvaticum* is a much nicer name!" Also in the vicinity are *R. dryophyllum*, and an old plant of *R. sphaeroblastum* which is going back fast, but luckily we have a number of layers. On the right, about half way down, are a group of five *Eucalyptus*, probably *gunnii*, but certainly the largest trees of that genus in this locality, and perhaps in Scotland. There are several other shrubs growing nearby that should be mentioned. The first is *Berberidopsis corallina*; a climber rather than a shrub, this plant grows to some forty feet in a larch, with the main vine as thick as one's wrist, and others trailing about in all directions on the ground and in rhododendrons. Another shrub is *Clethra delavayii*, some 25 feet high, and *Pieris formosa*, one of many in the garden. In the wood above the path are a number of large-leaf rhododendrons, mainly the result of promiscuous parents. Also a collection of hybrids, most of which originated from the late Sir James Horlick's garden on Gigha and were planted in the autumn of 1959. Several rhododendrons worth noting may be seen at the end of the glade where the path rejoins the garden road. Perhaps the most interesting is a plant said to be *R. protistum;* this has not flowered, due, we think, to the dense canopy above it. Once again the light has been let in, and we hope to see the first buds in the not too distant future. Others in the vicinity include *R. diaprepes*, *R. habrotrichum*, *R. decorum*, *R. crassum*, *R. irroratum* and *R. dichroanthum* subsp. *scyphocalyx*.

We are now leaving the woodland area, but before doing so I would draw attention to the fact that the walk has taken us round the perimiter of the "Wood". There are a great many rhododendrons in the central area that have been missed, *R. delavayi*, *R. sutchuenense*, *R. fargesii*, *R. beesianum*, *R. arboreum*, and others too numerous to mention. A newly created glade is to be planted with a collection of the Maddenii series; this should be quite an attraction both for flower and for scent in a few years time.

We continue towards, and pass in front of, the Garden Cottage. Suddenly one becomes aware of the fact that the path is now fairly high up, with glimpses through the trees to the lower levels and the sea beyond. Rhododendrons can be seen on both sides, including many recent plantings. Old plants include *R. cerasinum*, *R. rubiginosum*, *R. irroratum*, *R. arboreum* and *R. concinnum*. The hill below is planted with a variety of shrubs, with notable specimens of *Eucryphia glutinosa* and *E. lucida*, also *Embothrium coccineum*. At its highest point the path passes above a small cliff, and wonderful views can be seen across the garden to the sea, looking straight down the Sound of Jura with the

mainland on the left, and the islands of Shuna, Scarba and Jura disappearing on the horizon. It is hard to realise that one has climbed so high without noticing it. The way down is by a series of zigzags and a lower level is soon reached at the foot of the cliff. Steps wind up below the rock face; these lead to several narrow paths that can be explored if one has the energy. Amongst new plants in the area are several of the Maddenii series, the most notable being a young plant of *R. sinonuttallii* which has been growing happily in this situation for the last three years. Just before the steps *R. bullatum* overhangs the path; when in flower its scent pervades the whole area. Next we come to a fine specimen of *R. zeylanicum* and a little further on a huge *R. decorum*, the scarlet of its young growth rivalling the flowers. Also present are fine bushes of 'Mrs Lionel de Rothschild' and 'Dawn's Delight'. By this time we are almost down to the lawn, and a flight of steps leads us back on to the garden road.

Turning right we pass in front of a bank of shrubs and rhododendrons, usually referred to as "Miss Yule's rockery". The frontage of the bank has been cleared, altered and replanted, but several old rhododendrons remain in the area behind it. These include *R. maddenii*, *R. decorum* and *R. burmanicum*; on the hill above are plants of *R. vaseyi*, *R. oleifolium*, *R. euchaites*, *R. strigillosum* and *R. calophytum* (now going back, although three good layers have been taken), and a very different form of *R. eritimum* from those previously seen, the flowers being a pinkish mauve.

At the end of the lawn we turn left and descend some steps, but before doing so attention must be drawn to the tree overhanging the road; this is *Acer monspessulanum*. In 1966, Sir Ilay Campbell thought this tree was going back, but it shows no sign of this some fourteen years later. Close by is a fine specimen of *Magnolia denudata* (*conspicua*), always a magnificent sight against the background of conifer trunks and *Griselinia*. Across the road is a huge *Gevuina avellana*. The tips of this have been caught by the wind and frost during the last winter. Next can be seen *Eucryphia cordifolia* and then a fine *Pittosporum*. In 1966 this was referred to as *P. tenuifolium*, but we doubt this and have still to identify it.

Crossing our previous path we proceed in the direction of the Water Garden. Two rhododendrons overgrow the path, the first is *R. johnstoneanum*, a fine creamy-yellow, the second is a huge plant of *R. leucaspis*. On the right is a large bush of *R.* 'Tally-ho', growing into an equally large plant of *R. uvarifolium* behind it. Further on, two forms of *R. racemosum* endeavour to obstruct the path from the left, whilst on the right *R. decorum* tries to do the same. On the far right, between the shore road and the "Wood", is a very fine specimen of *Cornus kousa* var. *chinensis*, something of a sensation when covered in its creamy bracts. Several large-leaf rhododendrons are present along the edge of the woodland and new plantings are now being made in this area, including *R. lacteum*, a species always missing from this collection in the past. Further down the road *R. manipurense* can be seen, only a fraction of its previous size. It was covered in buds during the drought of 1976, but due to this they failed to open at the usual time, July-August with us. But in the period of sleet and snow the following November it came into full blossom; alas, the effort was too much for it, and apart from one good shoot from the base, the whole plant died, but it has been propagated and several plants are growing elsewhere in the garden.

The Water Garden has been considerably altered and now covers a much greater area; there is still a lot of work to be done, and certainly a wider range of planting is needed. Water lilies have proved disappointing, the caddis-fly larvae seeming to make short work of them. The major attraction at present is the masses of self-sown *Primulas* and *Lysichitum americanum* which create a wonderful display through the spring and early summer. There are several paths that can be explored as one wishes. I will mention one rhododendron, this is *R. eximium*, which grows on the bank of one of the pools.

The shore road takes us past the largest pond and we find ourselves just above the beach. The sea in front of the garden is Asknish Bay and not Loch Melfort as so many visitors seem to think. Arduaine is on a promontory, and Loch Melfort runs inland behind the garden. It is this island-like effect that gives us our normal gentle climate and freedom from severe frosts.

We are now nearing the end of our tour. Passing through an opening in the wind-break we find ourselves in a grassy area which the previous owners used to describe as "The Jungle", waist high in reeds, ankle deep in water, with islands of brambles, bracken and self-sown pernettya, not to mention the giant ferns, any of which when felled will fill a barrow. The ground has now been drained and the water fed into what will eventually be a series of pools; the work on these has still to be completed. Having walked up to the higher end, the first thing of interest is *Magnolia parviflora* (or should it be *sieboldii*?). This lovely magnolia is normally in blossom here from early May until late September, the scarlet seed clusters and flowers appearing together towards the end of the summer. Over on the right is a plant of *R. strigillosum*, very different in growth to the plants seen in the woodland. Among the nearby shrubs is a good form of *R. concatenans*, which needs more light to get the full effect of its glaucous foliage. This has been done with the young plants we have raised and the difference in the leaf is quite remarkable.

Turning to the left, one finds the start of the Rock Garden, which is mainly planted with shrubs rather than alpines, although a few of the latter have survived from the original planting. Quite a number of rhododendrons are present, perhaps the most interesting being a large bush of *R. leptothrium*, and the equally rare in gardens and just as tender *R. oldhamii*. Others include *R. baileyi*, *R. calostrotum*, *R. hemitrichotum*, *R. intricatum*, *R. keiskei*, *R. keleticum*, *R. moupinense*, *R. pemakoense*, *R. schlippenbachii* and others too numerous to mention. There are also a variety of shrubs, the most notable being *Pachystegia insignis*, not often seen and not easy to grow, or so I understand.

We are now close to the garden gate and the end of this brief tour; many things have been left out, plants that should have been mentioned and paths that ought to have been explored, but with a garden that extends to some 23½ acres it would take a book to describe in detail. There are, however, two plants that should be remarked upon; the first is *Narcissus cyclamineus* which has naturalised in the lower lawns, and comes up in its thousands. The other is *Lathraea clandestina*, a rare and seldom-seen parasite. At Arduaine this showy plant produces flowers in great profusion in the woodland, in damp places and on dry banks. Found originally under the rotting trunk of a fallen tree, the solitary plant has now spread throughout the garden, and when visitors

start to ask us about the purple crocus or gentian-like flower we immediately know to what they are referring.

Finally, I must apologize for not giving details of the measurements of the plants mentioned. This is often only an opinion arrived at by conjecture, but I would describe the majority as being each in its own way a specimen.

Rhododendron *zoelleri*

ARTHUR W. HEADLAM

We recently learned with regret of the death of Michael Black of Grasmere, Westmorland, a former member of the Rhododendron and Camellia Committee.

Michael was well known to many members of the Australian Rhododendron Society, and during his visit to Melbourne in 1968, delivered the inaugural Baron Mueller Memorial Lecture at the Melbourne Herbarium on July 12, before a large gathering of members of the Society and other interested people. His "Historical Survey of Rhododendron Collecting" was published in the Australian Rhododendron Society's journal, *The Rhododendron* of June 1968.

Many of the Malesian rhododendrons in cultivation in Australia today are from material he generously made available to the Society, and probably the most outstanding of them all is *R. zoelleri* which he collected at Aregenan in eastern Papua, New Guinea. *R. zoelleri* is widely distributed over most of the territory and extends to the Moluccas. It has been found at sea-level and at altitudes of from 4,000 to 6,000 feet, both as a terrestrial and an epiphyte.

Numerous forms have been collected for the Society, the West Irian form in the Arfak Mountains by Dr H. Sleumer, seed of which sent to Strybing Arboretum in San Francisco resulted in the naming of a clone *R. zoelleri* 'Golden Gate', and another form from Goodenough Island was raised and named *R. zoelleri* 'Island Sunset' by the late Don Stanton of Wollongong, New South Wales, but like the West Irian form this has proved somewhat difficult to grow and flower.

There is little doubt that the *R. zoelleri* collected by Michael Black at Aregenan is the best form in cultivation in Australia, and at the same time, the easiest to grow and flower.

In summer 1978 my plant produced three fine trusses, the last and best carrying nine flowers to the truss, each flower measuring five inches across the lobes. The colour was deep yellow and the lobes were suffused with orange to orange red on the margins.

(*Note.* Baron Ferdinand von Mueller was in 1853 appointed to the position of the first Government Botanist of the State of Victoria, Australia, on the recommendation of Hooker. His appointment enabled him to explore widely throughout Victoria and other parts of Australia. He held the position until his death in 1896 at the age of 76 years.)

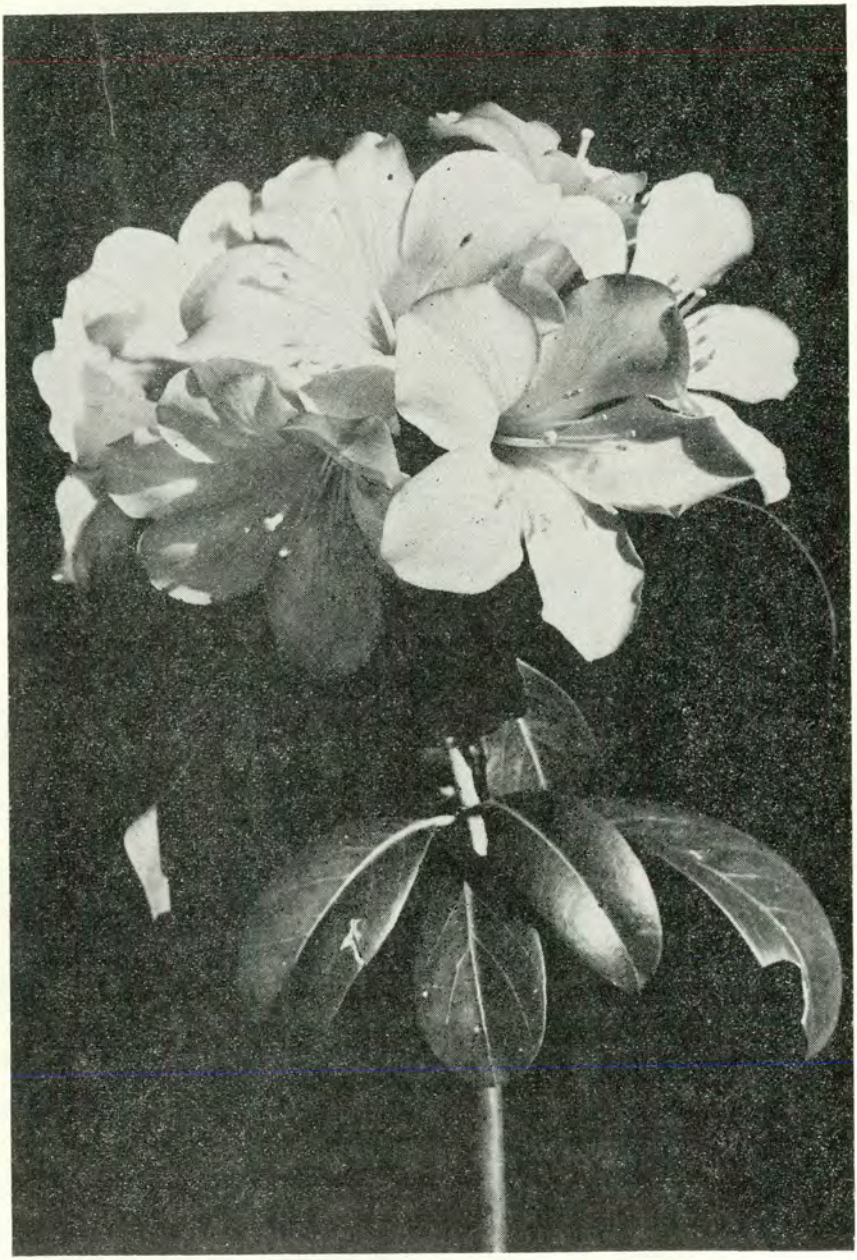

Fig. 1 *Rhododendron zoelleri*

Growing Rhododendrons in Malawi

An Interim Report

I. F. LA CROIX

Malawi (formerly Nyasaland) lies in the southern part of Central Africa, between 9° and 17° south, that is well within the Tropic of Capricorn and similar to the most northerly part of Australia. We live in the Shire Highlands, in the south of the country, at an altitude of 3,800 feet and the climate is by no means as hot as might be expected. Over the five-year period 1974-78, the hottest month has been November, with a mean maximum of 81.6°F., although in any one year October or December can be hotter. The highest temperature recorded in this period was 92.3°F. in November 1976. July is the coldest month; the lowest temperature recorded in this same period was 44.9°F. in July 1977, although I am told that frosts have been recorded here – they are frequent on the high plateaux in June and July.

The year divides most naturally into three seasons – the cool season from May to August; the hot season from September to November; and the rains from December to April, with the first showers usually coming in November. The mean annual rainfall over the five-year period mentioned was 50.5 inches, but there can be considerable variation from year to year. In 1979, with the rains now over, we are 33% below average. While the rainfall might seem quite high, it is very seasonal. February is usually the wettest month; the highest monthly figure I have a record of was 18.02 inches in February 1974. In February (1979) 3.57 inches fell. From May to October inclusive, the average rainfall is less than 1 inch per month, and in August and September there is usually less than 0.1 inch. Most of this dry season rain occurs in what is known as "Chiperone" weather – spells of mist, low cloud and drizzle that blow up on a south-east wind from the Moçambique channel.

In spite of this prolonged dry season, it seemed to us that this would be at least a possible climate for rhododendrons, particularly the more tender varieties that come from areas where, like here, there is little variation in day length. Usually, on moving to a new area, one is advised to look at what is already growing. There are few established gardens here, but we have seen azaleas growing, quite large, old bushes, all apparently evergreen, also some camellias – again the bushes were sizeable but the flowers were poor – and two large magnolias. I have not seen these in flower, but they look like *M. grandiflora* though with smaller leaves than usual. A couple of miles down the road, tea estates start and so soil did not seem likely to be a problem. The soil in this area is classified as a red soil and is described as being a sandy clay, or sand/clay/loam, with a pH of between 4 and 6; in our garden it is 5. Although there seems to be a general belief that tropical soils newly brought into cultivation are fertile, this is by no means always the case. The soil around here is lacking in nitrogen, calcium and magnesium, and sometimes potassium. It is always lacking in humus and becomes either fine and powdery or baked hard when dry.

When our house was built, inevitably all the trees on the site were cut down for firewood, with the exception of some large specimens of *Eucalyptus grandis* (widely planted here as a timber tree) and one *Bauhinia purpurea.* Because of both the lack of suitable shade and the prolonged dry season, we decided that any rhododendrons would have to be grown in pots. We had hoped to have these on the veranda, but this proved to be far too hot during a large part of the year, as it is not nearly wide enough and the sun streams right in. So, to provide shade for them and also for our collections of ferns and epiphytic orchids, we designed a shade house with open walls and a lightly thatched roof. James, our garden helper, who comes from the shores of Lake Malawi where there is a long tradition of basket-work and the like, built this very effectively from eucalyptus poles, using andropogon grass for thatch, tied with palm fibre. It is about 9 ft. × 9 ft.; 7 ft. high at the ridge, with the roof projecting beyond the poles and coming to about 3 ft. from the ground. The central area is paved with brick and on either side there are "beds" covered with stone chippings on which the pots of rhododendrons and ferns stand. Most of the orchids are suspended in baskets or perforated pots from the roof. The thatch lets through some sun and rain and the house is always pleasantly cool. The rhododendrons are kept there in hot weather and in cool, overcast spells are moved to the veranda.

The first rhododendrons we had were a batch that I brought with me from England when I flew out in July 1978. There were young plants of *R. edgeworthii; R. crassum* (one of our Chairman's pink-flowered seedlings); two seedlings of Mr Judson's *inaequale* × *ciliicalyx* cross, and a small rooted cutting of 'Harry Tagg'. Our house, which should have been ready in May, was in fact not completed until early August, and so for the first month after my arrival we lived in a temporary house, and the young plants had to be potted up in what soil was available. The nature of this can be guessed by the fact that there was a brickmaking kiln near the end of the drive.

When we moved in here, one of the first essentials was to find a source of humus. Leaf mould is unobtainable here as decomposition is so rapid, and peat cannot be bought. However, we came upon a splendid source close at hand. About a hundred yards from the garden there is a small stream which "runs" all the year round. Along this grow two kinds of palm, *Raphia farinifera* and *Phoenix reclinata.* The raffia palms are magnificent trees with short trunks and the largest leaves in the plant kingdom, up to about 40 feet long. They flower only once in their lifetime, and after that fall and die. The Phoenix palms seem also to be relatively short-lived as a number of these have fallen too and the soft wood of their trunks soon decomposes. This is then fibrous and water-retentive and, when mixed with ordinary soil, appears to form a satisfactory compost. The raffia palms also have their uses, as this is what James uses to tie the thatch of the hut.

Of the first group of plants, 'Harry Tagg' and the smaller *inaequale* × *ciliicalyx* died. The others have produced new leaves but have made little in the way of growth, except for the surviving *inaequale* × *ciliicalyx,* which grew about 3 inches last April and produced a couple of branches.

The next batch arrived at Christmas, with my son. He brought them in pots and all, and so they received little check. They were all well-rooted cuttings – *R. ciliatum*; 'Fragrantissimum'; an unknown member

of the Maddenii series, and camellia 'Donation'. These were put into larger pots on arrival and moved straight into the shade house, which was now ready. They responded by breaking into new growth after a couple of weeks and more than doubling their size. Round about April, they grew some more and are now very sturdy plants. All of this lot have done much better than the original batch – it is tempting to think that bringing them out in winter gains a growing season. They come from a low temperature to a high one, and from a short day to a longer one – 13 or 14 hours. In June and July, on the other hand, there is little difference in temperature between Britain and Malawi and the day length is shorter here, about 11 hours at that time of year. However, it is too small a sample to generalise from, it could be just that the second lot had much less disturbance.

As well as these plants brought from England, we have some azaleas, given to us as rooted cuttings from plants already in the country; all are evergreen, three we were told were from large plants and three from dwarfs. The colours are supposed to be white, purple and red, which could cover quite a large spectrum. The small ones, which look like some kind of Japanese azalea, have been put into pots; all are breaking from the base and one looks as if it has set a flower-bud. We planted the large ones out, as the number of occupied pots was increasing alarmingly; we found an area near the shade house that had some shelter from bushes and could easily be watered. I am not sure when these should flower, I think it is towards the end of the dry season.

I was anxious to try some Malesian rhododendrons here, and Mr Headlam kindly sent me some seed from Australia. I have grown and flowered Malesians from seed in England and did not anticipate any difficulty. However, the seeds germinated well and developed a pair of true leaves, and then stood still. Some *ciliicalyx* seed also sent by Mr Headlam got as far as two or three pairs of leaves and then did the same. A few weeks ago it occurred to me, rather belatedly, that this might be due to a lack of the appropriate mycorrhizal fungi. I scraped some soil from around the base of the unknown Maddenii, which was growing particularly strongly, and scattered this among the *ciliicalyx* seedlings which, being just about large enough to handle, had been potted on. The Malesian seedlings (*R. laetum* and *R. laetum* × *R. macgregoriae*) were dug up in clumps from their margarine tubs with a kitchen knife and planted around the azaleas in pots. (Small flowerpots, either clay or plastic, seem to be unobtainable here.)

As far as I know, mycorrhizal fungi are not very specific, and so for the latest batch of seed, again mostly crosses and back-crosses of *R. laetum* and *R. macgregoriae*, we collected the nearest thing we could find to well-rotted pine needles; soil and fallen needles from under a stand of *Pinus patula* growing on Zomba plateau at an altitude of about 6,500 feet, where decomposition is slower. I assume that there must be fungi associated with these pines; whether they will be suitable for rhododendrons, we must wait to see.

We are now hopeful of bringing on the plants we have got. The main problems are lack of water in the dry season and lack of shelter. In October and November last year, there were several spells when we were without any water at all for periods of over 24 hours. The local pumping station has been installing a larger pipe and we hope it will all be connected up by that time this year. The shelter is necessary, not only from the sun but from the wind that blows for most of the year. As we will

not be here for very long, we cannot afford to plant shelter belts and wait for twenty years like Osgood Mackenzie at Inverewe, but we have planted fast-growing shrubs like hibiscus and oleander and hope that, as well as giving us the beauty of their flowers, they will form effective wind-breaks before long.

An Account of the Rhododendron Group Tour in Argyllshire, May 1979

ROBERT H. L. JACK

To those members travelling north on Friday, 3 May for the start of the Scottish Tour on the following day, the weather must have seemed daunting. On Thursday, parts of Wales and the Pennines had experienced yet another snowfall in the seemingly unending winter. On the Friday, northbound members drove through showers of hail and light flurries of snow in the Lake District and wondered how there could be any rhododendrons to see, and perhaps the tour was too early for such a year as this. Any garden outing is always fraught with such anxieties, especially when it has to be arranged months in advance and this was a most ambitious tour of six days, eleven gardens, two ferries, one island and forty-three members.

These fears were in part relieved when we gathered next morning in bright sunshine at Glenarn, Mr J. F. A. Gibson's noted rhododendron garden at Rhu, on the Clyde near Helensburgh. Though Mr Gibson lamented the damage to flowers caused by a frost two days previously, we found much of interest. The garden is, of course, justly famous for its large leafed rhododendrons and their hybrids, a number made by Mr Gibson being in flower. The westerly yet sheltered aspect, mild climate and high rainfall of some 75 inches per annum make this an ideal site for them. Though the garden slopes towards the sea, there is good top shelter and in one part a small narrow ravine planted in such a way that specimens growing in it were flowering at the level of the pathway along its edge. In this way we were able to admire for instance a very good *R. niveum* and near it a *niveum* hybrid at eye level though they were 20 feet high. At the same time the narrowness of this miniature gorge meant we were close to the flower trusses.

A huge *R. arboreum* beside the house was just coming to its best. We found *R. macabeanum* and several *grande* hybrids quite unaffected by frost and a huge *falconeri, sidereum, hodgsonii, sino-grande* and *glaucophyllum,* represented in all its forms. There was a handsome umbrella pine, *Sciadopitys verticillata,* and magnolias too.

We were kindly given coffee and expressed our thanks with the gift of a young rhododendron plant to add to the garden's collection before we tore ourselves away.

From Rhu we drove northwards along the lochside road to Arrochar for lunch, enjoying the sunlit scenery of the Gareloch, Loch Long and rugged hills on the way. In the afternoon we travelled on to Cairndow at the head of Loch Fyne, stopping at the top of the "Rest and

be Thankful" to contemplate the view. There we saw the old highland road built by General Wade after the 1745 Rebellion, but the fresh snow-white crests on the peaks above us sent us back quickly to the warmth of our coach. At Cairndow, Lord and Lady Glenkinglas met us and, while telling us of frost damage and the difficult winter, took us on a tour of their woodland garden notable for its trees as well as rhododendrons. We saw a gigantic *Abies grandis*, only just under 200 feet high, probably the tallest tree in Britain, a true forest giant. We saw cypresses, a tigertail spruce (*Picea polita*) from Japan, an oriental spruce (*P. orientalis*) and in their shelter *R. falconeri, vernicosum, fargesii,* a very big 'Elizabeth', also *orbiculare,* the hybrids 'Aries', 'Siren', and in full flower 'Avalanche'. Near the top of the wood there was a fine specimen of *lanatum* but with its flowers unfortunately spoilt by frost. Near the house is a beautiful setting of dwarf rhododendrons, spring flowers and bulbs.

We were kindly treated to tea and home-made biscuits before we departed to Creggans Inn at Strachur. This hotel, a dozen miles on, situated on the east shore of Loch Fyne, has a beautiful westerly outlook across the loch and was our comfortable base for two nights. From there we were able to spend the next day visiting two gardens, one at Eckford, belonging to Mr Younger, and the other, the Benmore Botanic Garden, formerly owned by Mr Younger's family but now run by the Royal Botanic Garden in Edinburgh.

At Eckford, Miss Robinson greeted us on Mr Younger's behalf and Mr Hall, Benmore's Curator, took us round the garden which was developed in the 1930s after the family gave nearby Benmore to the nation. It is very sheltered in aspect on a steep slope and has a top cover of gigantic Douglas firs and European larch. These provide a very deep natural mulch of needles and moss underfoot and wind protection above. The climate and shelter combined make for the most luxuriant growth imaginable, both of trees and rhododendrons. Everywhere there were natural seedlings of rhododendrons growing in the moss and even large leafed *grande, macabeanum* and *falconeri* seedlings in fissures in the bark of trees up to two feet above ground level. Their health and vigour illustrated how well they enjoyed the situation and the ninety inches per annum of rainfall. We experienced a small instalment of this annual quota before we had been there long, but it did nothing to dampen everyone's enthusiasm. Perhaps the one thing which illustrates the luxuriance of everything in this garden was a Douglas fir storm casualty which had fallen across a pathway. The ground was too steep to remove the massive trunk, and so a flight of steps had been carved in the timber and a handrail fixed up and over so that the path could continue in use. It was reminiscent of stories and pictures of British Columbian forest giants.

As this garden is the subject of a separate article by Kenneth Lowes, I will leave the detailed description to him but just whet the appetite by saying the vigour and range of rhododendrons was extraordinary.

We lunched at Benmore's Garden Restaurant and spent a fascinating afternoon in this large and beautifully kept garden. The entrance avenue of *Sequoiadendron giganteum,* with each tree standing over 150 feet, was an imposing sight. The rhododendrons are for the most part grouped in their series, which does facilitate comparison of closely related species. At the same time, the spacious setting makes the whole natural and attractive. Again, the larger leafed species particularly attracted our

attention with the bright sunshine giving our photographers all the scope they required. To illustrate the size and quality, we saw a R. *campanulatum* 30 feet tall with a trunk 4 ft. 6 in. in circumference at 3 feet above ground level covered in flowers. Among the many interesting species were *watsonii, vernicosum, basilicum, fictolacteum, fulvum, siderophyllum* and a striking *lacteum* of deep colour and beautiful truss. Other things which caught our attention were a large *Pieris formosa* with its creamy flower trusses and crimson young growth, and a *Nothofagus antarctica* growing along the top of a bank so that one saw to best effect its angular growth. A wonderful collection of dwarf conifers is being complemented by an increase in the acreage of the large conifer collection.

So great was the enthusiasm for this garden that we had to send out scouts to gather everyone in at departure time. Our enjoyment was in no small measure due to the combined kindness of Dr Cullen, the Assistant Keeper, who travelled specially from Edinburgh to accompany us, and of Mr Hall who led us round.

The next morning we bade farewell to Creggans and set off for Crarae, the home of Sir Ilay and Lady Campbell, further south on the other side of Loch Fyne. In this garden, though wonderfully situated, flowers had suffered from recent frost damage. Sir Ilay welcomed us and, with Mr McKirdy his head gardener, took us on a most interesting tour of the garden. Its main feature is a glen running inland which has been planted and developed over many years with rhododendrons, both species and hybrids, magnolias, embothrium and azaleas. On a hill to the west we saw gums (*Eucalyptus*), and a collection of *Sorbus* underplanted with deciduous azaleas, and the whole carpeted with emerging bluebells. Lower down were groups of *hodgsonii, macabeanum* and *mollyanum* seedlings, now some twenty-five years old, with a nice *delavayi*, and a pink *arizelum*, though these were unfortunately frosted, and later flowering hybrids like 'Diva'. To the east of the glen is a whole garden in itself. There we found more rhododendrons and a young collection of *Nothofagus* and a very fine specimen of monkey puzzle (*Araucaria araucana*) fully clothed with branches to ground level. There were several strategic viewing points overlooking Loch Fyne. Below the glen enormous bamboo hedges, some fifteen feet high and as many feet wide, made noteworthy windbreaks.

It was a delight to see an established garden of this quality being further developed with such enthusiasm and new additions of shrubs and trees, as well as rhododendrons being planted. After being most generously entertained to lunch on the lawn, we set off again, this time north-westwards by way of Dalmally, Loch Awe, the Pass of Brander and on to Connel, near Oban, to Achnacloich, Mrs Nelson's charming house. Our first view of the house from the drive was with a foreground of massed naturalised narcissus and pink flowering cherries. The garden has been beautifully developed round the natural features of slopes and hillocks with peeps of the sea. We saw a blend of hybrids and species; 'Carol Stocker', 'Peace', 'Conroy', *R. johnstoneanum, falconeri, barbatum, tephropeplum*, 'Cilpinense', a good dark *niveum* and a strikingly dark purple *concinnum*. At one point, when we came on a large *calophytum* which had finished flowering, Mrs Nelson's remark of "I must find time to dead head it" brought an immediate response from the group. Members staged a combined onslaught and in a few minutes did a thorough job as high as they could reach.

Several of us had a good view of a small flock of crossbills (*Loxia curvirostra*) feeding on larch cones in a tall European larch before they flew off. To round off our afternoon Mrs Nelson took us indoors for tea and scones. Being shod for garden walking, the front entrance became lined with abandoned wellington boots and heavy footwear as we all trooped in. Then the utmost luxury, tea with an electric under-carpet-blanket warming everyone's toes in the drawing room.

Our route was then through Oban and south to Kilmelfort, where we spent a most comfortable night in the luxurious modern Kilmelfort Hotel, beautifully situated and very well run by Mr Tindal and his staff.

In each of the places we stayed and in all the journeys between gardens, we enjoyed the most wonderful scenery with views of lochs, mountains and the fresh colours of spring landscape in ever improving weather. Those who had come prepared to record highlights on film all needed extra film and, of course, our enthusiasm grew as each garden unfolded new treasures.

The next morning, under a warm sun we walked across from our hotel to be met by Mr Edmund Wright of Arduaine and shown round his truly wonderful garden. Originated by Mr James A. Campbell at the turn of the century, this garden was acquired by Mr Wright and his brother some seven years ago. The work of improvement, maintenance and development they have done together on this 23 acre garden is herculean. Stonework, path building, tree thinning, replanting, turfing, creating new pools and a water garden, nothing seems to daunt them.

Many readers will have seen recent exhibits at the Rhododendron Show from this garden and marvelled at the quality without perhaps realising that it requires a journey of some five hundred and fifty miles to reach the R.H.S. Halls in Vincent Square.

Of the many shrubs and rhododendrons we saw in this garden, a few of the memorable ones were the first *giganteum* to flower in this country, a huge *griffithianum, rex, arboreums, sinogrande, fulvum, maddenii, hodgsonii, cinnabarinum roylei, campylocarpum* var. *elatum,* the tiniest leafed *serpyllifolium,* a *Berberidopsis* creeper 40 feet high with wrist-thick stem, also, about the same height, a *Trochodendron.* In different parts of the garden we saw purple toothwort (*Lathraea clandestina*), magnolias, eucalypts and an enormous *R. zeylanicum* grown from seed shipped home from Ceylon with the tea, and probably the largest in Britain.

Many people with a water garden have to guard their goldfish against gulls or herons, but few people can have visits from otters exploring along the sea coast as they do at Arduaine. On this occasion we were able to entertain our garden host to lunch before we departed to Stonefield Castle.

At the castle, now a hotel, where we stayed, we were met by Mr David Hannah, the head gardener, and in every sense the custodian of the fifty acres of its surrounding woodland garden. The first plantings here were from seed sent home from the Himalayas by Sir Joseph Hooker, in 1859. Under Mr Hannah we enjoyed a conducted tour starting on the lawn with a huge *niveum.* We saw too the *niveum* hybrid 'Succoth Blue', Hooker's true blood red *arboreum,* some enormous *falconeri,* a very big *eximium,* an *arboreum* with five trunks towering to probably 50 feet and covered in flowers, *thomsonii* 'Fleur de Roi', *campanulatum, wallichii, barbatum, smithii,* pink *calophytum,* and *grande* × *thomsonii* hybrids.

There were multitudes of small *ciliatum* seedlings flowering alongside the pathways and self sown large leaved seedlings elsewhere. There was a wonderful Japanese umbrella pine which must have been approaching 50 feet high, also a *Philesia magellanica* 4 feet high and 12 feet across.

I hope no reader will think we are a band of rhododendrophils gone over the brink, intoxicated with colour or fragrance or driven by an insatiable west highland appetite for yet more rhododendrons when I say that after such a day as this, a dozen of us missed half our supper to make time to visit yet another garden. Dr F. Severne Mackenna's Dun Alasdair at nearby Tarbert was very well worth it too. A young garden of some five acres, it has been literally carved out of a hillside thicket of wild *R. ponticum*. Where the ground has been cleared, exposed rock protrudes through the shallow peaty soil in the series of small enclosed gardens created. We saw among others, thriving plants of *campanulatum, suberosum, lanigerum, semilunatum, tephropeplum, roxieanum* var. *oreonastes, hypenanthum* 'Annapurna', *concinnum pseudoyanthinum, exasperatum,* all recorded and labelled. Indeed, we were impressed by the thoroughness of labelling we had seen all along.

And so ended a truly wonderful day in which we felt we had made full use of every waking hour.

At 5.00 a.m. the sun was up and another day began. This was a day where time and tide might play a part for we were going by ferry to Arran from Clonaig. The ferry was too small for our coach, its maximum capacity 4 cars, and we did not wish to be late and risk being left behind. Our coach operator had arranged an island bus to meet us at Lochranza, take us to Brodick Castle and then deliver us aboard the S.S. *Brodick* to Ardrossan ferry, where our own coach would meet us. In this way we crossed the Firth of Clyde while our baggage stayed on the mainland but went the long way round.

We again enjoyed scenic grandeur in perfect weather as we sailed in sunshine on a mirror-calm sea that soothed any fears of difficult voyaging. On the forty-minute crossing, as we looked at Goat Fell on Arran in brilliant sunshine and watched the Argyllshire hills recede, we became aware our course was distinctly erratic. Thoughts of tricky navigation to avoid unseen rocks were forgotten when we saw a submarine surfaced on a parallel course about three miles distant. A furtive peep inside the wheelhouse did not reveal urgent action. The submarine was friendly, but the wheelhouse was being repainted and as the helmsman applied varnish to each spoke of the wheel, he altered our course to ensure no part was missed!

We arrived on time. All our arrangements worked smoothly and in the care of Mr John Basford and his assistant, Mr Bannan, we saw the gardens and the magnificent large leafed rhododendrons that have so often graced the show benches in Vincent Square. Some 60 acres in extent, and lying between the castle and the sea, the gardens enjoy protection above and around, planted largely by the late Duchess of Montrose in the 1920s but owned by the National Trust since 1948. Tender Maddenii series rhododendrons like *taggianum* and *lindleyi* were growing out of doors, also *macabeanum, magnificum, giganteum,* a wonderful specimen of 'Fortune', *arboreums* like *delavayi* and a beautiful 'Sir Charles Lemon' at its flowering peak. We saw too the Horlick collection gifted by the late Sir James Horlick of Gigha to the National Trust,

with 'Avalanche' in full flower and a specimen of 'Mrs James Horlick' nearby.

Our onward journey to Ardrossan was most pleasant and enjoyable. Our bus was there to meet us and we reached Edinburgh for our last night. Mr H. H. Davidian came to dinner and gave us a talk about the tour of the Royal Botanic Garden on which he was to take us next day. His enthusiasm and knowledge of rhododendrons is such that he could make even a *ponticum* a topic of profound interest and teach something at the same time. When surrounded by the collection in those gardens we had interest and instruction in full measure. We saw *collettianum*, recently collected in Afghanistan, the true *caucasicum*, a selection of *R. wardii* forms illustrating the range of growth habits and differences of time of flowering within one species. We were instructed in the finer points of leaf texture, as well as being shown particular distinguishing features like leaf margins and types of leaf hairs. We saw *edgeworthii* growing out of doors and soon to flower, also *pendulum*, a beautiful *lacteum* and the quality and variety of young leafage was extolled, the dark green, bronze, pale green and blue green shades and silvery indumentum coverings were all commended to us and exemplified. The tiny dwarfs like *kotschyi* and *sargentianum* growing in the rock garden were brought to our attention in case we were bemused by large-flowered species and missed them.

We visited the botanical library in the herbarium building and finished by seeing tender species like *dalhousiae, burmanicum* and *ludwigianum* and the Malesian introductions growing under glass.

No account such as this can portray the quality and variety of plants we saw, for it is only possible to mention some of them. I hope it will convey a memorable picture to those who were not able to join the tour and encourage them to visit Argyllshire at some future date. We are very grateful to the owners whose gardens we visited and for the time everyone spent showing us round. We hope the young rhododendrons we left at each garden as a thank-you token flourish and remind them of our happy visit. No reader will have any doubt about the success of this tour but it was our Chairman, Walter Magor, who made it possible and then made it happen. To him we all say thank you again and we hope that the new *Sorbus* (sp. Ghose) which we sent him as a surprise grows well.

Notes from Lamellen

E. W. M. MAGOR

I inherited this garden when my Father died in 1941 after growing rhododendrons here from seed for nearly forty years, but for the next twenty years Government service overseas prevented me from paying it more than the briefest of visits at long intervals. During the last twenty years of my Father's life Haughton, who had been a cook in the Navy, had been in charge of the garden, but had never been allowed to touch the rhododendrons, except to scythe the brambles and bracken round them in October every year. His job was "the tummy garden", as Father called it, and keeping the drives open, and till we returned he followed

these orders meticulously, to the great encouragement of the vegetation.

Soon after we came home, we had a visit from the Cornwall Garden Society, who visited Tremeer in the morning and Lamellen in the afternoon, and one dear lady as she battled her way through the brambles in her Ascot frock, said gushingly to my wife, "After seeing General Harrison's rhododendrons so beautifully kept this morning, it really is rather refreshing to see yours in their natural state here".

Not long after this, Sir Eric Savill brought Dr Harold Fletcher over and, as we pushed our way through the jungle, and passed a nursery with the rhododendrons two feet apart and eighteen feet high, I asked Dr Fletcher what he would advise me to do about them, and was told, "Cut the whole lot down".

Eighteen years later, I am still finding plants that we did not know we had (*R. ceraceum* and *Lithocarpus cleistocarpus* last year), but we did appreciate at a very early stage that we had to do a great deal of clearing and replanting and, if possible, propagate some of my Father's hybrids as well as rare trees and shrubs, of which we had plants that were already on their last legs. In the beginning, Mr Hillier was very helpful over this, and so in more recent years have been the Savill Garden and in particular the Hydon Nurseries. In 1962, however, David Leach's fine work *Rhododendrons of the World* came out, and my wife gave me a copy as a birthday present. This, in chapter IX, gives the most exhaustive account of the propagation of rhododendrons that I have yet seen, and this inspired me to improvise a small "Rearing Frame", and put in a few rhododendron cuttings from which I now have some nice plants of Rhododendrons *crassum, brachysiphon, maddenii, lyi, ciliicalyx, xanthocodon*, 'Christmas Cheer', 'Dicharb' and 'Fulgarb'.

For the next ten years, my gardening was confined to weekends, as I was working as a civil servant in London and, for five months of every year these weekends were spent in cutting and packing rhododendron blooms for sale at Covent Garden to pay the gardener. Old Haughton finally retired shortly after I did, after forty-two years' very loyal service here, saying that at eighty he was no longer prepared to go on paying income tax on his Old Age Pension. My wife died soon afterwards, after ten busy and very happy years in this garden, and my elder daughter took over the property a year later. My son-in-law's accountant soon advised that he should not be paying the new gardener from unearned income (farm rents), and that the garden must produce an income of its own. We had found some years earlier that it was no longer possible to sell surplus fruit and vegetables, when the local greengrocer monopolist could so much more profitably transport them the 250 miles from Covent Garden so, to my grandchildren's huge amusement, Grandfather was given "bottom heat" and mist, and told to get on with it, and enormous fun it is, though very time-consuming.

I still refer frequently to David Leach's book, and I cannot praise it too highly. I did however also find a lot of useful advice in the extracts my Father made fifty years ago in his garden ledgers of letters from Sir Isaac Bayley Balfour and Mr J. C. Williams (reproduced in the Rhododendron and Camellia Yearbook, 1964), and from the *Gardener's Chronicle*, and among these were Frank Knight's article on the Propagation of Rhododendrons by Cuttings, published in 1929, one of the first articles on the subject to appear. I chanced to remark to him at a Garden Society dinner how much to the point it was nearly fifty years

later, and he said "Why don't you reprint it?" The Editor of the *Gardener's Chronicle* gave permission, and it appeared in *Rhododendrons, 1976*, and a number of people have remarked to me what a valuable document it is, and not only for its historical interest.

However, that scourge of the Rhododendron Establishment, my friend "Thunderbunny" as he says that he is known (no prizes for successful guesses as to his identity!) tells me that a "past President and Chief Organiser of the International Plant Propagators Society, a man noted for virtuosity in the field of rhododendron propagation" had experienced "his astonishment at the waste of space in reprinting an article which had appeared in 1929 when far more up-to-date information was available, not least his own article in the R.H.S. Yearbook for 1953".

There was an article in the 1977 annual on recent work on this subject from the Glasshouse Crops Research Institute, and it was also hoped to publish an article on work in progress at St Andrews University. Meanwhile, it is of interest to look back even further at records of work on the propagation of rhododendrons from cuttings.

J. G. Millais, writing in 1917 in *Rhododendrons*, says "Recently Mr Watson's 'Rhododendrons and Azaleas' has been issued and is a good handbook on the subject" . . . "Mr Watson in his excellent work on the subject does not understate the matter when he strongly advises the planting of the better class of Rhododendrons (including the Azaleas)" . . . "Nurserymen seem to be quite unaware at present of the large numbers of Rhododendrons . . . that can be raised from cuttings." . . . "Professor Bayley Balfour in his famous paper on the subject (*R.H.S. Journal, vol. 38, part 3*) has however proved to us that it is possible to raise almost any shrub or tree from cuttings if proper attention is given to the hard callus formed before the roots appear" . . . "Mr Watson correctly states "It is more than likely that the majority, if not all Rhododendrons, are capable of being multiplied by cuttings and that when once rooted they would thrive at least as well as when grafted" . . . "*R. racemosum, R. intricatum, R. concinnum, R. yunnanense*, and nearly all the dwarf Chinese hill Rhododendrons are easily raised from cuttings. I have also seen several of the large Rhododendrons (Eurhododendron) struck by this method."

The American Rhododendron Society also saw fit to re-print in its Quarterly Bulletin for July 1976, an article by an acknowledged authority on growing rhododendrons from cuttings, Mr Guy Nearing, first published in 1959, discussing whether cuttings should be taken from old or young plants. To quote from David Leach, Mr Nearing "reports that a great loss of vigour results eventually from the practice of taking cuttings, year after year, from each successive generation of young plants which have themselves been propagated in this fashion only the previous season". I doubt whether there is much experience of this practice with rhododendrons in this country, though I was surprised recently to hear the theory expounded very dogmatically by someone who, as far as I know, does no propagation. I do not know whether this could have any scientific explanation, but it would appear to be an argument against early marriages. It could be true perhaps of camellias; there seem to be some very feeble strains in circulation of *C.* 'Donation' and also of *C.* 'Leonard Messel', and I have heard it said by someone who should know that he cannot produce enough 'Donation' cuttings.

Some of the readers of this Annual, however, might be interested to hear how Grandfather got on with his "bottom heat". Most of the

scientific work that has been done with rhododendron cuttings seems to have been confined to the hardy hybrids, and it seems to be established that rhododendrons with *caucasicum* blood, and the "small-leafed" rhododendrons root most easily; 'Cunningham's White' (*ponticum* × *caucasicum*) being a favourite. 'Nobleanum' (*caucasicum* × *arboreum*), I find, also roots easily, and so do 'Cauapo' (*caucasicum* × *apodectum*) and 'Goldsworth Yellow' (*caucasicum* × *campylocarpum*); but so do rhododendrons with *arboreum* blood; I have had very good results with 'Red Admiral' (× *thomsonii*), 'Dicharb' (× *dichroanthum*), 'Fulgarb' (× *fulgens*) and 'Choremia' (× *haematodes*) and *arboreum* itself. I have rooted a number of *griersonianum* hybrids too. I find the species more interesting however, and it is the evergreen azaleas and the lepidotes which root most easily, especially the Maddenii, Triflorum, Lapponicum and Anthopogon series, and their hybrids. I have however also successfully rooted such elepidotes as *macabeanum, floribundum, ramsdenianum* and *bureavioides;* the Fortunei and Thomsonii series, however, I find difficult, and I have heard it suggested that the entirely glabrous leaf surface is an inhibitory factor. I have also had success with leafbud cuttings of *chrysodoron* and 'Chrysomanicum'!

Camellias, however, are relatively child's play; before Christmas 1977 I potted up over three hundred camellia cuttings that I had been allowed to have from Tremeer when General Harrison was leaving, 27 different camellias: 13 × *williamsii*, 8 *japonicas*, and 6 various. I had 100% success with the × *williamsii*, slightly less with the *japonicas* and about 60% with *reticulatas* and other hybrids.

The Garden at Eckford House, Benmore

KENNETH LOWES and ARTHUR HALL

Most rhododendron enthusiasts know at least something about the Younger Botanic Garden at Benmore, which lies between the lower end of Loch Eck and Dunoon, in Argyll National Park. During the period 1925 - 1930, the estate of Benmore was handed over to the Forestry Commission by Mr Harry George Younger, and in about 1930 his son, Mr John W. H. B. Younger, moved into the house at Eckford, which had previously been the factor's house, about half a mile down river. The gardens of Benmore House had been put into the care of the Edinburgh Royal Botanic Garden, whose Regius Keeper was then Sir William Wright Smith. When Mr John Younger moved into Eckford House, Sir William gave him a large selection of plants, mainly of rhododendron species. In his note in the *1968 Year Book*, from which much of the information given above was gleaned, Mr Younger was already able to complain of "the embarrassment of overcrowding", such had been the growth in the exceptional rainfall and quite mild climate of the valley of the River Echaig. Eckford is about six miles north of Dunoon and one and a half miles south of Loch Eck.

Since the death of Mr J. W. H. B. Younger in August 1972, the garden has not been fully kept up as a rhododendron garden, as the present owner, Mr David A. H. Younger, does not live there except for short periods. Recently, however, some work has been done to arrest the

deterioration caused by gales, storms and unchecked growth. The authors of this account have been able to look round much of the garden and rediscover many of the plants which have survived the very difficult weather conditions of the last few years. As yet, the amount of time spent on this exploration has been very limited, although it is hoped to achieve more in future years. In the body of this article the use of the first person singular indicates Kenneth Lowes, but this is done purely for simplicity and does not minimize Arthur Hall's contribution. For reasons of available time, most of the writing was done by the former, but most of the real knowledge was supplied by Arthur Hall. In order to discuss the plants at Eckford with any pretence to accurate reference or naming, real knowledge is certainly needed, and I am most grateful that it was available.

There are two main obstacles to the naming of the plants. One is that such stock records and acquisition records as Mr John Younger kept are not now available, if indeed they still exist; the other is the present confusion in labelling, which by now has grown to dangerous proportions. Branches have fallen off or been knocked off, and entire shrubs have died; labels from them have been found on the ground at any distance from the original plant, whether this is alive or dead. These circumstances, allied to a certain natural caution on the part of both authors, account for the tentative approach to the use of names which will be apparent to readers. Three examples illustrate the point. On a visit to Eckford in 1978 I noted that a pair of plants, apparently identical and about eight feet apart, bore old stamped lead strip-labels giving different names - *crinigerum* and *habrotrichum*. In 1979 I could find only one of these plants, but neither label. Certainly there are several plants in the garden of *crinigerum, glischrum, glischroides* and *habrotrichum*; and there are several such labels on, or not on, these plants. Then, in 1979 a similar stamped label was found bearing the word TOMASTYLUM. Until then the rhododendron *tanastylum* had not come to notice. Lastly, a bare rhododendron stump two or three inches thick, cut back to about 18 inches from the ground, has put forth a new and strong upright growth over a foot tall, looking remarkably like *fictolacteum*; this does not accord too well with the lead label it bears, which says ELLIOTTII OR KYAWI. But should casual reference to the uncommon *R. kyawi* seem optimistic, Mr John Younger's mention (on p. 47 of the *1968 Year Book*) to "*R. kyawi* now 13 ft. high and 40 ft. round" replaces scepticism with the realization that there are great things in this garden. For instance, in the same article (p. 46) Mr Younger mentions "*R. meddianum* var. *atrokermesinum*, now 15 ft. high and 42 ft. round, in full flower this year in early March". I wish I had seen *that*! I have not, unfortunately, seen either plant; in the case of the *meddianum*, Mr David Younger informs me that it recently began to fail in vigour and must now be considered a casualty; in the case of *kyawi*, I have no positive news but hope to have better luck in 1980. To be able to miss these two uncommon rhododendrons is not quite so surprising as it may seem, as will be appreciated by those who have seen something of the garden. For this garden has a very strong personality of its own, a quality of naturalness seldom achieved in the creation of a garden by an individual garden-maker. Bearing in mind that some hundreds of plants have been put there, on the whole by the hands of one man, clearly it is not by either luck alone or by the unguided hand of Nature that today Eckford can suggest to the rhododendron enthusiast

what he imagines to be the real thing. For this is what, during the May 1979 visit of members of the Rhododendron Group, caused some of them to make the comparison with what some of the Himalayan or Tibetan or Burmese rhododendron country seems to be like, with comparable density and even impenetrability.

Seen from the main road, across a flat arable field, the garden is the bottom part of a steep hillside, and gives an impression of having been tilted up at thirty or forty degrees for the purpose of being viewed. The house sits snugly on a slim platform, in a framework of conifers, some of them very tall even by the standards of Argyll. But in April and May the eye is quickly taken by masses of colour from the larger rhododendrons. Arriving at the gate which gives access to a short steep drive to the house, the visitor is already among the rhododendrons, and at the right season can scarcely ignore a good plant, about ten feet, and more than that through, of one of Eckford's many *campanulatums*. Should he stop to examine this specimen, or any of the many others, he is also already face to face with the identification problem, for there is such variation among these *campanulatums* that thoughts of hybrid origin are easily aroused. After scrambling about the garden six or seven times, my recollections are dominated by *campanulatums* and two other species, the *arboreums* and the *glischrum* group. In different ways the Campanulatum series is capable of showing wide variation, as Dr Cowan and Mr Davidian underlined in "A review of rhododendrons in their series" in the *1949 Year Book*. Referring to the series, they wrote ". . . this loosely bound group of purely Himalayan species is acknowledged to be a heterogenous assemblage". Referring to the species, they observed "Numerous variant forms occur not only in cultivation but also in the wild, and, moreover, in cultivation *R. campanulatum* hybridises freely". Dr Fletcher has written in similar vein (*A Quest of Flowers*, Edinburgh University Press, 1975, p. 50). At Eckford it seems probable that the range covers several forms of the species, a number of hybrids, and *wallichii*. Some plants are labelled *wallichii*, and from superficial inspection they probably are. Foliage and flower-colour both show variation, the colours I have seen all being airy and delicate, usually a white ground being lightly flushed with pale rose, lilac or lavender, nearly always attractively spotted. Further visits may of course bring to light a still wider range.

Near the entrance gate and looking up towards the house, the rocky bankside is quite densely planted with a range of smaller species which in their compact forms set off, but do not conceal, the house. Plants around the house which particularly take the eye include four very beautiful white *arboreums* of very solid texture, all labelled "*cinnamomeum*" and having a good rich rusty-brown indumentum. An eight-foot *caloxanthum*, heavily laden with graceful trusses of a lovely deep primrose, had its flowers but not its foliage cut by two sharp night-frosts at the beginning of May in 1979. This is a species which is well represented in the garden, always, I think, in a very good form.

The house is virtually framed by rhododendrons but behind it there is a small wooden bungalow. Immediately in front of it are four quite large plants, approximately equal in size. Not seen in flower, they might consist of a *falconeri*, a *calophytum*, an *auriculatum* or perhaps 'Polar Bear', and an *uvarifolium*. Future visits, and the enthusiastic and kindly tutelage of Arthur Hall, may yet combine to sharpen my perception,

however. The bungalow is perched in the bottom corner of a tiny alpine meadow, planted with many hundreds of narcissi in massive stretches, each chiefly of one variety yet merging into one another at the edges. Yet this is one of the few places in the garden where rhododendrons do not dominate, and the shrubs and small trees spaced around this grassy area maintain the high level of interest. A brief list will whet the appetite, but regretfully several of these plants look unhappy, particularly the only plant that I have ever noticed of *Metasequoia glyptostroboides* looking as though it just could not cope with ninety inches of rain every year. A number of these plants, although in a comparatively open situation, are thickly coated with lichen and look stunted and frustrated. Lack of light may be a contributory factor, for the high, steep hillsides keep much of the early and late sunshine off the garden. Among these shrubs and trees are *Enkianthus cernuus rubens, Piptanthus laburnifolius, Kalmia angustifolia, Leptospermum scoparium,* an *Embothrium* seedling, *Cotoneaster moupinense, Hamamelis* × *intermedia* (form not given), *Nyssa sylvatica,* a *Prunus* and some *Eucryphias.* This open grassland patch is itself, like the house, almost ringed with rhododendrons, in this case on the eastern side or highest part of the slope. There is one notable plant here, on the very edge of the wood. This is a very fine *crassum* with bold rounded leaves of thick texture, measuring at least 4½ inches by 2½ inches when expanded. The plant is about fifteen feet high by twenty feet wide (and so, presumably no less than fifty feet round - if one *could* get round); in May 1979 it bore many hundreds of frosted flower buds and it is said to be a regular and very reliable flowerer. From the dense tangle of growth behind this plant there arises a twenty feet tall, quite narrow *rubiginosum* of a lilac-rose shade, in 1979 covered with flower which withstood the two sharp frosts in the first week of May. Near it is a plant of *searsiae,* in the Triflorum series, Yunnanense sub-series, which was not in flower in 1979 but which from a previous flowering has produced seedlings at its feet with the characteristic silver-grey leaf reverse.

This tiny clearing is of irregular oval shape, and it is possible to leave it at various points in order to penetrate the edges of the rhododendron forest. Once inside this forest, keeping a set direction becomes a matter of luck until a sense of familiarity has been achieved, for there are many culs-de-sac, one or two impressively steep bluffs, walls, of hillside rather like a childhood picture of the entrance to Ali Baba's cave, and not a few impenetrable walls of large rhododendrons. It is fairly realistic to state that a complete tour of the places where walking is impossible would almost certainly involve treading on the growth of good and even rare plants, a dozen times or more, and this in using the greatest care. Once committed to the exploration, everything but the conifer canopy and the rhododendrons is relegated to insignificance, although there are in fact a very few plants which are neither conifers nor rhododendrons. There is also the occasional small glade, or at any rate, area of forest floor, where one can look round and enjoy such plants as are best seen from normal eye-level. However, in this dense wood heights are not easily estimated unless they are very modest, in which case they are scarcely worth mention. Such as are given were guessed at a glance; their interest merely lies in the comparatively quick growth some plants have made, as the garden itself is not really old.

At present a tour of the wood itself is not, therefore, a simple walk with easily-followed landmarks. The plants now to be mentioned are

located on a roughly anti-clockwise circuit with frequent sideways excursions. Some of the remoter areas have not been examined, although "remoter" may only mean ten yards in some cases. As further clearances are made, more rhododendrons will be accessible or even revealed, for inspection and identification. Today, an opening gives a sight of, and access to, the interior of the main rhododendron woodland, which lies beneath a tall and heavy canopy of mature conifers. Just after entering the wood, in a small clearing, a rather gangly plant of 'Prelude' is splayed out among deep sphagnum on the top of a massive rock, many feet above path-level. Practically all the plants in the vicinity are, or purport to be, species; to find a 1942 hybrid here may seem incongruous; yet 'Hawk Crest' is thought of as a woodland plant, so why not 'Prelude'? Well-known for being Lionel de Rothschild's last cross (L.R. 1210), 'Prelude' is one of numerous Rothschild hybrids to be found in the garden.

A number of the conifers among which we now walk merit the epithet "giants". There are grand firs, noble firs, pines and larches. At one point on the circuit one of these giants, felled by a gale, impedes progress along the route; to quell thoughts of turning back, steps have been neatly cut in the horizontal trunk, on both sides; so the corpse invites us to cross and is easily scaled by means of its own stile, aided by a handrail made from rhododendron timber. Turning hard left from the last rhododendron mentioned, 'Prelude', *campanulatums* are at once in evidence; one of the bigger ones here is about eighteen feet high by twenty-five feet through, and has neat trusses of a pale rosy-lilac on a white ground, lightly speckled chestnut-red. The foliage is handsome and the soft snuff-coloured indumentum is consistent, showing up well one windy day when leaves were fluttering. By plunging through the edge of the group with which it merges, much of which consists of tall and now rather leggy *racemosums, virgatums* and *sanguineums*, it is possible to find a path near which are two less common species of the Lacteum series, *phaeochrysum* and *traillianum*. This path soon leads to a knoll deep in sphagnum, bearing what for this garden is a strange mixture of smaller species and hybrids. Some of the plants have been seen in flower, and much of the labelling in this area appears to be quite trustworthy. The following may be distinguished, among others whose identity is not yet clear. A very fine large-flowered *ciliatum, calostrotum* Rock's form, 'Gertrude Schäle', 'Humming Bird', 'Moonstone', *pemakoense, patulum, brachyanthum* var. *hypolepidotum* and *chamae-thomsonii*. A substantial plant labelled *williamsianum* × *wardii*, but not in flower, does in fact look like 'Cowslip' as it should; but who made the cross, and actual provenance of the plant itself, are not yet known.

Slightly above the knoll a simple bench-seat, now encrusted with age and lichen, is overlooked by quite young-looking specimens of *Liriodendron tulipifera* and *Stewartia pseudocamellia*. Nearby are *Prunus sargentii, Drimys winteri* and an *Embothrium* marked "Rhu" (presumably meaning Glenarn, with the owners of which garden Mr Younger had friendly links). On the other side of the path is a good deep-coloured form of *glischroides*, of which, along with *glischrum, habrotrichum* and *crinigerum*, there are a good many specimens in the garden. The deep carmine-red hairy growth on the young shoots of *habrotrichum* is, where it is unfamiliar, surprising but very striking and picturesque. I have not yet seen a specimen of *rude* at Eckford, but in the 1968 article Mr Younger mentioned a *vesiculiferum*. In an article in the *1962 Year*

Book (p. 39), Dr Fletcher said of *vesiculiferum* that it "grows beautifully at Eckford and elsewhere in Argyll, making a nicely shaped plant with very handsome foliage, and carrying numerous trusses of pale rose flowers. I regard it as a very rewarding plant . . " However, I have not yet located this evidently notable specimen.

Near the *glischroides* are two eight-foot plants bearing the label *erythrocalyx*. Here Arthur Hall doubts the accuracy of the labelling and at present favours the theory that these two plants are *fargesii* hybrids. Similar labelling doubts prevail only a little further on, where a small tree bearing in 1979 many attractive trusses of brilliant rose-scarlet is labelled *lukiangense*; if true, the colour would lean to magenta-red, and in this case Arthur Hall inclines to the idea of a *strigillosum* hybrid. The tree is quite mature-looking, and the cross must presumably have been made early in the garden's history. Once again, the provenance of this plant is not yet known, but it would be interesting to find it, for it is a most handsome rhododendron.

We are now in a more open area, of what could be called forest clearing. There are, or in a few cases apparently have been, some large plants around the edges. These include a good *macabeanum*, a distinguished *calophytum*, *sperabile* var. *weihsiense* with attractive silvery indumentum beneath the leaves measuring up to six inches by two. A *basilicum*, bearing no flowers in 1979, has eleven trunks and reaches about twelve or fourteen feet by twenty feet spread; a fine-looking tree. Of two adjacent *sidereums*, one has two main trunks of approximately twenty feet height and fifteen feet spread. A large *smithii* has very handsome bark, then there are nice plants of *sinogrande* and *fictolacteum*, followed by a very large plant of many trunks, branching from the base, and labelled *gymnanthum*. In retrospect a query arises concerning the reason for the finding of labels of both *lukiangense* and its subspecies *gymnanthum* on almost adjacent trees, for as it happens another *lukiangense* subspecies, *adroserum*, is to be found in this area, quite near. A true *lukiangense* may yet, of course, be encountered. A similar problem lies only a few yards away, where three rather weary-looking trunks of separate trees, with some but not many signs of life, bear three labels all saying *delavayi*; it would be nice to see them all rejuvenated, and in flower together, for in 1968 Mr Younger was able to write "*R. delavayi* is quite hardy with us".

A plant labelled *setiferum*, a Selense, is more probably one of the Arboreum series, but again, in 1968 there *was* a *setiferum*. Similarly, Arthur Hall thought a plant marked *araiophyllum* is probably a hybrid rather than the true species. Near here, an unlabelled large-leaf almost certainly revealed its identity as *praestans* by the flattened, winged petioles and plastered indumentum. Now came the rhododendron which *may* be *tanastylum*, mentioned earlier, with red mid-ribs to the leaf.

A small *niveum* and a *pseudoyanthinum*, one of many in the garden, bring us near one of Eckford's two chuckling streams - in early May not chuckling too ebulliently and in consequence not seeming too aggressive as they might well be under flood conditions. Hereabouts a very large *fulvoides* with conspicuous leaves up to a foot long, tawny rather than orange beneath, and bearing good trusses of about sixteen or seventeen flowers of pale lilac-rose with strong maroon blotch, hangs over a streamside path several feet below. Its approximate measurements are: four trunks each 6 to 8 inches diameter, with a height of fifteen feet by twenty feet spread. Across the stream, a fourteen-foot *wardii* grows from

three trunks with a total circumference of six feet near ground-level. It is in a heavily-shaded area and bore few signs of flower in 1979. Nearby a twelve-foot shrub labelled as a *williamsianum* hybrid, and looking like that, bore hundreds of flower-buds. The label *sphaeroblastum*, hanging from a beautiful *campanulatum* of considerable size, was not very convincing; but I did not notice the genuine *sphaeroblastum* on this occasion - in this remarkable garden it may well be there, and it may yet be possible to re-hang the label one day. Round the stream-margins there are, among many other plants, *cerasinum*, *wardii* again, *griersonianum* and *decorum*. If we now clamber back up to ground-level we find we have just completed an oval circuit, and have passed behind the distinguished *crassum*, mentioned earlier as overlooking the centre of the little alpine meadow. At this end there is a group of plants which, during the twelve days we were there in 1979, impressed its personality on the entire property - house, bungalow, drive, wood, and the bottom pasture which has not so far been mentioned. This is a group of three *arboreums* in a very telling shade of rose, which tower up into the big tree background, and caught our eye every time we glanced at Eckford from the main road. Although damaged by the two hard frosts mentioned, they were almost as spectacular afterwards. Round them, some quite large plants crowd one another and, to judge by seedlings at their feet, here promiscuity has been unrestrained and breeding confusion appears to be total. These large plants include 'Cornish Cross' - which one, I cannot say - an 'Alix', often encountered in Argyll, and two plants bearing interesting but puzzling labels. These say WA - Bulstrode Park, and WA - Kentish Lad. The significance may be clear to some readers. I do not myself recall encountering either of these in other gardens, but Bulstrode Park is in the Handbooks under "Available hybrids" and will be familiar to some.

By going back to the path by the stream and ignoring a profusion of plants on the banksides, such as a 'Carita' and a *litiense* almost rubbing shoulders, for instance, we can descend to a small field or pasture in which some rather mature-seeming rhododendrons are used as dot-plants. Although most of these look interesting, few have labels at present. Swinging round to the right, and thus looking northwards across a long bluff planted with eucryphias among other things, we are again in view of the house and drive, seen behind the neat beech hedge which surrounds a kitchen garden and small greenhouse. Even here, looking from behind, the side of the steep drive is planted with interesting things.

More than most rhododendron gardens that I know, Eckford is a garden for the specialist. At present it needs a real *aficionado* with lots of time available to tackle the density problem; but this problem is not insurmountable, and recently much progress has been made towards making the plants accessible for viewing. On the very steep hillside this is of course difficult, and adverse weather, especially winter gales, does not help. There is a lot of work to be done in the way of surgery and identification, even after a significant attack on the clearing work. I could not help thinking of the kind of operation on V.S.O. lines that could accelerate results; but much expert supervision of blitzkrieg tactics would be needed. The rhododendrons have nearly all grown well under the influence of high rainfall and benign climate; unfortunately they are thus their own enemies, for although in poorer conditions the spacing would appear very reasonable, at Eckford the normal quoted or presumed sizes of plants are usually exceeded. In other words, most of

them have been given a very congenial home here, and they revel in it.

If good progress can be maintained in clearing and identifying, it is certain that this account will be quickly out-dated, for the list of omissions will outgrow the list of names already given here. In this event a further article would be needed to provide a truer picture of the remarkable garden that is Eckford.

Book Notes

"The Larger Species of Rhododendron" by Peter A. Cox. B. T. Batsford Ltd., 352 pp. with 6 colour plates, 53 black and white and 38 line drawings. £17.50.

Mr Cox's *Dwarf Rhododendrons*, published in 1973 by Batsford in association with the Royal Horticultural Society, has been a considerable success. It covered all the species in cultivation up to 5 feet, as well as the Malesian species, and listed the principal dwarf hybrids.

His new book covers all the species too large for inclusion in *Dwarf Rhododendrons*, and follows the same general layout. There are chapters on "Rhododendrons in their Natural Habitat", on "Larger Species in the Garden", on "Planting and Maintenance", on "Propagation" and on "Pests, Diseases and Disorders" and thirty "Recommended Lists" ("Largest Leaves", "Best Bark", "Newly Introduced", etc.).

There are six very beautiful colour plates by Margaret Stones and numerous excellent line drawings. Some of the black and white plates are the author's own, but most have been supplied by the Royal Botanic Garden, Edinburgh; in particular, there are some splendid photographs of rhododendrons in the wild, one each by Mr and Mrs Cox, an historic one by George Forrest and a number by Dr Joseph Rock. Mr Peter C. Hutchison has again contributed some very interesting distribution maps.

In *Dwarf Rhododendrons*, Mr Cox admitted that he had taken the liberty of making a few changes in the classification and naming as printed in the *R.H.S. Rhododendron Handbook, Part One, 1967*, which is still the standard accepted in this country. In the present work, the author has followed the revision described in *Notes from the Royal Botanic Garden, Edinburgh, Vol. 36, no. 1* by J. Cullen and D. F. Chamberlain, which covered the lepidote rhododendrons and some of the elepidote sections.

A table is provided in this book giving the Sleumer sections and subsections equivalent to the familiar series and sub-series in the *Handbook*, but no explanation is provided of the reasons for the changes in nomenclature. With other authoritative works approaching publication, one wishes the author could have waited for the publication of the rest of the Edinburgh revision, as it is not at present possible to check the authority for some of the statements he makes about the relationship of elepidote species, and some unfamiliar names have been dredged up, not included in the *Handbook* or in *The Species of Rhododendron*, 1930, e.g. *R. puniceum* Roxb.

Of the fourteen "Species of Doubtful Relationship", mentioned in the Edinburgh *Preliminary Synopsis*, three have been included in this book on which the author evidently does not agree with the taxonomists,

coxianum, imberbe and *spilotum.* Subject to these reservations, the 212 pages of Species Descriptions are the best part of this book; the botanical descriptions are adequate without being too long, and these are accompanied in most cases by ample field and cultivation notes. One would have preferred Collectors' names to have been given in full, only using initials when referring to seed numbers.

Mr Cox is at his best when describing matters with which he is familiar, and the sections on "Collecting Wild Rhododendrons", on "Showing Rhododendron Trusses and Plants", on "Planting" and the chapter on "Propagation" are very good. The section on the "History of Rhododendron Distribution and Evolution" is perhaps less convincing, and in this early part one puzzles over such unfamiliar terms as "triacular" and "speciation", and a number of other words which more obviously have just been missed by the proof-reader.

If the Edinburgh proposals for revision of the classification are accepted by the Royal Horticultural Society, and by the next International Rhododendron Conference, this should become an important book.

E. W. M. M.
August, 1979

Phenology of Cultivated Rhododendrons in the Lower Mainland of British Columbia

by the President,
Dr L. Keith Wade,
and some of the members of the Vancouver Chapter of the
American Rhododendron Society. (University of British Columbia
Technical Bulletin no. 10, March 1979)

"Phenology" is perhaps a term more familiar in the Western Hemisphere than on this side of the Atlantic, and it was as unfamiliar to Webster's Dictionary as "Climatological", which can perhaps be paraphrased as "climatic". Neither term was included in any botanical glossary to which the reviewer had access, but Chambers Twentieth Century Dictionary defines "phenology" as the "study of organisms as affected by climate, esp. dates of seasonal phenomena, as opening of flowers, arrival of migrants".

The term is not defined in the publication under review, but it would appear in this context to mean a study of the effect of environmental factors on the dates of flowering and length of flowering period.

With the assistance of the University of British Columbia Botanical Garden and Youth Employment Program, nine members of the Vancouver Chapter have recorded the flowering dates of about 220 species of rhododendron and their varieties and some 550 hybrids at six sites from sea-level to 160m altitude and from 100m to 80km inland in the British Columbia Lower Mainland in 1976, 1977 and 1978. The data collected was subjected to computer study by staff employed by the Botanical Garden, and this is tabulated over 160 pages of the bulletin,

showing against each rhododendron the date when colour first showed in each site over the three years; the date when the first floret opened; the date of peak bloom; and the date of the end of blooming.

It is noted that temperature extremes increase with distance inland, and to a less marked extent with increase in altitude. Difference in flowering times are greater in early- rather than late-flowering rhododendrons. These general conclusions would seem to bear out experience elsewhere.

It is interesting to note that this publication, like Mr Peter Cox's "The Larger Species of Rhododendron" reflects the half-way stage in the revision of the classification of the genus which coincided with the New York Rhododendron Conference in 1978, with the lepidotes completed, but the elepidote series for the most part not.

As seems to happen these days, proof reading has been patchy; e.g. *R. decorum* at Stanley Park in 1976 seems to have taken a remarkably long time to open (p. 32); the spelling of 'Burgundy' is unusual (p. 108); and the breeding attributed to *R.* 'Crest' would have produced a very different rhododendron (p. 118) to this fine hybrid.

Where there is doubt over the spelling of the name of a species, it is stated that the 8th edition of "Bean" has been followed (p. 33). Misled perhaps by "The Rhododendron Handbook", Part One 1967 (p. 162) the spelling of *R. traillianum* has been changed (p. 85), though George Forrest named this species after his father-in-law, so presumably knew how to spell his wife's maiden name; a pitfall into which Dr Chamberlain did not fall.

The study confirms experience elsewhere that the date of flowering and length of flowering period of most rhododendrons is infinitely variable. An appendix sets out the flowering periods of the rhododendrons studied, month by month, from 'Purple Splendour' in the first half of February; *moupinense, mucronulatum* and *sutchuenense* in the second half, through to *calendulaceum, didymum, prunifolium* and *serotinum* in July, and *saluenense* in August (surely a second flush). In Cornwall, a similar range would run from 'Fulgarb' and 'Nobleanum' in January to *auriculatum* and *serotinum* in August, with *neriiflorum*, 'Yellow Hammer' and others giving a second flush in October.

E.W.M.M.

Book Review

The Camellia - Its History, Culture, Genetics And a Look Into Its Future Development. By David L. Feathers and Milton H. Brown. The American Camellia Society. $12.50, plus $1.50 for postage and handling for overseas shipment.

With the rapidly growing world-wide interest in Camellias, a new authoritative book on the subject is to be greatly welcomed, especially when it is the work of such knowledgeable enthusiasts as David Feathers and Milton Brown, aided by other experts in their particular fields.

Published under the auspices of the American Camellia Society, the book in its 476 pages covers a wide spectrum of camellia growing and use, though naturally orientated towards such activities in the United

States, almost all its contents can be of interest and benefit to growers in other parts of the world.

Starting with an interesting article on camellia history and origins, a large section follows devoted to culture, in all its aspects. For a beginner, it is a most valuable part, as it goes into details of soil requirements, watering, planting, situation and mulching, together with the treatment of plants once they are growing. The selection of varieties, always rather bewildering for a newcomer, is well covered, together with an article on the various flower types and forms, with good illustrations to facilitate recognition. Propagation in various ways is fully covered too. I was glad to see that rooted cuttings, the surest if not the quickest way in this country's climate, was dealt with.

However, for the already keen camellia grower, there are many other chapters, written in some cases by experts on their special subjects. Hybridization and genetics, bud mutations and flower variegations are among the varied aspects covered. The cold resistance of various camellia varieties is also touched on. Fortunately for us in this country, the various chapters on pests and diseases do not greatly concern us here, except for the one on catching moles, which I personally have experienced as a major pest.

Altogether, a most comprehensive book; illustrated with many drawings and photographs - some coloured - to accompany the text; and for these days of inflation, at a most moderate price. A book to be recommended to all camellia growers; beginners or experts.

Giles Loder.

Magnolia heptapeta et alia?

NIGEL HOLMAN

"You will forgive me if I say that your letter about *Magnolia* produces a feeling of horripilation! It brings back the days when I was in continual communication with George Johnstone during the writing of his book; when, after averring that he was no botanist, he would express strong opinions about how the botanists should classify the plants of this genus. . . . One thing, however, I have no wish to do: that is to get involved again in the interminable arguments between gardeners about the differences between their plants - differences which as a rule have no significance in botanical classification. . . ." (Extract from a letter, dated 30 June 1967, from the late J. E. Dandy, of the Department of Botany, British Museum (Natural History).)

For over fifty years Mr Dandy was the eminence grise of *Magnolia* taxonomy; his assistance in the preparation of their books on magnolias is acknowledged by J. G. Millais (1927), George Johnstone (1955), and Neil Treseder (1978). George Johnstone also shows in his text the depth of disagreement he had with Dandy over certain taxa.

The main battle was fought over *Magnolia sargentiana robusta*, considered by the botanists to be a variety of *M. sargentiana*. Johnstone, however, was convinced that they were two separate species; this opinion was based on many years of study of living specimens in the garden. He also visited the Herbarium at Kew, where he found that the dried

specimen of *M. sargentiana robusta* had lost the tip of its leaf; he considered this significant, as his conclusions were partly based on the emarginate tip to *M. robusta*'s leaf, a characteristic absent in *M. sargentiana.* After due consideration, he gave *M. sargentiana robusta* specific status in the original text. Dandy said "no", Johnstone said "yes"; stalemate. Dandy then appealed to the Council of the R.H.S., the publishers of the book, *Asiatic Magnolias in Cultivation.*

It was inevitable that the Council would find in Dandy's favour; the argument was over Botany, and the Botanist was bound to win on appeal; George Johnstone altered his text to conform with Dandy's opinion, albeit unwillingly. He made this clear in the chapter on *M. sargentiana robusta,* in which he differentiates between those who work on dried specimens in the herbarium, and those who work with living examples in the garden.

Thanks to having had a father with a profound love of magnolias, I have had the advantage of studying "living examples" in my own garden, which has led me to take up cudgels on behalf of various taxa with Mr Dandy, hence the letter. My success rate was no better than George Johnstone's. This was bound to be - we were using different criteria; however, I enjoyed the correspondence, as, I think did Mr Dandy. My questions were always answered - "Thank you for your questionnaire; it makes a change from income-tax forms and such like".

A clear example of these differing criteria is illustrated comparing the type *M. campbellii* with its subspecies *M. mollicomata.* The taxonomist, working in the herbarium with dried specimens, finds little to differentiate between these two taxa. The gardener, however, sees differences that make it imperative to keep them separate. One of the disadvantages of the type is the length of time it takes to reach florescence - up to twenty-five years from seed, a long wait for the impatient; this compares with an average of twelve years for *M. mollicomata.* A specimen at Chyverton grown from seed by my father took only nine years (seed sown November 1936, germinated May 1937, first flower bud observed November 1945, and thirty-five buds counted November 1946). The type can open its first flowers in February, a month before *M. mollicomata,* making the latter a safer bet in our untrustworthy climate. Despite these inherent disadvantages, the glorious clear pink to crimson flowers of *M. campbellii* make it an essential member of any collection of magnolias, whereas the pale fuchsia-purple flowers of the typical *M. mollicomata* can be disappointing.

It is because of this gap between the botanist and the horticulturist, that I get a feeling of horripilation, similar to that which my first letter gave to Mr Dandy, when I read of botanists "Reviewing a Genus", as I know that the result of their labours could be the lumping of species, and the changing of names familiar to the gardener all his horticultural life.

These fears were realized when I read in the *Journal of the American Magnolia Society** the various changes in the nomenclature of *Magnolia* proposed by Dr Stephen Spongberg, of the Arnold Arboretum, first published in the *Journal of the Arnold Arboretum.*†

Dr Spongberg's revisions can be placed into two categories - change in status, and change of name. The changes in status, based as they are on botanical principles, can be absorbed without much distress, whereas

* Volume 12, No. 2, pp. 3-6 (Fall-Winter) 1976.

† *Journal Arnold Arboretum*, Volume 57, part 3, pp. 250-312, 1976.

some of the proposed changes of name I find highly controversial, and difficult to accept.

One of the most popular magnolias is *M. stellata*, outstanding for its slow growth and bushy habit, and for its multipetalled (15-36) white flowers. For some years various American authorities have been suggesting that it is a variety of another Japanese magnolia, the tree-like *M. kobus*, with white flowers of 6-9 tepals; this theory is confirmed by Dr Spongberg. He merges var. *borealis* into the type, but retains *loebneri* (at present the collective epithet for hybrids of *M. kobus* × *M. stellata*), as a variety of *M. kobus*:

Previous Usage	*Spongberg*
M. kobus	*M. kobus*
M. kobus var. *borealis*	*M. kobus*
M. × *loebneri*	*M. kobus* var. *loebneri*
M. stellata	*M. kobus* var. *stellata*

Even after all this reshuffling, I foresee little effect on the gardener; *stellata* will remain in common use, the same as *mollicomata*. It is important that it should do so, as despite the obvious close relationship with *M. kobus*, their differing habit of growth separates them in the garden.

The various species of *Magnolia* have been classified into Sections; *M. kobus*, with *M. salicifolia* and *M. cylindrica*, form Buergeria. Another widely grown Section scrutinized by Spongberg is Oyama, with four members, *M. globosa*, *M. sieboldii*, *M. sinensis*, and *M. wilsonii*. I am unhappy with one of the Doctor's prescriptions for this section - the relegation of *M. sinensis* to a subspecies of *M. sieboldii*. I consider that the fully pendent flowers of *M. wilsonii* and *M. sinensis* sets these two species apart from *M. sieboldii*, with its semi-pendent nodding flowers. If there has to be a change, I would have preferred to see *M. sinensis* as a variety of *M. wilsonii*. This treatment would fit in well with a revision that will be welcomed by all magnolia growers, the recognition of *M. highdownensis* as a form of *M. wilsonii*. This magnolia was first grown from seed at Caerhays; as there was no equivalent amongst the dried specimens in the herbarium of magnolias collected in the wild, and as it showed characteristics intermediate between *M. sinensis* and *M. wilsonii*, it was considered by Dandy to be a hybrid between these two species. This theory was questioned by George Johnstone; he found that if you raised seedlings of this taxon, all the progeny would be the same, which you would not expect if it were a hybrid. Now that it has been accepted as a variety of *M. wilsonii*, one can visualize a neat progression from *wilsonii*, through *highdowensis* to *sinensis;* this progression would be broken by the inclusion of *sieboldii*.

Other changes in status advocated by Dr Spongberg include the demotion of various North American species not widely grown in the British Isles: *M. ashei* to *M. macrophylla* var. *ashei*, *M. pyramidata* to *M. fraseri* var. *pyramidata*, and *M. cordata* to *M. acuminata* var. *subcordata*.

All the proposed changes looked at so far have a common factor: the retention of the original name, albeit in a different class; because of this, there should be no confusion. This is not the case where the change is complete, and the familiar name is replaced by one that is not, or ever has been, in common use, and is therefore seldom included in a

reference book or nurserymen's catalogue. There are three such examples in Dr Spongberg's review:

M denudata to *M. heptapeta*
M. liliiflora to *M. quinquepeta*
M. × *watsonii* to *M.* × *wieseneri*

The substitution of *M.* × *wieseneri* for *M.* × *watsonii* is a simple case of priority of publication. Neil Treseder goes into the history of it in depth in his new book, *Magnolias.** This putative hybrid of *M. hypoleuca* × *M. sieboldii* was brought over originally by the Japanese for their stand at the International Paris Expo of 1889. At the end of the Show the flowering specimen was procured by Kew. The Director, J. D. (later Sir Joseph) Hooker, named it in honour of the Assistant Curator, W. Watson. Unfortunately another specimen was being exhibited at the same time in Paris by a Japanese nurseryman; this was purchased by a local landowner, M. Wiesener, and named in his honour by Carrière. He published *M. wieseneri* on 1 September, 1890, which takes priority, under the Rules of the International Code of Nomenclature, over *M. watsonii*, published by Hooker on 1 February, 1891.

The replacement of *M. denudata* and *M. liliiflora* is a more involved story with an unfortunate ending. These two species, the first of the Asiatic magnolias to be introduced into cultivation in Europe (*heptapeta* 1780, *quinquepeta* 1790), have a complex botanical pedigree; Johnstone recognizes eleven synonyms under *M. denudata* (including *heptapeta*), and fifteen under *M. liliiflora* (including *quinquepeta*).

The first generally accepted name for *M. heptapeta* was *M. conspicua*, published by R. A. Salisbury in 1805. This was the name used by J. C. Loudon in his comprehensive work, *Arboretum et Fruticetum Brittanicum* (1838), and was to remain in common use for the next hundred years; my father purchased a specimen under this name from Veitch of Exeter in 1935. This illustrates how long it takes for an alteration of name to filter through, as it was in 1913 that Dr Rehder, of the Arnold Arboretum, ruled that the valid name should be *M. denudata*, published by Desrousseaux in 1791.

At the same time (1913), Rehder proposed that *M. liliiflora* was the valid name for a magnolia that had been appearing under a multitude of names: in Loudon and the *Botanical Magazine* as *M. purpurea*, in Elwes and Henry as *M. denudata*, and under *M. obovata* in the first edition of Bean (1914).

In 1934 Dandy proposed in the *Journal of Botany* that the correct names for these two species were *M. heptapeta* and *M. quinqueeta*, first published by Buc'hoz in 1779, but under the generic name *Lassonia*. This genus was later to be merged into *Magnolia*; under the Code, specific epithets retain their priority in their new genus. Buch'hoz had based his descriptions on botanically inaccurate Chinese drawings, which led him to give a name that means seven petalled to a plant that has a constant nine tepals, and one that means five-petalled to a species that has never less than six. Despite these obvious inaccuracies, Dandy considered that under the Code, these misleading epithets were legitimate. In this he went against the opinion of Dr Rehder, who had rejected Buc'hoz and all his works in his review of 1913; "manca et falsaque", inadequate and false.

By 1950 Dandy had changed his mind. In his paper read to the R.H.S.

* 1978 (Faber & Faber).

Camellia and Magnolia Conference, Buc'hoz's names are once again relegated to synonyms of *M. denudata* and *M. liliiflora.* George Johnstone is very forthright in his condemnation of Buc'hoz "a botanist discredited in this generation as well as his own. . . If a future International Botanical Congress should agree to accept the proposal for Nomina specifica reficienda, it is understood that *M. quinquepeta* and *M. heptapeta* are names which would be submitted for permanent exclusion". I see here the words of Dandy.

Because of this, I consider it very unfortunate that a new generation of botanists should revive the controversy. Their case is based on Article 62 of the 1972 Code; "A legitimate name or epithet must not be rejected merely because it is inappropriate or disagreeable, or because another is preferable or better known, or because it has lost its original meaning". I question whether Buc'hoz's descriptions ever did have a "meaning"; in Johnstone's opinion, his description of *M. heptapeta* was nearly unrecognizable as a magnolia, lacking a gynoecium and including a fringed calyx. I find it extraordinary that a description as inaccurate as this should be acceptable under the Code. Linnaeus attempted to bring order and meaning into nomenclature; the adoption of such wildly misleading epithets is the antithesis of this, and I consider it imperative that the Code should be amended.

I sincerely hope that the authorities may relent, and that *M. denudata* and *M. liliiflora* be restored their legitimacy. I also pray that before more such changes are proposed, whatever the genus, the taxonomists take note of the Resolution passed unanimously at the Horticultural Congress held at Nice from April 11-18, 1958:

"The XVth International Horticultural Congress assembled at Nice, being convinced that the stability of the specific names of cultivated plants is of the highest importance for the progress of both applied and pure botany, and being gravely disturbed by the continued changes in the specific names of widely grown horticultural plants, urges the IXth International Botanical Congress, due to meet in Montreal 1959, to make any appropriate emendations to the International Code for Botanical Nomenclature that will reduce to the minimum the changing of such names for nomenclatural reasons in the future."

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A New Rhododendron

H. H. DAVIDIAN, B.Sc.

Rhododendron basfordii Davidian, sp. nov.

Species *R. lindleyi* T. Moore affinis sed corolla plerumque minore infundibuliformi extra lepidota margine crispa, foliis infra squamis plerumque dense lepidotis, calycibus staminibus antheris stigmatibus et capsulis plerumque minoribus, calyce dimidio inferiore vel basi lepidoto differt.

Frutex 1.53-2.44 m altus; ramuli lepidoti, sparism setulosi vel esetulosi. Folia sempervirentia; lamina oblonga, oblongo-lanceolata vel oblongo-elliptica, 5.5-10.5 cm longa, 2-3.9 cm lata, apice rotundata, obtusa vel acuta et mucronata, basi obtusa vel rotundata, paulo decurrens, supra atroviridis nitens elepidota, costa media sulcata, venis primariis 8-10 impressis, margine esetulosa, infra glauco-viridis, squamis inaequalibus mediocris et magnis brunneis inter se ½-2 diametris distantibus praedita, costa media prominente, venis primariis elevatis; petiolus 0.7-2 cm longus supora convexus, haud vel raro sulcatus, dense vel moderate lepidotus, paulo setulosus vel esetulosus. Inflorescentia terminalis umbellata, bracteis pallide viridibus, 3-4-flora; rhachis 3-4 mm longa, lepidota, esetulosa; pedicelli 1.4-1.7 cm longi, dense vel moderate lepidoti, esetulosi. Calyx 5-lobatus, 0.8-1.1 cm vel raro 1.4-1.8 cm longus, rubro-viridis vel viridis, lobis ovato-oblongis, ovatis, ovalibus vel oblongis, extra lepidotis, glabris, margine ciliatis. Corolla infundibuliformis 5.8-7 cm longa, 5-loba, carnosa; lobi rotundati margine crispi, paulo fragrans, alba, basi macula luteo-viridi parva notata, extra lepidota, glabra vel tubi basim versus pubescens. Stamina 10 inaequalia, 3.2-5.4 cm longa, corollae breviora; filamenta triente inferiore dense pubenscentia; anthera 3 mm longa. Ovarium oblongum apice in stylum contractum, 7-8 mm longum, 5-loculare, dense lepidotum, glabrum; stylus rectus vel dimidio superiore curvatus, 4.8-5.2 cm longus, corollae brevius, triente vel dimidio inferiore lepidotus, stigmate 1-3 mm diametro discoideo. Capsula oblonga vel oblongo-ovalis, 0.9-1.2 cm longa, 5-6 mm lata, recta vel paulo curvata, costata, dense lepidota, glabra, calyce persistente.

BHUTAN. Rudo La (East side). Identifying specimen for seed of rhododendron. Shrub 6 ft.-8 ft. high. Hab. rhodo & abies forest. Altitude 8,500 ft. 10.10.1949. F. Ludlow, G. Sherriff, & J. H. Hicks No. 19848. (Holotype in Herb. Brit. Mus. Details of the flower are taken from a cultivated plant.)

This species was discovered by Ludlow, Sherriff, and Hicks in fruit in October 1949 at Rudo La, Bhutan, growing in rhododendron and abies forest at an elevation of 2,593 m (8,500 ft.).

R. basfordii is a member of the Megacalyx Subseries, Maddenii Series. It shows a resemblance to *R. lindleyi* in some features, but differs markedly in that the corolla is usually smaller, funnel-shaped, scaly all over the outside, the margins of the lobes are crinkled, the lower surface of the leaves is usually densely scaly, the calyx, the stamens, the anthers, the stigma, and the capsule are smaller, and the calyx is scaly in the lower half or at the base.

The species was introduced by Ludlow, Sherriff and Hicks in 1949 (No. 19848 - the Type number), and it flowered for the first time at Brodick Castle, Isle of Arran. In cultivation it is broadly upright up to 6 feet high, fairly densely filled with dark green leaves, shining on the upper surface. It is successfully grown in the open air at Brodick Castle along the west coast. The species is a vigorous grower, and very often it produces fertile seed in plenty. Like all other species of its Series, it is easy to root from cuttings. Moreover, when raised from open-pollinated seed, the seedlings usually come true to type. The plant is a late-flowerer, prolonging the flowering season to the end of May or June.

It is free-flowering, and provides an admirable display with its white flowers in trusses of three to four.

I have named this species after Mr John Basford as a tribute to his remarkable achievements in the cultivation of rhododendrons at Brodick Castle garden, Isle of Arran.

A broadly upright shrub, 1.54-2.44 m (5-8 ft.) high! branchlets scaly sparsely bristly or not bristly. Leaves evergreen, oblong, oblong-lanceolate or oblong-elliptic, lamina coriaceous, 5.5-10.5 cm long. 2-3.9 cm broad, apex rounded, obtuse or acute, mucronate, base obtuse or rounded, slightly decurrent on the petiole; upper surface dark green, shining, not bullate, not scaly, midrib grooved, primary veins 8-10 on each side, deeply impressed; margin not bristly; under surface glaucous-green, scaly, the scales unequal, medium-sized and large, brown, $\frac{1}{2}$-2 times their own diameter apart, midrib prominent, primary veins raised; petiole 0.7-2 cm long, convex, not grooved or rarely grooved above, densely or moderately scaly, slightly bristly or not bristly. Inflorescence terminal, umbellate, flower-bud pale green, 3-4 flowered; rhachis 3-4 mm long, scaly, not bristly; pedicel 1.4-1.7 cm. long, somewhat thick, rather densely or moderately scaly, not bristly. Calyx 5-lobed, 0.8-1.1 cm or rarely 1.4-1.8 cm long, reddish-green or green, lobes ovate-oblong, ovate, oval or oblong, outside scaly in the lower half or at the base, glabrous, margin hairy with long hairs. Corolla funnel-shaped, 5.8-7 cm long. 5-lobed, fleshy, lobes rounded, margins crinkled, slightly scented, white, with a small yellowish-green blotch at the base, scaly all over the outside, glabrous or pubescent at the base of the tube outside. Stamens 10, unequal, 3.2-5.4 cm long, shorter than the corolla; filaments densely hairy in the lower $\frac{1}{3}$ their length; anthers 3 mm long. Ovary oblong, tapered into the style, 7-8 mm long, 5-celled, densely scaly, glabrous; style long, straight or curved in the upper part, 4.8-5.2 cm long, shorter than the corolla, scaly in the lower $\frac{1}{3}$-$\frac{1}{2}$ its length, stigma 1-3 mm in diameter, disc-like. Capsule oblong or oblong-oval, 0.9-1.2 cm long, 5-6 mm broad, straight or slightly curved, ribbed, densely scaly, glabrous, calyx-lobes persistent.

Leslie Slinger's 'Summer Flame'

DAN E. MAYERS *

The sad death of Leslie S. Slinger, a few years ago, signalled the closure of the Slieve Donard Nursery of Northern Ireland – a nursery notable for the quality and variety of its plants and novel introductions.

I should like to call particular attention to a little-known rhododendron originated by Mr Slinger which deserves wide acclaim – his beautiful late-blooming hybrid 'Summer Flame'.

'Summer Flame' is a brilliant red which blooms at the end of July into the first week of August. Its flowers are both larger and brighter red than other contemporary late-bloomers, such as 'Red Cap', 'Arthur Osborn', and other *R. didymum* hybrids. Nor does it grow to the overwhelming size of 'Dragonfly', 'Polar Bear', and others of their ilk.

* Loth Lorien Arboretum, Wadhurst, Sussex TN5 6PN.

Mr Slinger produced 'Summer Flame' by selfing 'Red Fox', a hybrid of 'Tally Ho' × 'Britannia' produced by Digby in 1947. 'Summer Flame' may be called an F_1 hybrid of 'Red Fox'. The quality of its flower can be inferred from its parents; what is surprising is its unusual lateness – much later than either parent.

A more general lesson may be drawn from the success of this F_1 cross - that is may be very worthwhile to investigate F_1 seedlings produced by selfing many of our outstanding hybrids, rather than concentrating, as so many do, on producing new F_1 hybrids. It is, indeed, much more likely that one may obtain the result that one sought in the original F_1 cross as a result of selfing it to produce the F_1 generation, as one has a second chance, so to speak, of combining the qualities of the particular F_1 form chosen from the original cross with other qualities genetically inherent in the cross, but which do not necessarily show up in the best F_1 form.

It is to be hoped that some nursery will undertake to propagate 'Summer Flame'; I should be happy to assist with scions.

The Future of *Rhododendron lacteum*

K. J. W. LOWES

The name of *Rhododendron lacteum* is, I believe familiar to most rhododendron enthusiasts. I wonder which extreme of opinion they first encountered. Was it "Lacteum is a very beautiful (or marvellous, or splendid) rhododendron"? Or was it "Lacteum is too difficult", or "Lacteum has too many faults"? The mere implication that, although it might have been either of these two extremes it must in any case have been an extreme, presents us with a paradox. If I may short-circuit the exposition which is to follow of the situation in which *R. lacteum* is placed today, these extreme views are both justifiable. Now, I do realise that the last six words sound on the one hand rather facile, and on the other, distinctly dogmatic. The serious reader will require that they be substantiated before allowing himself to be any further involved in the matter. Fortunately, this is easy, and the evidence is set out below.

But before giving this evidence, some justification for this article should be given. This is my belief: ever since the first plants of the species began to flower in Britain, *R. lacteum* has been dying out; it continues to do so; and there seems to be very little awareness of this or concern to remedy the situation. This may sound extravagant, yet it appears to me that it is perfectly true. During the last three years I have asked about a dozen very knowledgeable rhododendron growers, nearly all of them connected with distinguished rhododendron gardens either as owners or as curators or as head gardeners, where I might see plants of *R. lacteum*. In replying, none reached double figures, and all used the same tiny group of names; I do not doubt that some of them could have done rather better if given the time to sit down and think about it. I have done this myself, with the aid of a handful of Year

Books, and produced an overall list of nineteen names of gardens in England and Scotland which have, or at some time since 1910 have had, one or more plants of *lacteum*. In one of these, I have seen the plant in flower and it was both a very poor form and a very poor plant; so it should not be counted. A plant in another garden has not been seen in flower, but it is suspect, as a possible hybrid. In a third garden in the list there were two plants, which died in 1921 - at most they could only have been eleven years old; there may have been other specimens in this garden, but of this I have no knowledge. It seems likely that of the other gardens two, three or possibly four have no viable specimen now. So we can be fairly sure that a good dozen gardens in England and Scotland each have one or more plants of *R. lacteum*. Beyond that there is the matter of my own ignorance. I do not know gardens in Ireland or Wales, but there must still of course be some *lacteum*s in Ireland, where there have undoubtedly been plants; there may be specimens in Wales too; and obviously, as I do not know all of the English gardens where rhododendrons are grown, there are bound to be more in England too. What is alarming is the very long list that could be made of famous rhododendron gardens in England and Scotland where *lacteum* is not represented. A further point; how many of us could order a plant of *lacteum* and have it planted within say ten weeks of the date of order? It is virtually unobtainable. During the last three years I have made several attempts in different quarters and through different channels to obtain plants; I have failed entirely, so I am not at the moment able to contribute very much to the programme of rehabilitation that I outline below.

Now let me present some of the evidence as to the high esteem in which the species has been held in the past, for I have encountered more unstinted praise of *lacteum* than of any other rhododendron. It is already clear enough that I am myself one of *lacteum*'s admirers, but that has absolutely no importance compared with the views of my witnesses, who are an absolute galaxy of rhododendron connoisseurs. They range from the great pioneer growers, some of them sponsors of the collectors, through their successors, and across to distinguished rhododendron botanists. So far as I know, the references are presented in chronological order.

First, Mr J. C. Williams of Caerhays (letter to Mr E. J. P. Magor of Lamellen, 19 Oct. 1925): "We have had a very perfect flower of *lacteum* open, and it is a most wonderful thing." Then Mr Lionel de Rothschild, posthumous notes, therefore written before 1942: "The next series to be discussed is also difficult, namely the Lacteum Series. Plants in this series also require to be planted early in their permanent positions as they do not like moving. . . . *R. lacteum*, eventually a tree up to 30 ft. in height, is probably the finest Rhododendron ever introduced: its large trusses of clear yellow flowers are extremely beautiful in April: it seems hardy enough in sheltered positions, but slow growing and difficult, as exactly the right place has to be found for it and it must then never be moved. The fine collection of this Rhododendron at Werrington was unfortunately very thickly planted and attempts made to move them have not been very successful." Now Mr Francis Hanger in an article in the *1948 Year Book*, page 22: ". . . the writer cannot think of any Rhododendron with a more beautiful truss of flowers than a fine form of *R. calophytum*, *R. lacteum* and *R. macabeanum* excepted." The following utterances of Dr Cowan occur in three different contexts,

showing him to be a convinced admirer. In 1952, in *George Forrest, V.M.H.* (O.U.P.), page 50: ". . . for the reasons given many hesitate to regard *R. lacteum* as a first-class garden plant, yet one has only to see it as it grows at Exbury, at Lochinch, at Blackhills and in many other gardens, fully to appreciate its great and rare beauty." In the *1953 Year Book*, in a symposium of personal preferences: "I take first - it may be personal preference - *R. souliei*, as represented by a perfect plant which flowered freely for many seasons but died some years ago. . . . After it, but scarcely less distinguished, I would select *R. lacteum*. No other Rhododendron has a more perfect truss, but its fine yellow flowers appear early in the season and at Edinburgh are apt to be caught by frost. Again, though this species is still represented in the collection, it appears to be short-lived. Our finest plant died some years ago." Then in the *1956 Year Book*, in "A review of Rhododendrons in their Series", page 142, with Mr Davidian: "*R. lacteum* is one of the finest rhododendrons in cultivation". Again with Mr Davidian, page 143: "It received a First Class Certificate when exhibited by Mr A. M. Williams from Cornwall in 1926. In culture it requires well-sheltered positions outdoors. It is slow in growth, reluctant to seed, and somewhat difficult to propagate by layering."

Dr Cowan mentioned *lacteum* in Lord Stair's garden at Lochinch. Here is Lord Stair in a "My favourite rhododendrons" symposium in the *1956 Year Book*, page 36: "It would be inadequate to mention one's favourites without including as alternatives such things as *R. lacteum* with its almost perfect yellow and beautifully shaped flowers . . .". In 1970 Sir Ilay Campbell wrote in the *Year Book*, page 4: "I have come to consider *R. lacteum* one of the most desirable Rhododendron species. It seems to have everything; attractive foliage, good habit of growth and, above all, in its best forms, perfectly shaped trusses of rich yellow flowers. Alas. like some other beauties, it is temperamental, demanding, unappreciative and exasperating. There are gardens - some, I'm glad to say, Scottish ones - in which it deigns to flourish, notably Lochinch in Wigtownshire, Dawyck in Peeblesshire, Corsock in Kirkcudbrightshire and, above all, Blackhills in Morayshire. But so diverse are these localities, that it is difficult to learn any climatic lessons from this distribution."

So far, we have been considering the species for its own sake. There are probably quite a lot of enthusiasts and growers who have never seen either a truss or a plant of a good *lacteum*. But its progeny are much easier to see, to buy and to read about. In the *1969 Handbook, Part Two, Hybrids*, twenty *lacteum* hybrids are listed and there have been one or two more since then. Some of them are held in high esteem by breeders and public alike, so there must be a case for ensuring its future for further breeding. Here are some views which must, I think, carry great weight. *1970 Year Book*, page 21, Mr O. C. A. Slocock: "Some years ago I made a cross between *lacteum* and *caucasicum* in the form "Cunningham's Sulphur". . . .Now, what was the cross designed for? First of all *lacteum* has the most perfect truss and yellow colour of any species of rhododendron". In the same *Year Book*, page 15, General Harrison: "The features of the great crosses made with *lacteum* are the beautiful shape of the individual flowers and the compact large trusses which sit so perfectly on a rosette of broad-shaped leaves." Mr Lionel de Rothschild's faith in *lacteum* as a parent is well known and easily shown without quotation. His first cross, LR1, was with *lacteum* but

was a failure; his subsequent attempts produced no less than seven Awards of Merit and one First Class Certificate. In an article in the *1970 Year Book,* written by Mr P. N. Barber of Exbury, on "Rhododendrons at Exbury", ten colour pictures were used as illustration; facing page 25, four out of five examples put a very *lacteum*-like bias on the colour plate. His son Mr Edmund de Rothschild continued breeding rhododendrons at Exbury. "So far 154 crosses have been recorded in the new "ER" stud-book. *R. lacteum* has been a particularly successful parent in producing award-winning progeny. . . ". (*The Rothschild Rhododendrons,* P. N. Barber with Brigadier Lucas-Phillips, 1967). However, all this does not mean that we can dispense with *lacteum* - in other words let it die out as we are on the verge of doing. Here is Sir Ilay Campbell again, in the same 1970 article: "These two Exbury products 'Jocelyne' and 'Lionel's Triumph' are magnificent, and I hope that soon they may become more easily available, but they have lost that neatness, even primness of truss, which is such a feature of *R. lacteum".*

In Sir Ilay's last sentence we read an implication that, good as the outstanding *lacteum* hybrids are, they have lost some of their distinguished parents' quality. What some of the hybrids do have, however, is something we could wish for in *lacteum* itself. We are certainly justified in sighing for better qualities of garden-worthiness; this means that among other matters we might hope for quicker growth and younger flowering, whether from seed or from vegetative propagation. Some of the hybrids may in time demonstrate that they possess greater freedom from premature death, as well as an overall higher expectation of life, than our present meagre stock-pile of *lacteum* seems to have.

In view of the body of praise and esteem which I began by quoting, we ought to be able to find hundreds of *lacteum*s distributed in almost as many gardens, in many parts of the United Kingdom. Alas! it is not so, for *lacteum* is not so welcome in our gardens as might be expected. I have not expunged from these quotations the unfavourable criticisms which, in some of them, lie alongside the praise; but I have notes of a further body of condemnatory observations from an equally notable body of critics - many of them, of course, the very same voices. Leaving their authors incognito, a few of these are: ". . . we have never been able to grow it successfully"; ". . . but *lacteum* in particular has too many faults, and these would be hard to eradicate" (i.e. in hybridising); "many plants have died at an early age, blooming for a few consecutive years after they have come to maturity"; "Despite care and attention, shade and water, they slowly expire bit by bit, first one branch then another, then total collapse". Finally this, viva voce in my presence, from two seasoned and very knowledgeable head gardeners who have spent most of their lives among rhododendrons: "*Lacteum* from seed? Doesn't flower until it's forty! And dies when it's fifty!" Condemnation could scarcely be more conclusive, but let us be more pragmatic. "The species was introduced into cultivation in this country by Forrest *in 1910* from the Tali range. It received a First Class Certificate when exhibited by Mr A. M. Williams from Cornwall *in 1926."* (Cowan and Davidian, *1956 Year Book;* part already quoted).

Faced with this situation, what is to be done to improve matters? Well, I have some suggestions and can sketch out a plan of campaign, but I have little hope of contributing more than a modest practical effort. I have some time left to me (how much, I do not know; I am sixty-six); I have some space in a garden, including what may be a

suitable habitat in a very small oak copse; and I have the will to grow a few plants of what is quite my favourite rhododendron. But it will take much, much more than that.

This is what I think is needed. First, and beginning as soon as arrangements between gardens can be made (and why not 1980?) the best forms we possess should be cross-pollinated *with one another*, in both directions and in all combinations possible. There are, it is immediately obvious, deep implications here; I am making no assumptions and I am trying to avoid presumptuousness totally. What an owner wishes to do about his own property is his own concern, and there is here absolutely no hint of challenging or infringing that principle. Having established this, it is clear that I am discussing only situations agreed voluntarily between owners or their representatives. Next, there arises the problem of growing on the resulting seedlings, irrespective of where they were germinated, and I hope in their hundreds. We cannot expect the present owners of the parents to undertake a programme of this nature; considerations of time, available labour and space make such an idea quite unreasonable. Perhaps a few would be willing to contribute an effort of growing-on, on a scale which they considered within their resources. For this growing-on process a great many willing and co-operative volunteers are needed; the greater the number, and the more widespread and diverse their gardens, soils and rainfalls, the better.

The chief aim is to find, imitating the bull-dozing mass-production tactics employed by Nature, a batch of new but pure *lacteums* with, among them, the better garden qualities we need. At this juncture I cannot refrain from mentioning recent developments in international attitudes which appear to be taking place in China. It may not be absurd to hope that some forms of plant-hunting there may be resumed, and that *lacteum*'s habitats in Yunnan may be re-explored, and reintroduction effected. It would be particularly important to raise at least one or two vigorous specimens with young-flowering proclivities, for this would be the great breakthrough which is needed, speeding up the search for the best possible garden-worthy forms. Other qualities are obviously desirable, such as more compact plants. In an operation like this there must be a lot of hope; but it is not hope*less*. There are many cases of a species proving unsatisfactory until the arrival on the scene of one or two exceptional specimens, so that from then on it becomes worth growing. Since this has happened before - not once but several times - it can happen to *lacteum*. We should try; otherwise we are negligent.

Let the pessimist and the cynic stop to consider what lay behind Mrs Roza Stevenson's careful investigation into the Forrestii subseries of the Neriiflorum series, and the comparison of free-flowering forms with forms that scarcely ever flower. (See also D. G. Leach: *Rhododendrons of the World* (1962), pp. 167/8, for his expression of a similar comparison.) In a word, a new *form* is sought which will cut through the delay in getting *lacteum* into flower from seed, and not have lost any of the quality of the best forms we have at present. I need not dwell further on the other possibilities, in for instance habit and foliage, which will arise from the growing of considerable numbers of fresh seedlings with that essential pedigree "*lacteum* × *lacteum*".

Meanwhile, what about the problem of arresting the present decline? First, how much is being done already? Within the limits of my own knowledge, there are at least two important gardens where layers of outstanding forms are already down, and a third which has recently

acquired two young plants from one of the best existing forms, and also has seedlings. I am confident that there must be more, but I fear that the total effort is entirely inadequate for the replacement of the meagre existing stock; and with the regretfully bad reputation the species has acquired - deservedly - from its performance in British gardens, the use of the term "existing" must carry the connotation "but not for much longer". As long ago as 1949 Mr Francis Hanger was writing: "This lovely rhododendron is fast dying out in cultivation; many of the established plants in this country are gradually fading away". (*1949 Year Book.*)

One of the problems, of course, is that layering involves mutilating the plant. Furthermore, where a plant is in a good display position layering is undesirable because it is unsightly. I am unaware of the record so far as attempts to grow cuttings are concerned; perhaps very few attempts have recently been made; I even wonder whether any cutting has been turned into a viable plant, for I have never read a reference to a success. But taking cuttings also means mutilating the plants, and in any event would only be worth doing if there were a good success record.

Better than cuttings is grafting, for although the loss of growth shoots on the mother plant is the same, the chances of success are much higher. Leach suggests grafting on to *ponticum* (*Rhododendrons of the World*, page 184). One sometimes reads suggestions that grafting is at its most sensible level when the understock used is a vigorous species in the same series. If this is valid, there might be a fruitful line of progress here. *R wightii*, which may or may not belong to the Lacteum series, can have certain qualities of vigour in its best-growing clones; other species might be found good for this purpose, assuming enough seed to be obtainable. The aim here is to get fresh plants of the good *lacteums* into flower very quickly, in order that more pollen from them may be available more quickly, more widely, and the sowing cycle reinforced.

My own opinion is that if owners of really first-rate *lacteums* would ensure that a few new layers and successful grafts of their plants were established in their own gardens, and perhaps in others too, they would at least earn the gratitude of posterity, and provide a better chance of continuity than exists at present.

Finally, there is the question of more successful cultivation. In my reading I quite frequently encounter suggestions - no more than that, because, I suspect, proof is lacking - that *lacteum*, like *reticulatum*, does best in a very acid soil. I wonder whether these references all stem from Francis Hanger's experiments with *lacteum* seedlings in pH 4.0, 4.4 and 5.3 (*1949 Year Book*, pages 69/70)?

One of the justifications for the preparation and presenting of this article must be that it should stimulate thinking and then action in important places. I should like to feel confident that within another year, or perhaps two years, worthwhile action is being taken, and that a new review of the *lacteum* scene would give cause for more optimism than I feel at the moment.

Camellias in Australia

A. W. HEADLAM

In *Rhododendrons 1978 with Magnolias and Camellias*, the formation of a Camellia Garden at Olinda by the Australian Camellia Research Society (Victoria Branch), was described. Progress continues, perhaps at a more leisurely rate after the original massive undertaking of clearing the land and preparing for the first planting. Inevitably, however, in an undertaking of such magnitude, there were some initial losses, but these are being gradually replaced.

One of the primary problems was watering during the summer months, particularly for the first year until the plants became established, and a watering system using polythene piping with capillary tubing to each plant puts the water just where it is required and does not have the disadvantage of watering the surrounding grass with consequent wasting of water and perhaps, more importantly, does not necessitate cutting the grass so frequently, an important factor where the majority of the work is done by members, mainly at weekends.

Progress continues steadily, but it may well be another year or two before the results of many hours of hard work by members really becomes apparent.

The Blooms Competition for 1978 continued with members exhibiting with their usual enthusiasm, despite the fact that it takes some considerable effort to leave a warm home to exhibit in a highly competitive display, often on a wet and blustery winter's night.

The following is an analysis of the A.C.R.S. (Victoria Branch) Blooms Competition for 1978. There are two sections, Open and Novice, but for the purpose of the following results they have been combined. Blooms winning on only one occasion would be far too numerous to list, and many blooms were exhibited which failed to gain a point in their section; however, there is always next year!

C. sasanqua, SINGLE:
'Apple Blossom', 'Hiryu' and 'Yuletide' each won points on five occasions, 'Zerbes', two.

C. sasanqua, DOUBLE:
'Star above Star' won points on thirteen occasions, 'Bonanza', four, 'Lucinda' and 'Showa Supreme', three, and 'Beatrice Emily' and 'Bert Jones', two.

C. japonica, SINGLE:
'Spencer's Pink', fourteen, 'Mattie Cole' and 'Henry Turnbull', four, and 'Fiona Capp', three.

C. japonica, SEMI-DOUBLE:
'Guilio Nuccio', five, 'White Nun', four, 'Coronation' and 'Cho Cho San' each three, and 'Lady Clare', 'Magnoliaeflora', 'Nancy Bird', 'San Dimas' and 'Wildfire' each two.

C. japonica, INCOMPLETE DOUBLE:
'Kramer's Supreme', five, 'Easter Morn' and 'Elsie Ruth Marshall', each three, 'China Doll', two.

C. japonica, INFORMAL DOUBLE:
'Elegans Supreme', seven, 'Debutante', three, 'Arejishi', 'C. M. Wilson', 'Glenwood' and 'D. Herzilia de Freitas Magahales', two.

C. japonica, FORMAL DOUBLE:
'Fimbriata', six, 'Commander Mulroy' and 'Nuccio's Gem', each four, 'Alba Plena' and 'Desire', three, and 'Alice Wood', 'First Prom', 'Margarete Hert-

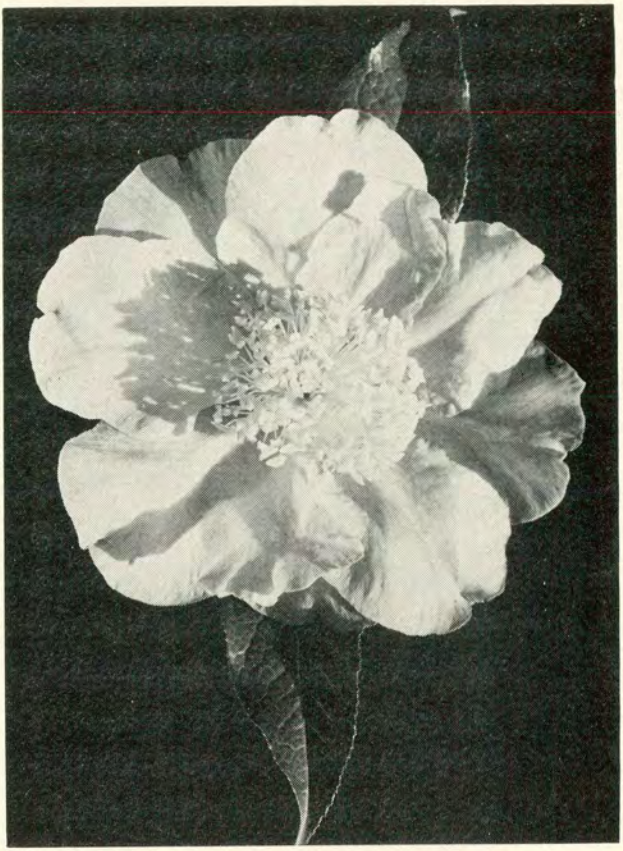

Fig. 2 Camellia 'China Lady', which was awarded three points in the class for hybrids over 115 mm.

rich' and 'Twilight', each two.

MINIATURE:
'Fircone', seven, 'Little Slam', six, 'Pearl's Pet', four, and 'Jingle Bells' and 'Tinsie', each two.

BOUTONNIERE:
'Usu Otome', seven, 'Ave Maria', four, 'Jingle Bells' and 'Little Red Riding Hood', three, and 'Miniata', two.

HYBRIDS UP TO 65 MM.:
'Cinnamon Cindy' and 'Tiny Princess', each four, 'Fragrant Pink' and 'Lamartsii', each two.

HYBRIDS 66 TO 115 MM.:
'Water Lily', thirteen, 'Debbie', five, 'E. G. Waterhouse', four, 'Julia Hamiter', three, and 'Citation', 'Dream Boat' and 'Margaret Waterhouse', each two.

HYBRIDS OVER 115 MM.:
'Water Lily', four, 'Anticipation', 'China Lady', 'Mary Phoebe Taylor', each three, 'Angel Wings', 'Drama Girl' and 'Donation', each two.

C. reticulata AND *C. reticulata* HYBRIDS UNDER 115 MM.:
'Emily J. Box', five, 'Brian', four, and 'Rob Roy', two.

C. reticulata AND *C. reticulata* HYBRIDS OVER 115 MM.:
'Howard Asper', three, 'Dr Clifford Parks', two.

SPECIES:
C. roseaflora and *C. wabisuke*, each four, *C. lutchuensis* and *C. maliflora*, each three.

THREE DISTINCT CULTIVARS:
'Drama Girl', five, 'Betty Sheffield Supreme', 'Dr Clifford Parks' and 'Showa no Sakae', each three, and 'Otto Hopfer', 'Can Can', 'Donation', 'R. L. Wheeler', 'Francie L.', 'Faith', 'King Size', 'Lady Clare', and 'Mouchang', each on two occasions.
THREE BLOOMS, ONE CULTIVAR:
'Margaret Davis', three, 'Alba Plena', 'Debutante' and 'Dixie Knight', each two.

Best Bloom of the night:
OPEN SECTION:
'Coronation', 'D. Herzilia de Freitas Magahales', 'Angel Wings', 'Easter Morn', 'Howard Asper', and 'Debbie'.
NOVICE SECTION:
'Beatrice Emily', 'Alba Plena', 'Fimbriata', 'Shiro Chan', 'Tomorrow's Dawn', *C. reticulata*, 'Purple Gown', and 'E. G. Waterhouse'.

In 1977 the camellias winning the most prizes were, 'Spencer's Pink', sixteen, 'Debbie', fifteen and 'Water Lily' on fourteen occasions; however, the picture has changed somewhat in 1978 with 'Water Lily' moving to first place with wins on seventeen occasions, followed by 'Spencer's Pink', fourteen, and interestingly, the *C. sasanqua* double, 'Star above Star' has indicated its popularity by moving into third place with wins on thirteen occasions.

As usual, the two main Shows were held in August, the Royal Horticultural Society of Victoria, Fellows Group, combined with the A.C.R.S. (Victoria Branch), at which the Blue Ribbon winners were 'Magnoliaeflora', 'Mrs D. W. Davis', 'Valentine Day', 'Mary Phoebe Taylor', 'Man Size' and 'Mrs Tingley' and the Waverley Garden Club/A.C.R.S. Show resulted in Blue Ribbons for 'Mrs D. W. Davis', 'Elegans Supreme', 'Howard Asper', 'Elsie Jury', 'Pearl's Pet' and 'Tiny Tot'.

Camellia Competition and Show

GEORGE AYLING

Once again I have to report that the weather ruined both the 1979 Competition and Show. Everyone will remember what the winter was like, so I will not dwell upon any particular beastliness it served up. So far as the Competition is concerned it is usually possible under glass to arrange one's own private climate to suit, but this time it was very difficult indeed, with the result that for the event there were only six courageous and skilful entrants, and entries in classes were sparse. The Show suffered even more but the one bright spot was that there were some newcomers amongst the exhibitors, and many of them were successful, although some of the regulars were missing. I have a theory that weather conditions are mitigated in towns by both the shelter of the buildings and by the heat from all the devices used to warm the inhabitants and this year it was noticeable that a larger proportion of entries than usual came from round about London.

However, the picture was not all black so far as camellias were concerned. The first four R.H.S. Shows of the year saw worthy exhibits from the Trade; South Down Nurseries on two occasions had a selection of *williamsii* hybrids mostly raised at Caerhays, and James Trehane and Sons at all four shows had large stands devoted entirely to cam-

ellias, including *japonicas*, *williamsii* and *reticulata* hybrids with *reticulatas*, and one or two "unusuals" such as 'Christmas Daffodil' and 'Fragrant Pink' for good measure. The International Camellia Society also had effective displays on two occasions. The high spot was probably at the third Show when the highest award of the Show, a Gold Medal, was awarded to Trehanes, and a further Gold Medal to Sir Giles Loder for a magnificent display of blooms from Leonardslee which had variety, quality and everything one could hope for in camellias. In conclusion, it is to be hoped that the new exhibitors will be encouraged by their success and that the "old hands" will reappear next year.

The Competition 1979

SPRAYS

Three *japonica*
1st Sir Giles Loder. Scentsation, Mrs D. W. Davis, Flamingo.
2nd Mr R. Strauss. White Swan, Clarissa, Donckelarii.
3rd Sir Giles Loder. Mathotiana Supreme, Shiro-Botan, Margaret Short.

One semi double *japonica*
1st Sir Giles Loder. Margaret Short.
2nd Mr R. Strauss. Guilio Nuccio.
3rd Sir Giles Loder. Shiro-Botan.

One anemone or paeony formed *japonica*
1st Sir Giles Loder. Scentsation.
2nd Sir Giles Loder. Kick Off.
3rd Mr R. Strauss. Ville de Nantes.

One small flowered *japonica*
1st Sir Giles Loder. Jingle Bells.

Reticulata
1st Sir Giles Loder. Buddha.
2nd The Duke of Devonshire. Reticulata.

Three hybrids
1st Sir Giles Loder. Pink Sparkle, Fire Chief, Francie L.

Semi-double *williamsii*
1st Mr R. Strauss. Donation.

Any other *williamsii*
1st Sir Giles Loder. Elegant Beauty.
2nd Mr R. Strauss. Debbie.

Any hybrid other than *williamsii*
1st Sir Giles Loder. Francie L.
2nd Sir Giles Loder. Fire Chief.
3rd Mr R. Strauss. Forty-niner.

BLOOMS

One bloom each three single *japonicas*
1st Mr R. Strauss. Sylva, Rogetsu, Clarissa.
2nd The Duke of Devonshire. Rogetsu, Sieboldii, Jupiter.

One single white *japonica*
1st The Duke of Devonshire. Rogetsu.
2nd Mr R. Strauss. Rogetsu.
3rd Mr R. Strauss. White Swan.

One single self-coloured *japonica*
1st Mr R. H. Ellis. Gertrude Preston.
2nd Mr R. Strauss. Furoan.
3rd Mr R. Strauss. Sylva.
4th The Duke of Devonshire. Jupiter.

One single variegated *japonica*
1st Mr R. Strauss. Clarissa.
2nd The Duke of Devonshire. Sieboldii.

Three semi-double *japonica*
1st Mr R. Strauss. Lady Clare, Geisha Girl, Donckelarii.
2nd Mr R. H. Ellis. Flamingo, Guilio Nuccio, Beau Harp.
3rd The Duke of Devonshire. Guilio Nuccio, Unknown, Governor Earl Warren.
4th Sir Giles Loder. Margaret Short, Flamingo, Shiro-Botan.

One Drama Girl
1st The Duke of Devonshire.
One Mrs D. W. Davis
1st Mr R. H. Ellis.
2nd Sir Giles Loder.
3rd The Duke of Devonshire.
One semi-double white *japonica*
1st Sir Giles Loder. Shiro Botan.
2nd Mr R. H. Ellis. Silver Anniversary.
3rd Mr R. H. Ellis. Haku Rakuten.
4th Mr R. H. Ellis. Mme V. Bisschop.
One-semi-double self-coloured *japonica*
1st Mr R. H. Ellis. Dr Tinsley.
2nd Sir Giles Loder. Flamingo.
3rd Mr R. Strauss. Apollo.
4th Mr R. Strauss. Wildfire.
One semi-double variegated *japonica*
1st Mr R. H. Ellis. Donckelarii.
2nd Mr R. H. Ellis. Geisha Girl.
3rd Mr R. H. Ellis. Sport of Tricolor.
4th The Duke of Devonshire. Tricolor.
Three anemone- or paeony-formed *japonica*
1st Mr R. Strauss. Faith, Gus Menard, Kramer's Supreme.
2nd The Duke of Devonshire. Debbie, Merrilees, Tomorrow.
3rd Sir Giles Loder. Kick Off, Mathotiana Supreme, Ballet Dancer.
One anemone- or paeony-formed *japonica*
1st Mr R. Strauss. Gus Menard.
2nd Sir Giles Loder. Conrad Hilton.
3rd Mr R. H. Ellis. Sally Harrell.
One self-coloured anemone- or paeony-formed *japonica*
1st Mr R. Strauss. Kramer's Supreme.
2nd Mr R. Strauss. Aarons Ruby.
3rd Sir Giles Loder. Scentsation.
4th Sir Giles Loder. Jingle Bells.
One variegated anemone- or paeony-formed *japonica*
1st Sir Giles Loder. Richard Nixon.
2nd The Duke of Devonshire. R. L. Wheeler.
3rd Mr R. Strauss. Extravaganza.
Three rose-formed or formal double *japonicas*
1st The Duke of Devonshire. Mathotiana, Alba Plena, Mathotiana Rosea.
One white double *japonica*
1st Sir Giles Loder. Fimbriata Alba.
2nd The Duke of Devonshire. Alba Plena.
One self-coloured double *japonica*
1st Mr R. Strauss. Berenice Perfection.
2nd The Duke of Devonshire. Mathotiana.
3rd Sir Giles Loder. Vulcan.
One variegated double *japonica*
1st Mr R. H. Ellis. Augusto Gouveia Pinto.
2nd The Duke of Devonshire. Unknown.
One bloom each, six cultivars *japonica*
1st Sir Giles Loder. Scentsation, Mrs D. W. Davis, Flamingo, Margaret Short, Kick Off, Shiro Botan.
2nd Mr R. Strauss. Faith, Rogetsu, Clarissa, Gus Menard, Guilio Nuccio, Donckelarii.
Any three cultivars (Restricted)
1st Mr R. H. Ellis. R. L. Wheeler, C. M. Wilson, King Size.
2nd Mr R. H. Ellis. Apollo, Guilio Nuccio, Dr Tinsley.
3rd Mr R. H. Ellis. Emmett Barnes, Barbara Woodrooff, Flamingo.
One bloom *reticulata* wild form
1st The Duke of Devonshire.
One bloom Captain Rawes
1st The Duke of Devonshire.
One bloom *reticulata*
1st Sir Giles Loder. Mouchang.
2nd Sir Giles Loder. Buddha.
3rd Sir Giles Loder. Wm. Hertrich.

Any three hybrids, one bloom each
1st Sir Giles Loder. Francie L., Grand Jury, Pink Sparkles.
2nd Mr R. Strauss. Donation, Debbie, Interval.
3rd Sir Giles Loder. Fire Chief, Inspiration, China Lady.
One bloom *reticulata* hybrid
1st Sir Giles Loder. Francie L.
2nd Mrs A. Hooton. Francie L.
3rd Sir Giles Loder. Pink Sparkles.
One bloom, hybrid other than *reticulata*
1st Mr R. Strauss. Donation.
2nd Sir Giles Loder. Grand Jury.
3rd Sir Giles Loder. Elegant Beauty.
Any hybrid, one bloom, restricted
1st D. M. Farnes. Inspiration.

Camellia Show 1979

SPRAYS

Any six, one spray each
1st Sir Giles Loder. J. C. Williams, Gloire de Nantes, Cornish Snow, St. Ewe, Saluenensis, Confucius.
2nd Mrs Catherine Hopwood. Debbie, Sylva, Grand Slam, Donation, Bow Bells, Francie L.
Any three, one spray each
1st Sir Giles Loder. Lady Clare, Salutation, Confucius.
2nd Mrs Barbara Griffiths. Elegano, Guidita Rosare, Contessa Lavinia Maggii.
Any three *japonicas*, one spray each
1st Mrs Barbara Griffiths. General Lemoine, Apollo, Contessa Lavinia Maggii
One spray, any single-flowered *japonica*
1st M. Tame. Alba Simplex.
One spray, any semi-double *japonica*
1st Mr R. Strauss. Gloire de Nantes.
2nd Mrs Barbara Griffiths. Apollo.
3rd Sir Giles Loder. Lady Clare.
One spray, any anemone or paeony *japonica*
1st Mr P. N. Buckley. Elegano.
2nd Sir Giles Loder. Kate Thrash.
3rd Mr P. N. Buckley. Pink Champagne.
One spray, any double *japonica*
1st Mr P. N. Buckley. No name.
2nd Mrs Barbara Griffiths. Contessa L. Maggii.
One spray, a small-flowered cultivar
1st Sir Giles Loder. Little Bit.
One spray *reticulata* wild form
1st Sir Giles Loder.
One spray and descendant from *reticulata*
1st Sir Giles Loder. Salutation.
2nd Mr R. S. Hood. Felice Harris.
One spray *saluenensis*
1st Mr R. Strauss.
2nd Sir Giles Loder.
williamsii, any single one spray
1st Mr R. Strauss. Williamsii.
2nd Sir Giles Loder. St. Ewe.
3rd Sir Giles Loder. J. C. Williams.
williamsii Donation, one spray
1st Sir Giles Loder.
2nd The Hon. E. Boscawen.
3rd Mrs Catherine Hopwood.
williamsii, any semi-double other than Donation
1st Mrs Catherine Hopwood. Brigadoon.
Cornish Snow, one spray
1st Sir Giles Loder.

Any twelve, one bloom
1st Surgeon-Captain Lock. Donation, Guilio Nuccio, Felice Harris, Citation, Anticipation, Lady Clare, Alba Simplex, Caleb Cope, St. Ewe, Blackburniana, Sayonara.
2nd Mrs Catherine Hopwood. Alba Simplex, Francie L., Aaron's Beauty, Duchess of Buccleuch, Grand Slam, Tremeer, Guilio Nuccio, R. L. Wheeler, Royalty, Elegant Beauty, Debbie, Haku Rakuten, Inspiration.
One each, any three *japonicas*
1st Mr J. W. N. Graham. Jupiter, Wills' Path, Charlotte Rothschild.
2nd Surgeon-Captain Lock. White Swan, Mattie Cole, Alba Simplex.
Alba Simplex or Devonia, one
1st Surgeon-Captain Lock. Alba Simplex.
Jupiter or Sylva, one
1st Mr J. W. N. Graham. Jupiter.
Any single flower white *japonica*
1st Mrs P. Eunson. Henry Turnbull.
2nd Mr J. W. N. Graham. Charlotte Rothschild.
Any single self-coloured *japonica*
1st Mr J. W. N. Graham. Wills' Path.
Any three semi-double *japonicas*
1st Surgeon-Captain Lock. Adolphe Audusson, Lady Clare, Grand Slam.
One Adolphe Audusson
1st M/s M. A. Tame.
2nd Surgeon-Captain Lock.
One Donckelarii
1st Surgeon-Captain Lock.
One Guilio Nuccio
1st Mrs P. Eunson.
One Lady Clare
1st Surgeon-Captain Lock.
2nd Mr J. W. N. Graham.
One semi-double white *japonica*
1st Mr P. N. Buckley. No name.
One semi-double self-coloured *japonica*
1st Mrs P. Eunson. Mrs D. W. Davis.
2nd Mrs Barbara Griffiths. Berenice Boddy.
3rd Mrs Barbara Griffiths. Apollo.
4th Surgeon-Captain Lock. Grand Slam.
One each, three anemone- or paeony formed *japonicas*
1st Mr P. N. Buckley. Elegans, Preston Rose, Pink Champagne.
2nd Surgeon-Captain Lock. Clarisse Carleton, Nobilissima, Blackburniana.
One Elegans
1st Mr P. N. Buckley.
2nd Mrs R. L. Heywood.
One R. L. Wheeler
1st Mr R. S. Hood.
One anemone- or paeony-flowered self-coloured *japonica*
1st Mrs Barbara Griffiths. Marguerite Gouillon.
One each, three double *japonicas*
1st Surgeon-Captain Lock. Souvenir de B. Liton, C. M. Hovey, L'Avenir.
One Contessa Lavinia Maggii
1st Mrs Barbara Griffiths.
One Rubescens Major
1st Mr J. W. N. Graham.
One Mathotiana Alba
1st Surgeon-Captain Lock.
One Souvenir de Bahaud Litou
1st Surgeon-Captain Lock.
One double white *japonica*
1st Mr P. N. Buckley. Alba Plena
One double self-coloured *japonica*
1st Mr P. N. Buckley. Margherita Coleoni.
2nd Surgeon-Captain Lock. Caleb Cope.
3rd Mrs P. Eunson. Berenice Perfection.

One bloom each, six *japonica*
1st Mr P. N. Buckley. Alba Plena, Pink Champagne, Mme V. de Bisschop, Margherita Coleoni, Elegans, Preston Rose.
2nd Surgeon-Captain Lock. Grand Slam, Drama Girl, Lady Clare, Clarisse Carleton, L'Avenir, Nobilissima.

One *japonica*, restricted entry
1st Mrs L. M. Frost. Adolphe Audusson.

One each, any four other than *japonica*
1st Surgeon-Captain Lock. Donation, Salutation, Anticipation, Citation.
2nd Mrs Catherine Hopwood. Leonard Messel, Salutation, Francie L., Royalty

Three cultivars *williamsii*
1st Surgeon-Captain Lock. Donation, Anticipation, Elegant Beauty.
2nd Surgeon-Captain Lock. Brigadoon, Debbie, Anticipation.

One *reticulata* other than single
1st Mr R. S. Hood.

One *saluenensis*
1st Mr R. Strauss.

One, any single *williamsii*
1st Surgeon-Captain Lock. St. Ewe.
2nd Surgeon-Captain Lock. J. C. Williams.
3rd Mr R. Strauss. C. J. Coates.

One bloom Donation
1st Surgeon-Captain Lock.
2nd The Hon. E. Boscawen.
3rd Mrs P. Eunson.

One *williamsii* other than single or Donation
1st Surgeon-Captain Lock. Debbie.
2nd Mrs P. Eunson. Debbie.
3rd Mr R. S. Hood.

One bloom Leonard Messel
1st Surgeon-Captain Lock.

Any hybrid not specified previously.
1st Mr R. Strauss. Inspiration.
2nd Surgeon-Captain Lock. Inspiration.
3rd Mrs P. Eunson. Freedom Bell.

CORRECTION TO *RHODODENDRONS 1978*

Our sincere apologies to Mr Brian E. Wright, of Crowborough in Sussex, whose *R. ciliicalyx* (runner-up in Class 21 of the 1978 R.H.S. Rhododendron Show) was wrongly attributed to the Wright family of Arduaine in the *1978 Year Book*.

Rhododendron Show

May 1st - 3rd, 1979

R. N. STEPHENSON CLARKE

SPECIES

Even allowing for normal regional variations in flowering timetables, the 1979 Show brought several species together, seldom coinciding in a competition - mainly because the very severe winter temperatures, followed by a cold spring, made many species flower later than usual and be available for later and sometimes longer use. A fine warm Easter weekend brought a rush of flower in the south - offset by another cold and overcast period to the eve of the Show, both holding species back and delaying others normally just out by May 1st. The overall result was some very large entries in many classes, and scant entries in some of the high-numbered events.

Whilst the Scottish and northern gardens climatically dominated most of the broad-leafed classes - partly due to having better avoided the disastrous drought of 1976 - certain gardens seemed to have escaped the worst of the winter privations.

There were sad absentees from the west coast gardens of Scotland - Corsock, Brodick and Lochinch - strong hands from Glendoick and Blackhills (eastern sectors) - very little from the West Country - largish entries from the S.E. nucleus of gardens (Borde Hill being, for example, slightly more forward than Leonardslee), and rather less than normal interest from Kent. Arduaine and Bodnant were only slightly below 1978 strength.

Much foliage seen in the exhibits reminded one of the effect of chilling winds, sub-zero nights - worse than all the layers of snow until drifts and slides begin.

A general conclusion must, however, be that the genus *Rhododendron* is a much more compromising and indestructible subject than many evidences suggest, and that garden owners who contributed to this Show are more resourceful and determined than any ante-post predictions might suggest.

That there were more collapsed rhododendrons by the second day than normally seen, further supports some of the information supplied over and above.

Class 1, 8 Species, Rothschild Challenge Cup (7 entries - a high support) was memorably won by Blackhills (Sylvester Christie, Esq.) - the pearl (perhaps of the whole Show) and the surmounting piece being *R. basilicum*** with bell flowers of a cream white, nearly translucent to underhint its deepest purple basal blotches, and tilted like a coronet to emphasize perfection in foliage. Also a good white *R. roxieanum* var. *globigerum** with fine crimson corolla marks, good *R. calophytum** (pink and stripy), *R. smithii*, just off-crimson *R. meddianum*, and *R.*

The asterisks represent the opinion of the authors and some others at the Show.
* = good ** = very good.

sutchuenense var. *geraldii.*

Arduaine was 2nd (*R. sinogrande**, *R. niveum** and *R. irroratum* appearing best). Hergest Croft - and I admired their entries throughout - came third with *R. sutchuenense**, *R. niveum* var. *fulvum,* and a plain white *R. phaeochrysum* (a little too plain to be excellent) deserving mention. Exbury in 4th position showed a nice *R. preptum** (a rarish species) and *R. crinigerum.*

Among the other entries I noted *R. grande* (Borde Hill - not a species to survive well in mid-Sussex) and *R. degronianum** (High Beeches). In all, a spectacular class - indeed, a treat.

Class 2 for 3 Species (a truss of each) had 7 entries, and must have been a stickler to judge.

Arduaine (the Messrs Wright) were placed 1st, showing *R. uvarifolium, R. thomsonii* and *R. balfourianum* var. *aganniphoides.* High Beeches were placed 2nd and showed *R. degronianum** (also in Class 1 - a slip), *R. fictolacteum** (smallish white flowers very good markings and blotch) and *R. neriiflorum.* Borde Hill placed 3rd showed white *R. fictolacteum, R. niveum* and *R. iodes**. Hergest Croft placed 4th included *R. chaetomallum** and *R. bainbridgeanum* of a rather off-putting colour.

Also Exbury (*R. morii, R. niveum, R. pseudochrysanthum*). Mrs Potter (her *R. fictolacteum,* marked "Hybrid" by the judges seemed correct to us). Sandling Park *R. rex, R. phaeochrysum** *R. campylocarpum* (unplaced - was adjudged nearly 1st by our reckonings).

Class 3 for 3 Species (Restricted Entry) was won by The British Tobacco Company, Chelwood Gate, Sussex - *R. wallichii* and *R campanulatum* being enjoyably together, though Mrs Potter's *R. campylocarpum* var. *elatum* in the 2nd Prize entry was the individual pick of the event.

Class 4, McLaren Challenge Cup - one truss any species - had a clear winner in *R. basilicum* (Blackhills), a duplicate of that seen in Class 1. The other sixteen entries included *R. macabeanum* (Nymans), good, but marked in the truss, leaves not perfect, *R. sinogrande* (Arduaine - very good but marked), and other similarly affected heavyweights - causing the judges perhaps to go for *R. pseudochrysanthum* (Exbury) 2nd, *R. niveum** (Arduaine) 3rd, and *R. arboreum* (Arduaine) 4th. Unlucky entries were *R. phaeochrysum** (Sandling Park), *R. rex* (Bodnant), and *R. rex* (H. P. Granlund of Balcombe), and *R. fictolacteum* (Mrs Potter - given a Highly Commended).

Class 5 Roza Stevenson Challenge Cup 1 spray or branch (17 entries) was a much stronger affair with some exciting entries. No panel of judges always think alike, and public attention is evidently no clue to any solution for some minds focus on size and magnificence, others on rarity or charm and presentation.

1st Prize went to a three-truss spray of *R. macabeanum*** (Nymans, The Countess of Rosse and The National Trust) religiously clean corollas and precise tidiness of foliage (even if better yellows exist beyond Taunton), expertly shown by Cecil Nice.

2nd Prize went to *R. rubiginosum* (Bodnant) - more strange than fiction. 3rd Prize went to *R. arboreum roseum** (also Nymans) placed 3rd 1978 - and I am not sure if this exhibit was not as good as their winning exhibit. 4th Prize went to *R. iodes*** (Borde Hill - A.M. White Plains) thought by many to be a hot contender for 1st place - a 13-truss spray brilliantly shown by that maestro of "arranging", Jack Vass.

Also very good *R. fargesii** (Hergest Croft) disqualified for being over

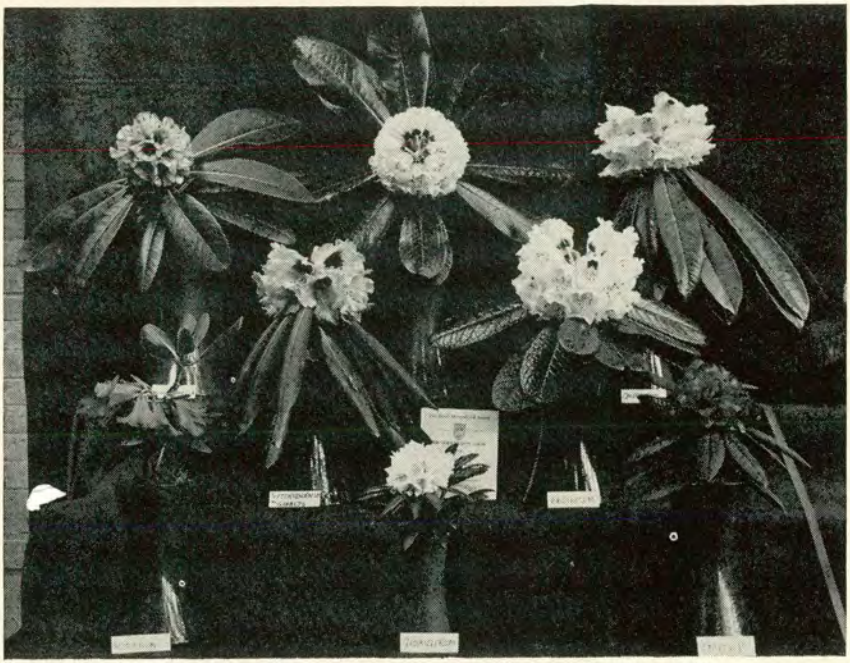

Fig. 3 The winner of Class 1, for a display of eight species, shown by Sylvester Christie of Blackhills, Morayshire

30 in. high - "offside" just when likely to score; *R. chaetomallum** (Hergest Croft) - excellent piecemeal, but too lofty and leggy for its fine components to blend together, *R. mekongense* var. *melsinanthum* KW406* (Borde Hill - winner 1975 in a strong entry - some think *R. trichocladum*, though such a fine yellow has never been related to such a species - awarded A.M. later, subject to identification).

Also entered were *R. dictyotum* A.M. 'Kathmandu' (Exbury) - intellectually stimulating, but rather a modest and untidy species; *R. calophytum* (Bodnant); *R. arboreum roseum crispum* (Lamellen), *R. racemosum* A.M. 'Rock Rose' (Hydon Nurseries) and *R. ciliatum*.

Class 6 Arboreum or its subspecies (10 entries) won by Nymans forma *roseum*. A hat-pin might have sorted out the rest, but a good rose-coloured truss (Arduaine) was overlooked for a place. I am sure this species, as with me, got very marked in 1979 - many were over by late April.

Class 7 Arboreum series except arboreum (11 entries - 8 of which were *R. niveum*). 1st *R. niveum* var. *fulvum** (Hergest Croft), 2nd *R. niveum* (Arduaine) - multi-flowered truss, very composite and excellent colour. 3rd *R. ririei* (Glendoick) - rather wan in hue.

In this Class *R. floribundum* (Bodnant) was unlucky, and an entry labelled *R. argyrophyllum* was merely an *R. arboreum*.

Class 8 Barbatum Series. Well supported (15 entries). 1st *R. barbatum* (Blackhills), 2nd *R. smithii*** (Hergest Croft) - excellent, better than A.M. form 'Fleurie', 3rd *R. crinigerum* (Exbury) pink-veined and quite good. Highly Commended *R. spilotum** (Nymans). A floater - not yet reclassified but appears to be nearest *R. morii* and equally delightful. *R. glischroides* and *R. habrotrichum* were also entries.

Class 9 Boothii Series 5 entries. Close. *R. sulfureum* (Lord Abercon-

way and The National Trust, Bodnant) beat their own *R. megeratum* with *R. sulfureum* F13512 (Borde Hill) third, despite its fine butter-yellow colour.

Class 10 Campanulatum Series. 1st *R. campanulatum** (apparently A.M. 'Waxen Bell') from Hydon Nurseries - Arthur George, Esq., a clear winner ahead of *R. wallichii* (Bodnant) and *R. tsariense* (Glendoick) 3rd. *R. fulgens* was included from Blackhills.

Class 11 Cinnabarinum Series 4 entries. (Borde Hill - R. N. S. Clarke, Esq.) won with "a very young spray of *R. concatenans* KW5874 Roylei Orange Bill - a good orange colour, leaves bluer in older plants". now *R. cinnabarinum* ssp. *xanthocodon* 'Concatenans',. *1978 Yearbook*, pp. 47-8. Ed.) *R. xanthocodon* (Bodnant) 2nd - surprisingly early for this species.

Class 12 Falconeri Series, 2 entries, went easily to Borde Hill, despite a pallid cream yellow truss, only 85% out and at half-cock as if woken up early, but the foliage was magnificent.

Class 13 Fictolacteum or Rex, 12 entries - difficult decision for judges. 1st *R. fictolacteum* (Arduaine) - a nice truss. 2nd *R. rex** (Sandling Park's celebrated veteran). 3rd *R. rex* (Tremeer - Mrs Catherine Hop-wood). Good *fictolacteum* were also shown by Sir Giles Loder, Mrs A. H. Potter and P. J. Urlwin-Smith, Esq.

Class 14. Other members of the Falconeri Series, went to a finely formed truss of *R. hodgsonii** (Blackhills) lurid magenta purple, over the same species TS42* collection (Glendoick) with a less startling restful magenta-lilac truss - *R. basilicum* (Blackhills) with pink stripes making 3rd, whilst *R. preptum** (Exbury) - neatly formed white flowers with good purple blotches - was in 4th place. *R. arizelum* (Nymans) - the best of several - and a weak-coloured *R. eximium* (Arduaine) were also noteworthy.

Class 15 Fortunei Series (18 entries) was more interesting than classic. The winner was *R. sutchuenense* var. *geraldii* while *R. calophytum* (Glendoick) 2nd and *R. sutchuenense* (Borde Hill) 3rd were good examples of their respective species. Lady Adam Gordon's nice entry labelled *R. orbiculare* was, we felt *R. cardiobasis* - *R. orbiculare* (Exbury) being conveniently nearby (not fully out). Both of these were a lovely shade of pink. *R. planetum* (a rare species to many, with distinctive leaves) was well shown by Blackhills.

Class 16 Fulvum Series was won by *R. uvarifolium* var. *griseum* (Blackhills) but I preferred their other entry *R. fulvum**, 2nd, a size-able truss. *R. fulvum* (Hergest Croft) was a modest 3rd. By May *R. fulvum* and, indeed, its colleague *R. fulvoides* are generally past their best in the south, rather evidenced by the other nine entries in this class, among which one marked F24314 could claim to be the best coloured entry of all - definitely pinker than the rest, but small.

Class 17 Grande Series (14 entries). A class much depreciated by signs of cruel weather. 1st *R. macabeanum** (Arduaine) - a good yellow, clean leaves. 2nd *R. praestans** (Blackhills) - also shown by Leonardslee and Borde Hill. 3rd *R. macabeanum* (Nymans) first in Class 5, but here sadly marked. Highly Commended was *R. sinogrande* (Bodnant) - but damaged leaves.

Class 18 Irroratum Series, 8 entries. 1st *R. anthosphaerum* (Blackhills) not typical of this species. 2nd *R. irroratum* (Borde Hill), highly spotted corollas - quite good. 3rd *R. irroratum* (Leonardslee) - polka dot. Highly Commended *R. irroratum* (Glendoick) near-white. Sadly, *R. venator*

KW6285 was not up to its usual winning form.

Class 19 Lacteum Series (15 entries) had another exciting winner, *R beesianum** (Blackhills) - a rarish, variable and often modest species, difficult to grow on well. *R. lacteum* (Leonardslee) was second - and *R. lacteum* (Hydon Nurseries) third (both a nice enough yellow). We also liked *R. beesianum* F30526 (Bodnant) and *R. wightii* with exceptionally large, good foliage - not properly out - of which more will be heard.

Class 20 Megacalyx Subseries had 4 entries. *R. lindleyi* (Glendoick) was first and the same species third for Lady Adam Gordon, but best for me was *R. dalhousiae** (LS & T 6694 FCC Frank Ludlow), very good depths of pink in tubular, well-extended bell flowers - placed 2nd.

In Class 21 Maddenii Series other than Megacalyx (7 entries) came a fine winner, *R. formosum* var. *inaequale** (C&H 301) from Peter Cox, Glendoick. A good yellow *R. burmanicum* and *R. johnstoneanum* were second and third. *R. dendricola* was also in this class. (Note: *R. ciliicalyx,* second in this class in 1978, came from Mr Brian Wright of Crowborough, not from Arduaine: apologies to both Mr Wrights for the mistake on p. 83 of the 1978 Yearbook—Ed.)

Class 22 Haematodes Subseries, one truss (7 entries). 1st *R. chaetomallum** (Hergest Croft) - good deep blood crimson; 2nd *R. beanianum* (Bodnant); 3rd *R. hemidartum* (Blackhills). The rare *coelicum* - F25647 - could be seen in this class - a species nearest perhaps to *R. chaetomallum* in appearance.

Class 23 Neriiflorum Subseries, 14 entries, contained nothing of high class - nice sprays of *neriiflorum* var. *euchaites* gaining 1st and 3rd places for Hergest Croft and Exbury. Nymans was second with *R. sperabile* - not probably quite *weihsiense* as claimed. *R. floccigerum* (Arduaine) was either "var. *appropinquans*" or *R. sperabile,* Farrer 888, and *floccigerum* F20305 (Borde Hill) had the normal type indumentum but yellow flowers margined with rose.

Class 24 Sanguineum or Forrestii Subseries, 4 entries, went to *R. citriniflorum* ssp. *horaeum* (copper orange to brownish flowers - irregular to say the least) from Glendoick - the remainder seemingly affected by birds. *R. eudoxum* (Nymans) appeared to be correctly described, but something had dined off a corner of the spray.

Class 25 Ponticum Series, 6 entries, was won by *R. caucasicum* (Glendoick) - third in 1978 - from a good *degronianum** (High Beeches) and *R. hyperythrum* (Sandling Park) with a nice white truss. *R. adenopodum* (Bodnant) will be reclassified in subsection Argyrophylla.

Class 26 Roxieanum or Wasonii Subseries, 10 entries, full of quality. *R. roxieanum* var. *oreonastes** 1st (Glendoick), got preference over a pinker truss from Blackhills with one faulty leaf - very noticeable in such narrow foliage. *R. wasonii** (Bodnant), a splendid yellow, was second, and *R. globigerum** (Blackhills), shown also in Class 1, was third. *R. iodes** was also in this class.

Class 27 Adenogynum or Taliense Subseries had 13 entries. Another strong class, but a clear winner both in size and standard was *R. prattii** (Major A. Hardy, Sandling Park) - not marked A.M. 'Perry Wood' W3958. Second was *R. vellereum* (*principis* in reclassification) L & S 15797 Collection - not as good as the A.M. KW5656 clonal forma. Also present and notable were *R. adenogynum* (Mrs Potter) 3rd, *R. adenophorum* and *R. balfourianum* var. *aganniphoides.*

Class 28 Campylocarpum spray, 5 entries. *R. campylocarpum* var. *elatum* (Mrs Potter, Wentworth) beat *R. campylocarpum* "forma Hooker" (Borde Hill) - Exbury being 3rd. Class 29 (6 entries). 1st *R. caloxanthum* (Nymans) - neither especially good, with the rare *R. panteumorphum* F21836 (Borde Hill) - well shown but apparently much better when seen in good garden daylight.

Class 30 Selense Subseries, 7 entries. Winner a beautiful truss of the very rare *R. jucundum** F21741 (Borde Hill) - A.M. award later - rose pink saucerish funnel-bell flowers with tidy deep matt-green foliage. Nymans showed *R. dasycladum rhaibocarpum* 2nd, also present as R59197 - Bodnant being 3rd with *R. selense*. Also present with *R. martinianum* (Nymans) and the very rare *R. esetulosum* (Blackhills), spray not intact, white flush-rose rather elongated flowers.

Class 33 Subseries Thomsonii, 11 entries. All three prizes went to *R. thomsonii* in the order Glendoick (cv. 'Balbirnie'*), Hergest Croft and Exbury. Bodnant showed *R. meddianum* (strange maroonish colour).

Class 31 *williamsianum* (3 entries - none of them properly out), and Class 32 *souliei* Subseries, one entry - *R. wardii* (Nymans) 1st given, were examples of species traffic running adrift. Our good *wardii* was out by 6.5.79 only.

Class 34, Schlippenbachii, 4 entries. Spray. 1st Borde Hill - beat Leonardslee - not properly out, though by 3 p.m. second day the result was reversed. Exbury was 3rd.

Class 35 Any deciduous azalea - not *schlippenbachii* - 6 entries, Spray or branch. 1st *R. quinquefolium** (Bodnant) - fine green centre. 2nd *R. albrechtii* (Leonardslee). 3rd *R. reticulatum* (Exbury) probably not *rhombicum* - as shown under Wilson 7694 in this same class.

Class 36 Three deciduous azaleas, 3 entries. Lord Aberconway's fine winning triumvirate included excitingly *R. reticulatum** white form. Exbury was 2nd. Leonardslee 3rd. A nice *R. canadense* was in the Fields.

Class 37 Anthopogon Series. 1st *R. primulaeflorum* (Bodnant), 2nd *R. laudandum* var. *temoense** (Glendoick) - delightful quality for this rarish and underrated variety - with lilac blue rather than white flowers. 3rd *R. hypenanthum* (Nymans) KW5849 not fully out. 4 entries.

Class 38 Campylogynum, 2 entries. 1st Bodnant - found to be *R. glaucophyllum*, though passed by the stewards. 2nd High Beeches - plum blue - not complete.

Class 39 Edgeworthii Series, 5 entries. All *R. edgeworthii*. 1st Glendoick*, 2nd Leonardslee* - *bullatum*, 3rd Sandling Park*.

Class 40 Glaucophyllum Series, 9 entries. 1st *R. charitopes*** (Robert Strauss, Esq., Stonehurst) - a lovely exhibit = clonal form 'Stonehurst' doubtless. 2nd *R. tsangpoense* (Nymans), 3rd *R. luteiflorum* (Bodnant).

Class 41 Heliolepis Series, 7 entries. 1st Exbury - *R. desquamatum* (seemed *rubiginosum*), 2nd, Arduaine - *R. rubiginosum*, 3rd Bodnant - *R. rubiginosum*, 4th Borde Hill - *R. desquamatum*.

Class 42 Lapponicum Series, 9 entries. 1st *R. hippophaeoides** said to be "Sunningdale" (Borde Hill), 2nd *R. russatum**, P. J. Urlwin-Smith, Esq. 3rd *R. flavidum - album* (Leonardslee). Very good, a species methinks. 4th *R. impeditum* (Exbury). Also interesting were *R. parvifolium* (Glendoick) and *R. stictophyllum* (Arduaine).

Class 43 Uniflorum or Lepidotum Series, 5 entries. 1st *R. uniflorum* KW5876 (Borde Hill) - well shown, pretty. 2nd *R. uniflorum* KW5876 (Glendoick). No 3rd prize given.

Class 44 Saluenense Series, 3 entries. 1st *R. calostratum* (Nymans), 2nd *R. calostratum* (Bodnant).

Class 45 Racemosum, 9 entries. 1st Bodnant - pink var. Bodnant. Considerable spray. 2nd Hydon Nurseries - R59578, A.M. 'Rock Rose' a small spray. 3rd Exbury, 4th Leonardslee.

Class 46 Scabrifolium Series, 5 entries. 1st *R. scabrifolium** (Borde Hill) from aged plant originally said to be at Grayswood, 2nd *R. hemitrichotum** (Arduaine) - best I have seen of this species. 3rd *R. spiniuliferum* (Leonardslee), good but frosted leaves.

Class 47 Trichocladum Series. Walkover for *R. mekongense* var. *melinanthum** KW406.

Class 48 Augustinii. Walkover - one entry - nice dark form from Exbury. I have never seen this interesting class so badly supported, or this species so late in gardens. At Borde Hill, the dark forms flower first.

Class 49 Oreotrephes. No entries. *R. oreotrephes* is seldom out at Borde Hill until May 3rd or later.

Class 50 Triflorum Subseries. No entries.

Class 51 Yunnanense Subseries, 5 entries. A class usually heavily supported. 1st *R. davidsonianum* (Bodnant), 2nd *R. bodinieri* (Exbury); not a good form - probably *R. rigidum*, 3rd *R. amesiae*; a rarish species with zygomorphic lurid purple-red flowers - Wilson 4322 - very exciting from Lamellen. I only wish that more garden owners would show their rare treasures - quite irrespective of their competition chances. Also noted was *R. tatsienense* - probably the celebrated F20486, weather damaged.

Class 52 A Malesian species. No entries.

Class 53. Any species not provided for in the foregoing classes. 1st *R. dauricum** white (Glendoick), 2nd *R. virgatum** (Leonardslee), 3rd *R. oleifolium* KW6279 (Borde Hill).

HYBRIDS

With six entries in Class 61, for eight hybrids, Bodnant once again won this class, showing a splendid selection, which included *R. calophytum* × *R. griffithianum*, *R. arboreum* × *R. griffithianum*, 'Coreta', and 'Choremia'. Exbury who were placed second, had I thought a greater variation in their exhibit, which included 'Fortune', 'Lionel's Triumph', 'Colonel Rogers', 'Mariloo' and 'Gaul'. Mrs Kleinwort was third. Exbury won Class 62 from seven other exhibitors, with 'Matador', 'Joanita' and 'Quaker Girl'; Mrs Kleinwort, showing 'Janet', 'Lionel's Triumph' and 'Yvonne', from Heaselands, was second. Class 63 restricted entry of three hybrids, was won by Mrs J. A. Fox from Sussex, with 'Avalanche', 'Lionel's Triumph' and 'Tregedna', a very attractive *R. thomsonii* cross; Mr Granlund showing 'Cornish Cross', 'Mariloo' and 'Luscombei', was second.

Class 65, for one truss of any hybrid, for which the Loder Cup is awarded, attracted twenty-nine entries. Always a difficult class to judge, this year was no exception, but finally the prestigious cup was won by Lady Adam Gordon for her quite outstanding truss of 'Colonel Rogers', with a champagne coloured form of 'Lionel's Triumph' shown by Mrs A. M. Hooton second; 'Loderi King George' × *R. irroratum* from The High Beeches was third; amongst the other eye-catching exhibits were the more yellow forms of 'Lionel's Triumph', 'Robert Keir' and 'Pink Glory' ('Loderi Pink Diamond' × *R. irroratum*).

Bodnant won Class 66 for six hybrids raised by or in the garden of

the exhibitor, with a very nice *R. calophytum* × *R. griffithianum*, 'Coreta', 'Red Queen', 'Choremia', *R. arboreum* × *R. sutchuenense*, and 'Aspansia' × 'Elizabeth', a very attractive flower with an enlarged calyx. Exbury were second with 'Alpine Glow', a *R. calophytum* hybrid, 'Lionel's Triumph', 'Exbury Calstocker', 'Gaul', 'Queen of Hearts' and 'Fortune'. Class 67, for three sprays raised in the garden of the exhibitor, was again "A battle of the giants", which was won by Bodnant who were also placed second, with a very pretty shell pink *R. arboreum* × *R. griffithianum*, 'Red Queen', 'Choremia' and 'Calrose'. Exbury included their very delicate cream coloured *R. hyperythrum* × 'Crest' amongst their three. Attracting sixteen entries in Class 68, Bodnant's deep pink 'Shirleyi' won from 'Colonel Rogers' shown by Exbury, with Bodnant's very attractive deep glowing red 'Choremia' third. With six out of the eight entries in Class 70 being 'Cornish Cross', *R. calophytum* × *R. griffithianum* from Bodnant won this class from Mrs Potter's 'Cornish Cross'. Mrs Kleinwort's 'Yvonne' won Class 71 from 'Luscombei' shown by Exbury. Class 72 was won by 'Avalanche' shown by Mrs Strauss, from 'Gladys' shown by Mrs Potter.

Class 73 was won by Mrs Potter showing 'Idealist', pale yellow tinged with apricot, Mrs Hooton's 'Carita Inchmery' was second; also shown were 'Marcia' and 'Damaris', Logan form. Class 74: Bodnant's very fine 'Choremia' won from 'Elizabeth' and the very pretty 'May Dawn'. Leonardslee, showing *R. fortunei* × *R. thomsonii* (gr. Luscombei) and 'Glory of Leonardslee' were placed first and second in Class 75. Mrs Kleinwort's large truss of 'Queen of Hearts' won Class 76 from Bodnant's 'Elizabeth' × *R. hookeri*. Class 77, which attracted six 'Elizabeth' two 'Ibex' and one 'Matador', was won by Mrs Potter's 'Elizabeth' from Exbury's 'Matador' and Mrs Kleinwort's 'Ibex'. Mrs Kleinwort's 'Laura Aberconway' was the only entry in Class 78. With ten entries in Class 79, 'Galactic', shown by Leonardslee, won this class from Exbury's 'Lionel's Triumph' and Mrs Hopwood's very good yellow 'John Barr Stevenson' from Tremeer. Hydon Nurseries' 'General Eric Harrison' was the only entry in Class 80. Mrs Hopwood's 'Comely' won Class 81 from Leonardslee's 'Bodnant Yellow'.

Class 82 attracted nine entries, of which 'Michael's Pride', with a truss of seven large creamy yellow bells, shown by Leonardslee won the class from a spray of 'Harry Tagg' also from Leonardslee, from 'Fragrantissimum' shown by Lady Adam Gordon; also shown was a large spray of 'Countess of Haddington' and a truss of 'Rose Mangles' with long pink glowing bells. Class 84 was won by an attractive spray of 'Eleanore' shown by Exbury, from 'Alison Johnstone' shown by Leonardslee, and General Harrison's very deep yellow *R. concatenans* × *augustinii*, shown by Mrs Hopwood, which I thought to be pure *concatenans*. Class 85, for 'Elizabeth', was won by Leonardslee from Mr Strauss. Class 86 was won by *R. aperantum* × 'Elizabeth' shown by Bodnant from Mr Peter Cox's 'Riplet' (*R. forrestii* × 'Letty Edwards'), a lax truss of deep rose bells with a pale throat. Mrs Potter's unnamed *R. campylogynum* × *R. racemosum* won Class 87. In Class 88 Peter Cox showed two *R. carolinianum* hybrids, which were placed first and second with *R. carolinianum album* × *R. leucaspis*, a very pretty floriferous white hybrid with many of the characteristics of *R. leucaspis* and P. J. Mezzit' (*R. carolinianum* × *R. dauricum*); also shown were 'Yellow Hammer', 'Ptarmigan' and 'Racil'. Class 89, with eleven entries, was won by 'Pink Glory' from Leonardslee with Exbury's 'Calstocker' sec-

ond and Mr Urlwin-Smith's 'Gaul' third. A very nice spray of 'Blue Diamond' shown by Exbury won Class 90, from 'St Merryn' exhibited by Mrs Hooton. Bodnant were placed first, second and third in Class 91 with 'Aspansia' × 'Elizabeth', 'Aspansia' × 'Hiraethlyn' and 'Red Wings'. A spray of 'Elizabeth' × 'Remus', shown by Exbury, won Class 92.

Class 93, with thirteen entries, was won by 'Elizabeth' from Leonardslee, with 'Damaris' shown by Lamellen second, and Mrs Hopwood's very good yellow 'Beatrice Keir' third. Major Hardy's 'Caerhays Philip' was the only entry in Class 94. Class 95, for any species shown by a novice, was won by Dr and Mrs Landon of Crowborough with a nice spray of *R. dichroanthum* ssp. *herpesticum*, better than anything in the Open class, 24. They also won the following class for any hybrid shown by a novice with a nice *R. aberconwayi* cross. There were no entries in classes 100 and 101 for evergreen azaleas. Class 102, for one plant in bloom of any dwarf Rhododendron suitable for the rock garden, was won by an outstanding plant of 'St Merryn', a Tremeer hybrid, shown by Hydon Nurseries, and this went on to be selected for trial at Wisley. 'Popacatapetl', shown by Mrs Fox, was second, and third, a plant labelled *R. lapetiforma* which is thought not to be in cultivation, and may have been *R. arteocladum*. Class 103, for a plant of an evergreen Rhododendron in bloom, was won by a nicely shaped plant of *R. pseudochrysanthum* from Exbury; new exhibits were *R. ciliatum* and *R.* 'Unique'.

Class 105. Six Rhododendrons - two leaves (back and front of each). 1st Arduaine*. Nice to see *R. bullatum* and *R. zeylanicum* included.

Fig. 4 A display by the S.E. branch of the Rhododendron and Camellia Group, showing the distribution of Rhododendrons throughout the World

2nd Exbury; good, but handicapped by trying series Fortunei - leaves tend to curl up when crucified. 3rd J. E. Hilliard, Esq., 93 Gales Drive, Three Bridges, Sussex; some well-selected species including *R. vellereum.*

NON-COMPETITIVE EXHIBITS

An outstanding exhibit of both Rhododendron species and hybrids, was staged by the South-Eastern Group on behalf of the Rhododendron and Camellia Group. A great deal of hard work in planning and organising went into making a very worthwhile exhibit. A large map of the world acted as a backdrop to the exhibit, showing the world-wide distribution of the genus as well as the altitudes from where the various species were originally collected. Coloured ribbons extended down from the map to the wealth of flowers below, showing that *R. hippophaeoides* and *R. stictophyllum* come from the high altitudes of Yunnan and W. Szechwan, whereas *R. niveum* and *R. parryae* come from further down the mountain sides. In all, there were well over a hundred species and hybrids on the exhibit which included *R. auratum, beesianum, lindleyi, lyi, fulvum, microleucum, lacteum, wasonii* and *roxieanum.* This exhibit received a silver gilt Lindley medal.

It was sad to see so few rhododendrons on the Trade exhibits, but Reuthe's had a very nicely balanced stand, in the centre of which was a plant of *R. campylocarpum* and small groups of 'Blue Tit', 'Princess Anne', *R. searsiae, R. vaseyi* and 'Popacatepetl'; all these groupings of plants had been skilfully done, so that one was able to see each individual group without it being crowded out by something else. This stand received a silver medal.

I would like to thank Mrs Karin Southwell, for secretarial assistance both in London and Sussex, beyond the calls of duty, and Miss Ann Magor for relieving me of the Hybrid Section - to my mind the Hard Labour Division. Also Mr Peter Cox of Glendoick, who looked over many classes with me - generously contributing advice from his immense knowledge, and pervading my task with his enormous sense of humour.

R. N. S. C.

ADDITIONS TO THE INTERNATIONAL RHODODENDRON REGISTER 1978/79

The following list contains names registered during the period July 16, 1978 to July 15, 1979.

Abegail	(Loder's White × *calophytum* (Pink form)). Truss 12-14-flowered, corolla Red Purple Group 62B with dorsal blotch of 62D. Crossed (1962), raised and introduced by Carl H. Phetteplace, M.D., Star Route, Leaburg, Or 97401, U.S.A.
Aleida	(mutation of Vuyk's Scarlet). Truss 2 flowers, corolla Bright Orange Red 44C. Selected, raised, introduced and registered by Research Station for Woody Nursery Crops, Valkenburgerlaan 3, 2770 AC Boskoop, Nederlands. (A Vuykiana azalea..)
Amazement	(*fortunei* × *wardii*) (gr. Prelude). Truss 13-flowered, corolla Yellow Group 3D. Crossed (c. 1961) by Donald Hardgrove, raised (after 1964) and introduced by Mrs Doris Royce, Basket Neck Nursery, Basket Neck Lane, Remsenburg, N.Y. 11960, U.S.A.

André — (Britannia × *yakushimanum*). Truss 11 to 14 flowers, deep rose in bud, pink (HCC 625/2), fading to pale pink. Crossed by R. de Belder, Belgium, introduced and registered by Research Station for Woody Nursery Crops, Boskoop, Netherlands.

Anna Strelow — (form of *laxiflorum*). Truss loose, 14-16-flowered, corolla White Group 155D shading towards base of corolla to a yellowish-White Group 155A, lobes of corolla faintly flushed Red-Purple. Collected by George Forrest, under No. F27706, raised by Col. S. R. Clarke and introduced by R. N. Stephenson Clarke, Borde Hill, Haywards Heath, Sussex, U.K. A.M. 1979.

Ann Luettgen — (Complex parentage which includes *catawbiense, maximum* and possibly unknown hybrids). Truss 17 flowers, buds deep purplish Red 10 RP 3/10 (Nickerson), corolla deep purplish Pink 2.5 RP 6/10 with heavy spotting strong Purplish Red 10 RP 4/12 in 3 dorsal lobe sector. Crossed (1971), raised and introduced by W. David Smith, Box 3250, R.D. 3, Spring Grove, PA 17362, U.S.A.

Arctic Flame — (A volunteer Glenn Dale seedling/evergreen azalea). Truss 1-3-flowered, corolla Red Group 46D with dark red dorsal blotch. Originated (1958) in garden of Charles Herbert, and raised and introduced by Charles Herbert, 1601 Country Club Road, Phoenixville, PA 19460, U.S.A.

Arlene Utz — (Complex parentage which includes *catawbiense, maximum* and possibly unknown hybrids). Truss 11 flowers, buds strong purplish red 7.5 RP 4/11 (Nickerson), corolla deep purplish pink 5 RP 6/10 with moderate purplish red 5 RP 5/10 edging and shaded deep purplish red 7.5 RP 3/9 deep in throat. Crossed (1968), raised and introduced by W. David Smith, Spring Grove, PA 17362, U.S.A.

Anne Hardgrove — (C. P. Raffill × Moser's Maroon). Truss 11-flowered, corolla Red Group 46A. Crossed (1949/50) and raised by Donald L. Hardgrove, and introduced by Sidney Burns, Ridge Road, Muttontown, Syosset, L.I., N.Y. 11791, U.S.A.

Arthur Pride — (Natural hybrid of *maximum* and *catawbiense*). Buds pink. Corolla Red Purple Group 65B edging with white throat and with white extending out into lobes and with blotch of small spots, Green Yellow Group 1D. Orig. North Carolina 1934; selected by Orlando S. Pride, Butler, PA 16001, U.S.A.

Barbara Houston — (Virginia Scott × Belvedere). Truss 9-flowered, corolla Yellow Orange Group 22C with large red spots on 3 dorsal lobes and ¼ in. pink edging to lobes; buds Red Group 42A. Crossed (1959), raised and introduced by Mr and Mrs H. L. Larson, 3656 Bridgeport Way, Tacoma, WA 98466, U.S.A.

Barbara Tanger — (Complex parentage which includes *catawbiense, maximum* and possibly unknown hybrids). Truss 17 flowers, buds strong Reddish Purple 2.5 RP 5/10 (Nickerson), corolla moderate Purplish Red 5 RP 4/10 with deep purplish red 7.5 RP 3/9 dorsal spotting. Crossed (1970), raised and introduced by W. David Smith, Spring Grove, PA 17362, U.S.A.

Bergie Larson

(*wardii* × Jasper). Truss 12-flowered, corolla Yellow-Orange Group 23B with slight red spotting in dorsal lobe sector; ¼ in. edging and reverse Red Group 43A, buds Red Group 43A. Crossed (1959), raised and introduced by Mr and Mrs H. L. Larson, Tacoma, WA 98466, U.S.A.

Bert Larson

(Diva × *strigillosum*). Truss 12- to 14-flowered, corolla Red Group 45D with darker brownish-red spotting in dorsal 3 lobe sector. Crossed by Mr and Mrs H. L. Larson, raised, introduced (1968) and registered (1978) by H. L. Larson, Tacoma, WA 98466, U.S.A.

Beverley Tasker

(Dido × Jalisco × Yellow Creek). Truss 7 flowers, some double heads having 11, corolla HCC 4/2 softer and not such a flat effect as colour chart indicates, general effect ripple, lemon yellow, green in base of throat. Crossed, raised, introduced and registered by Mr H. R. Tasker, "Staple Hometsead", Ruapuna, Ashburton R.D. 5, New Zealand.

Birthday Greeting

(Naomi × *fortunei*). Truss 6-7-flowered, inner corolla Yellow-Orange Group 18D diffusing towards rim to Red-Purple Group 68B; reverse diffused shades of Red-Purple Group 68B and Red Group 51C, with some deep red markings in the throat close to Red Group 46A. Crossed, raised and introduced by Edmund de Rothschild, Exbury, Southampton, U.K. A.M. 1979.

Blazon

((Louise Gable × Ward's Ruby) × James Gable). Truss 2-9-flowered, corolla Red Group 53B. Crossed (1968), raised and introduced by W. L. Guttormsen, Greenwood Gardens, 1233 S.E. 1st Ave., Canby, OR, 97013, U.S.A.

Bob's Blue

(Ilam Violet × Blue Diamond). Truss 3-5-flowered, corolla Violet Group 88C-D. Crossed, raised and introduced by Dr Robert C. Rhodes, Maple Ridge, B.C., Canada.

Bob's Yellow

(*wardii* × Goldfort). Truss 10-flowered, corolla Yellow Group 3C-D, flare in throat Yellow-Green Group 145B. Crossed, raised and introduced by Dr Robert C. Rhodes, Maple Ridge, B.C., Canada.

Bonnie Maid

(*fortunei* × unknown). Truss 10-13 flowers, corolla Red Group 55B with 2 dorsal rays 53A. Crossed (1968) by Maurice E. Hall, and raised and introduced by Edward J. Brown, County Road, R.F.D. 5, Lakeville, MA 02346, U.S.A.

Bowie

(*chapmanii* × *minus*). Fl. cluster 10-36 flowers, corolla Red Purple Group 62C-D with pale brownish green blotch. Crossed (1953), raised and introduced by Dr Henry T. Skinner, Bowie, MD 20715, U.S.A. Intro. U.S. National Arborteum (1971).

Bradfield

(*souliei* × *yakushimanum*). Truss 5-6-flowered, corolla White, rim flushed Red-Purple Group 63C, reverse more uniformly flushed with same colour. Upper throat spotted Red-Purple Group 60A. Crossed (1956), raised and introduced by the Crown Estate Commissioners, Crown Estate Office, The Great Park, Windsor, Berks., U.K. P.C. 1979.

Buttermint (syn. Compact Yellow; Aristocrat)	(Unique × (Fabia × *dichroanthum* ssp. *apodectum*)). Truss 15-flowered, buds orange, corolla lighter than Brilliant Yellow Group 2.5Y 9/9 (Nickerson with moderate Pink 5R 8/6 edging. Crossed (1960), raised and introduced by Dick Mauritsen, registered by Harold E. Greer, Greer Gardens, Eugene, OR 97401, U.S.A.
Canadian Gold	(Hotei × *wardii* hybrid). Truss 9-11-flowered, corolla Yellow Group 6D with reddish-maroon blotch. Crossed, raised and introduced by John G. Lofthouse, 6649 Osler Street, Vancouver, B.C., V6P 4C2, Canada.
Carat	(*viscosum* hybrid × Satan). Truss 7-9 flowers, orange red (HCC 17/1), blotch faint orange. Crossed, raised, introduced and registered by Research Station for Woody Nursery Crops, Boskoop, Netherlands.
Carol Amelia	(Polar Bear × Evening Glow). Truss 8-10-flowered, corolla White tinged Yellow Group 11C with greyed Red Group 180B spotting in dorsal lobe sector and reverse with Red Purple Group 63B streaks. Buds Red Group 39D. Crossed (1967), raised and introduced by A. John Holden, RT. 4, Box 188, Shelton, WA 98584, U.S.A.
Carol High	(Elizabeth × French Creek). Truss 14-flowered, corolla White Group 155B with chartreuse green spotting in throat, reverse with trace of Red Group 56D. Crossed (1966), raised and introduced by Charles Herbert, Phoenixville, PA 19460, U.S.A.
Chelsea Chimes	(form of *coryanum*). Truss 8-9-flowered, corolla White Group 155D with sparse spotting in upper throat of Red-Purple Group 57A. Collected by Kingdon-Ward under KW 6311. Raised by Col. S. R. Clarke and introduced by Robert N. Stephenson Clarke, Haywards Heath, Sussex, U.K. A.M. 1979.
Clipper	(Louise Gable × Ward's Ruby). Truss 1-2-flowered, single, semi-double or double, corolla Red Purple Group 68B to 68C to 65D. Crossed (1961), raised and introduced by W. L. Guttormsen, Canby, OR 97013, U.S.A.
Comstock	(Jalisco × Jasper). Truss 8 flowers, corolla lighter than moderate Orange Yellow 10 YR 8/70 (Nickerson), deeper colour in throat, pale pink stripes 2.5R 9/3 on reverse. Crossed by Del James in 1955, raised and introduced by Harold E. Greer, Greer Gardens, Eugene, OR 97401. U.S.A.
Copper Kettles	(Crest × Souvenir of W. C. Slocock × *dichroanthum* ssp. *apodectum*). Truss 9-11-flowered ¼ of fls. with petaloid centres, corolla Red Group 37B at edge to Yellow-Orange Group 23D at calyx. Crossed, raised and introduced by John G. Lofthouse, Vancouver, B.C., Canada.
Coral Queen	((King of Shrubs × Fawn) × Dido). Truss 9-12 flowers, corolla Deep Coral Group 51B. Crossed (1961), raised, introduced and registered by Mrs R. J. Coker, 129 Ilam Road, Christchurch, New Zealand.
Coral Velvet	(*yakushimanum* × unknown). Truss 5-flowered, corolla opens moderate Yellowish Pink 7.5 R 8/6

(Nickerson, changes to lighter than Light Yellowish Pink 7.5 R 9/3 with age, has slight deeper spotting; buds deep Coral Pink. Seedling sent from Japan in 1930. Raised by Henry Swanson, and introduced by Harold E. Greer, Greer Gardens, Eugene, OR 97401, U.S.A.

Crimson Crest — ((Louise Gable × Ward's Ruby) × James Gable). Truss 2-3-flowered, corolla Red Group 53A. Crossed (1968), raised and introduced by W. L. Guttormsen, Greenwood Gardens, Canby, OR 97013, U.S.A.

Crown Equerry — (form of *niveum*). Truss up to 32-flowered, corolla Purple-Violet Group 80D in throat, darkening to 80C towards lip and with deeper veining of 80A. Collector not recorded, raised by Stevenson (Tower Court), and introduced by the Crown Estate Commissioners, Windsor, Berks., U.K. F.C.C. 1979.

Czech Beauty — (Goldsworth Yellow × unknown). Truss 11-flowered, corolla Yellow Group 4D with dorsal Greyed Orange Group 168A spotting. Seed from Schumacher Seed Co., Sandwich, MA, 1960. Raised and introduced by Louis A. Hindla, 986 Church Street, Bohemia, N.Y. 11716, U.S.A.

Deep Purple — (Violacea × Purple Splendor). Truss 1-2-flowered, corolla Red Purple Group 72B with Purple Group 77A blotch. Crossed (1967), raised and introduced by W. L. Guttormsen, Greenwood Gardens, Canby, OR 97013, U.S.A.

Diorama — (*viscosum* hybrid × Fireglow). Truss 9-12 flowers, red (HCC 820/3). Crossed, raised, introduced and registered by Research Station for Woody Nursery Crops, Boskoop, Netherlands.

Directeur Dorsman — (Wilgen's Ruby × May Day). Truss 6-10 flowers, bright red (HCC 821/2). Crossed, raised, introduced and registered by Research Station for Woody Nursery Crops, Boskoop, Netherlands.

Dixy Lee Ray — (Zuiderzee × Naomi Pink Beauty). Truss 14- to 17-flowered, corolla Red-Purple Group 68C with slight dorsal spotting Red Group 37B; throat and lobe centres White Group 155B (star-shaped). Crossed (1958), raised and introduced by Mr and Mrs H. L. Larson, Tacoma, WA 98466, U.S.A.

Doctor Richard Anderson — (Else Frye × *johnstoneanum*). Truss 5-6-flowered, corolla white with blush of 52D at lobe edges, bi-coloured blotch 33C blending to 28C in dorsal lobe sector; reverse with 52D blush. Crossed (1967) by Richard Anderson, M.D., raised and introduced by H. J. Braafladt, 4476 Excelsior Road, Eureka, CA 95501, U.S.A.

Donna Hardgrove — (*fortunei* × (*wardii* × *dichroanthum*)). Truss 8-flowered, corolla Yellow Orange Group 23C with 23B edging. Crossed (c.1951) and raised by Donald L. Hardgrove, and introduced by Sidney Burns, Syosset, L.I., N.Y. 11791, U.S.A.

Doris Bigler — (Complex parentage which includes *catawbiense, maximum* and possibly unknown hybrids). Truss 17 flowers, buds strong Reddish Purple 2.5 RP 5/10 (Nickerson), corolla Light Purple 7.5 P 7/7 with

strong Reddish Purple 10 P 5/10 edging and yellow blotch and light green spotting. Crossed (1971), raised and introduced by W. David Smith, Spring Grove, PA 17362, U.S.A.

Edith Pride — (English Roseum × *maximum*). Buds deep pink; corolla Red Purple Group 62C with small white blotch and pale yellow spotting. Crossed (1958), raised and introduced by Orlando S. Pride, Butler, PA 16001, U.S.A.

Edward M. Boehm — ((un-named Fischer hybrid of unknown parentage) × (Hexe × Vervaeniana)). Truss 1-3 flowers, corolla Solferino Purple 26 (HCC) with 1 in. × 1 in. dorsal blotch Chrysanthemum Crimson Group 824/3 streaked with brown. Crossed (1959), raised and introduced by G. Albert Reid, Box 243, Blackman Road, Bargaintown R.D. 1, Linwood, N.J. 08221, U.S.A.

Eider — (*carolinianum* × *leucaspis*). Truss 5-8-flowered, corolla white. Crossed (1967), raised and introduced by P. A. Cox, Glendoick Gardens Ltd., Perth. U.K.

Eva Rebecca — (Polar Bear × Autumn Gold). Truss 8-10-flowered, corolla outer third Orange Group 28D shading to inner two-thirds Yellow Orange Group 19C with greyed Orange Group 171C spotting in dorsal lobe sector. Buds Red Group 42D. Crossed (1967), raised and introduced by A. John Holden, Shelton, WA 98584, U.S.A.

Far Horizon — (form of *vellereum*). Truss 22-24-flowered, corolla Red-Purple Group 68A, fading to white deep in throat, upper throat lightly spotted with Red-Purple Group 66A. Collected by Frank Kingdon-Ward, under No. KW5656, raised by Col. S. R. Clarke, and registered by R. N. Stephenson Clarke, Haywards Heath, Sussex, U.K. A.M. 1979.

Fiona Wilson — (Loderi King George × Pink Pearl). Truss 9-10-flowered, corolla Red-Purple Group 73D. Crossed (1959) and raised by Geoffrey Hall, Harewood House Gardens, and introduced and registered by Lord Harewood, Harewood, Leeds, Yorks., U.K.

Fire Sprite — ((Louise Gable × Ward's Ruby) × James Gable). Truss 3-16-flowered, corolla Red Group 53C. Crossed (1968), raised and introduced by W. L. Guttormsen, Greenwood Gardens, Canby, OR 97013, U.S.A.

Fire Wine — (Purple Splendour × Fire Bird). Truss 16-flowered, corolla lighter than Deep Purplish Red 7.5 RP 3/9 (Nickerson), with slightly deeper dorsal spotting. Crossed (1960), raised and introduced by Harold E. Greer, Greer Gardens, Eugene, OR 97401, U.S.A.

Florence Archer — (*wardii* × Marcia). Truss 8-flowered, corolla Yellow Group 39A fading to Yellow Group 11A, with spotting in 2 dorsal lobe sector of Yellow-Green Group 145A; ¼ inch edging of Red Group 39A; buds Red Group 39A. Crossed (1966), raised and introduced by Mr and Mrs H. L. Larson (1978), by H. L. Larson, Tacoma, WA 98466, U.S.A.

Garden State Garnet — (Parentage unknown). Corolla China Rose 024 (HCC) with darker spots on dorsal lobe. Crossed (1966),

raised and introduced by G. Albert Reid, Linwood, N.J. 08221, U.S.A.

Gay Princess (syn. Pink Princess) — (Atroflo open pollinated). Truss 18-flowered, corolla Red Purple Group 67C with 69A edging and reverse; Greyed-Orange Group 163C blotch and green spotting in upper throat. Seed collected (1953), raised and introduced by Charles Herbert, Phoenixville, PA 19460, U.S.A.

Genie Magic (syn. Genie) — ((Rose Greeley × Ward's Ruby) × Kirin). Truss 1-3-flowered, corolla Red Group 47C. Crossed (1967), raised and introduced by W. L. Guttormsen, Canby, OR 97013, U.S.A.

Gilded Gown — (Crest × unknown). Truss 9-10 flowers, corolla Yellow Group 4C fading to 4D, buds Orange/Red Group 35A to 35C. Crossed, raised, introduced and registered by Mrs R. J. Coker, Christchurch, New Zealand.

Ginny Beale — (*metternichii* × *adenopodum*). Truss 16-flowered, corolla Red Group 49D with no blotch or spotting; faint pink stripes in reverse; buds dark pink. Crossed (c.1964) by Joseph Gable, raised, introduced (1973) and registered (1978) by Ross B. Davis, Jr., 404 Conestoga Road, Wayne, PA 19087, U.S.A.

Ginny Gee — (*keiskei* (prostrate form) × *racemosum* Forest No. 19404). Terminal inflorescence 9-11 trusses with total of 30-50 flowers, corolla white with Red Group 55D mottling at lobe margins. Crossed (1969), raised and introduced by Warren Berg, 29070 222nd Place, S.E., Kent, WA 98031, U.S.A.

Golden Fantasy — (Parentage unknown). Truss 8-flowered, corolla cream with deeper yellow throat and dorsal greenish blotch, deep in throat slight chartreuse spotting. Lobes fade to White Group 155B. Crossed (1963) by Roy J. Kersey, raised and introduced by Mrs Halsey A. Frederick, Jr., Timber Town, 530 Fishers Road, Bryn Mawr, PA 19010, U.S.A.

Golden Star — (*fortunei* × *wardii*). (gr. Prelude). Truss 7-flowered, corolla Yellow Group 8B. Crossed (c.1951) and raised by Donald L. Hardgrove, and introduced by Sidney Burns, Syosset, L.I., N.Y. 11791, U.S.A.

Great Scott — (Mrs J. G. Millais × Cheyenne). Truss 14-flowered, corolla slightly darker than pale Purplish Pink 2.5 RP 9/2 (Nickerson) (appears white) with very prominent Dark Red 2.5 R 3/7 blotch (flair) in dorsal 3 lobe sector, solid in base of tube. Crossed (1960), raised and introduced by Harold E. Greer, Eugene, OR 97401, U.S.A.

Hamma Hamma — (Fabia × unknown). Truss 10-18-flowered, corolla Red Group 53B with heavy black spotting in dorsal lobe sector. Crossed (c.1958), raised and introduced by Roy W. Clark, 2101 Olympia Ave., Olympia, WA 98506, U.S.A.

Harnden's White — (Albatross × Hawk). Truss 10-flowered, corolla almost white (with slight greenish yellow tinge). Crossed (1955), raised and introduced by Harold E. Greer, Eugene, OR 97401, U.S.A.

Hazel

(*bureavii* × unknown). Truss 12-15-flowered, corolla slightly darker than Pale Purplish Pink 2.5 RP 9/2 (Nickerson) with deeper stripes and edging inside and on reverse and very slight brown spotting, buds deeper pink. Crossed in 1959 by unknown person, raised and introduced by Harold E. Greer, Eugene, OR 97401, U.S.A.

Helios

((*decorum* × *discolor*) × (*fortunei* × (*wardii* × *dichroanthum*)). Truss 10-flowered, corolla Red Group 49B shading to Yellow Group 5C in throat; reverse shell pink with pink striping. Crossed (1962), raised and introduced by Alfred A. Raustein, 230 Union Avenue, Holbrook, N.Y. 11741, U.S.A.

Highfield Cream

(*yakushimanum* × unknown). Truss 9-flowered, corolla mimosa yellow H.C.C. (602/1), fades to pale cream, slight green throat. Crossed and raised by Mrs R. J. Coker, and introduced and registered by Mrs J. S. Clyne, 38A Seddon Street, Highfield, Timarau, New Zealand.

Hohman

(form of *prunifolium*). Truss 4-5-flowered, corolla Red Group 39A (Jasper Red) with lobe edging somewhat lighter 34C. Raised by Henry J. Hohman, and introduced by U.S. National Arboretum, named and reg. by Dr Henry T. Skinner, Bowie, MD 20715, U.S.A.

Holmeslee Bright Light

(Parentage unknown). Corolla Red-purple Group 57A-C. Crossed, raised, introduced and registered by Graham Holmes, Holmeslee, Rakaia, New Zealand.

Holmeslee Opal

(Wax Eye × Van Nes Sensation). Truss 12-15 flowers, corolla white with tinge of Green Group 56D. Crossed, raised and introduced by Graham Holmes.

Honey Glow

(Crest × unknown). Truss 12-14 flowers, corolla Red Group 4C, outer part 4D, flushed Red Group 55D when opening. Crossed and raised by Mrs R. J. Coker and introduced and registered by Mr and Mrs C. A. Grant, Kapunatiki, Orton Road, Temuka, New Zealand.

Humboldt Sunrise

(Else Frye × *johnstoneanum*). Truss 5-6-flowered, corolla Yellow Group 11C with 12A blotch in throat, reverse 11C with Red Group 38B blush. Crossed (1967) by Richard Anderson, raised and introduced by H. J. Braafladt, Eureka, CA 95501, U.S.A.

Ina Hair

(*macabeanum* × unknown). Truss 20 flowers, corolla rose madder in bud Group 23/2, fading to cream with rose madder spots in throat. Crossed and raised by Pukeiti Rhododendron Trust, and introduced and registered by Mr G. F. Smith, of Pukeiti Rhododendron Trust, New Plymouth, New Zealand.

Irene Bain

(*yakushimanum* × May Day). Corolla opens pale pink, fades to cream with pink frilled edge. Crossed (1965) and raised by Dr Yeates, introduced and registered by Mrs Irene Bain, Glenview, R.D. 1, Napier, New Zealand.

Irene Hall

(Loderi King George × Pink Pearl). Truss 11-12-flowered, corolla white, flushed pink outside along centres of petals, upper petals slightly spotted inside, short deep red mark at base inside. Crossed

(1959) and raised by Geoffrey Hall, Harewood House Gardens, and introduced by Lord Harewood, Yorks., U.K.

Island Gem — (from open-pollinated seed of *oreotrephes*). Terminal flower clusters of up to 3 trusses, each of 3-4 flowers, corolla Purple Group 76A with Greyed Red Group 180B, blotch of spotting, Greyed Orange Group 168D shading deep in throat. Raised (1971), introduced and registered by Howard A. Short, Sunrise Rhododendron Gardens, Route 7, Box 7472, Bainbridge Island, WA 98110, U.S.A.

Ivan D. Wood — ((King of Shrubs × Fawn) × Dido). Corolla Cream/Green Group 55D, at edge of flower, centre Group 20C, fading to Group 11C. Crossed, raised, introduced and registered by Mrs R. J. Coker, Christchurch, New Zealand.

Jane Henny — (Lady Bligh × Loderi Venus). Truss 13-flowered, corolla white with Red Group 56B shading and mottling, fades to White Group 155D with Orange-Red Group 35D rays in throat. Crossed (1950) and raised by Rudolph Henny, and introduced by Mrs Henny, 8991 75th Ave., N.E. RT.6, Salem, OR 97305, U.S.A.

Jane Holden — (Polar Bear × Autumn Gold). Truss 8-10-flowered, corolla Red Group 48D with 35C spotting in dorsal lobe sector. Centre of lobes and throat somewhat darker giving star-shaped appearance, buds Orange Red Group 35C. Crossed (1967), raised and introduced by A. John Holden, Shelton, WA 98584, U.S.A.

Jane Rice — (Complex parentage which includes *catawbiense, maximum* and possibly unknown hybrids). Truss 10 flowers, buds deep purplish pink 2.5 RP 6/10 (Nickerson), corolla moderate Purplish Pink 10 P 7/7 with yellowish green spotting. Crossed (1970), raised and introduced by W. David Smith, Spring Grove, PA 17362, U.S.A.

Janet Rhea — Sport of ((Hiawatha × Glacier) × unnamed Fischer seedling × (Hexe × Vervaeniana))). Truss 2-4 flowers, corolla Solferino Purple Group 26/1 (HCC) with $\frac{1}{8}$ inch - $\frac{1}{4}$ inch wide edging. Discovered (1974), raised and introduced by G. Albert Reid, Bargaintown, Linwood, N.J. 08221, U.S.A.

Janet Scroggs — (Virginia Scott × Jasper). Truss 7- to 9-flowered, corolla Yellow Group 5C with dorsal lobe spotting of Greyed-Orange Group 171D; buds Greyed-Red Group 178D. Crossed (1958) by Mr and Mrs H. L. Larson, raised, introduced and registered (1978) by H. L. Larson, Tacoma, WA 98466, U.S.A.

Jan Wellen — (Aladdin × Amoena × Vuyk's Scarlet). Truss 2-3 flowers, bright pink (HCC 23/1) blotch dark red. Crossed, raised, introduced and registered by Research Station for Woody Crops, Boskoop, Netherlands.

Jean Rhodes — (Naomi × Mrs Horace Fogg). Truss 14-flowered, corolla Red Group 55B-C, dark throat Greyed-Purple 185B-C, bud 54A. Raised by Mrs Lillian Hodgson, crossed and introduced by Dr Robert C. Rhodes, Maple Ridge, B.C., Canada.

Jenice Coffey

(Marinus Koster × Pilgrim). Truss 14-16-flowered, corolla Rose Pink (HCC 427/2) with minor deep pink dorsal spotting and deep red star-shaped marking deep within throat and deep pink stripes down centre of lobes on reverse, buds Rose Pink (HCC 427). Crossed (1963), raised and introduced by Sigrid Laxdall, 3023 West Alderwood, Bellingham, WA 98225, U.S.A.

Jolie Madame

(*viscosum* hybrid × Satan). Truss 7-9 flowers, pink (HCC 23/2), blotch faint gold-coloured. Crossed, raised, introduced and registered by Research Station for Woody Crops, Boskoop, Netherlands.

Joy Bells

(*macabeanum* × Fortune). Corolla cream suffused chartreuse with faint small crimson blotch in throat. Crossed and raised by Mr Joseph Joyce, and introduced and registered by Mrs W. J. Hayes, Centrewood Waimate, P.O. Box 29, New Zealand.

June Rose

(*amagianum* × *reticulatum* selfed). Truss 3- to 4-flowered, corolla Red-Purple Group 58C, with Red-Purple Group 67B flare on upper petals. Crossed (1969), raised, introduced and registered by M. C. Pratt, The Hazels, Lower Street, Fittleworth, Pulborough, Sussex, U.K.

Kaponga

(*arboreum* × Iverys Scarlet). Corolla red. Crossed, raised, introduced and registered by Mr Bernard Hollard, Kaponga, Taranaki, New Zealand.

Karens (Evergreen Azalea)

(Possibly Hinodegiri and *yedoense* var. *poukhanense*). Truss 3-4-flowered, corolla Doge Purple 732/3 (HCC) with 732 spotting in dorsal lobe sector and slightly on adjacent 2 lobes. Crossed (c.1940) by Mr Aaugi Pedersen and Mr Anker Pedersen, raised and introduced by Pedersen's Nursery. Reg. by Bebecca Keith and Prof. Floyd A. Giles, 100 Ornamental Horticulture Building, University of Illinois, Urbana, Il. 61801, U.S.A.

Kimberton

(Unknown × Crest). Truss 12-flowered, corolla Red Purple Group 62A with Yellow Green Group 154B dorsal blotch. Crossed (1969) by Lewis Bagoly, raised and introduced by Charles Herbert, Phoenixville, PA 19460, U.S.A.

Kimbeth

(Kimberly × Elizabeth). Truss 3-5-flowered, corolla Deep Purplish Pink 7.5 RP 6/12 (Nickerson) (Neyron Rose). Crossed (1960), raised and introduced by Harold E. Greer, Eugene, OR 97401, U.S.A.

Klassy's Pride

((*neriiflorum* × *strigillosum*) × (Loderi (clone unknown) × *thomsonii*)). Truss 14-flowered, corolla Red Group 46A with dorsal black spotting. Crossed (1963) by Ben Nelson, raised and introduced by Carl G. Heller, Bodega Rhododendron Nursery, R.T. 2, Box 647, Poulsbo, WA 98370, U.S.A.

Kulu (syn. Gable's Selection 2, *vernicosum* aff. Rock 18139)

Truss 7-10 flowered, corolla Red Group 49C blending to 49D in throat, indistinct dorsal blotch 49A, reverse 49A, shading to 49C, buds Red Group 48A-49A. Seed by Caroline Gable, Gable Nursery, Stewartstown, PA

Lalique	(Loderi or *griffithianum* seedling). Truss 14-15 flowers, corolla Neyron Rose Group 56A to D. Crossed, raised, introduced and registered by Mr and Mrs A. G. Holmes, Rakaia, New Zealand.
Lawton's Chinese Red	(Parentage unknown). Truss 12-15-flowered, corolla Currant Red 821/2 (HCC). Crossed (c.1959) by unknown person. Raised and introduced by Lloyd H. Lawton, 3941 Main Road, Tiverton, R.I. 02878, U.S.A.
Leeann	((Carmen × Choremia) × Gills Crimson). Truss 8-flowered, corolla Red Purple Group 60A with minor maroon spotting. Crossed (1968) and introduced by Carl C. Heller, Poulsbo, WA 98370, U.S.A. Raised by Shirley Lent.
Lemon Float	(Hotei × (White Wedding × *lacteum*)). Truss 15-20-flowered, corolla Yellow Group 1C. Crossed, raised and introduced by John G. Lofthouse, Vancouver, B.C., Canada, V6P 4C2.
Leonarran	(Parentage unknown). Truss 2-3-flowered, corolla White Group 155A, reverse sparingly and irregularly flushed with Red-Purple Group 57D, upper throat spotted yellow-green. Originated at Brodick Castle Gardens, Isle of Arran, raised and introduced by Sir Giles Loder, Leonardslee, Horsham, Sussex, U.K. A.M. 1979.
Lillian Hodgson	(Solent Queen × Old Copper. Truss 10-flowered, corolla edges Red Group 37D, centre Yellow-Orange 16D. Crossed, raised and introduced by Dr Robert C. Rhodes, Maple Ridge, B.C., Canada.
Linda Jean (syn. Linda)	(Helen Close × Glamour). Truss 1-2-flowered, corolla Red Purple Group 68B. Crossed (1960), raised and introduced by W. L. Guttormsen, Canby, OR 97013, U.S.A.
Linwood Charm	(Parentage unknown). Corolla Phlox Pink 625/1 (HCC). Crossed (1966), raised and introduced by G. Albert Reid, Linwood, N.J. 08221, U.S.A.
Linwood Ruby	(Parentage unknown). Truss 3-4 flowers, corolla Spiraea Red 025/1 (HCC) with a few faint spots on dorsal lobe. Crossed (1966), raised and introduced by G. Albert Reid, Linwood, N.J. 08221, U.S.A.
Lois	(*pemakoense* × *racemosum*). Truss 2-5-flowered, corolla lighter than Moderate Purplish Pink 10 P 7/7 (Nickerson). Crossed (1955), raised and introduced by Harold E. Greer, Eugene, OR 97401, U.S.A.
Louvecienne	(form of *rigidum*). Truss 2-5-flowered, corolla Red Group 56D with speckled eye Red-Purple Group 57B. Collector not known. Raised by Lionel de Rothschild, and introduced by Edmund de Rothschild, Southampton, Hants., U.K. A.M. 1975.
Lucy Elizabeth	(form of *iteophyllum* syn. *formosum*). Truss 2-3-flowered, corolla White Group 155D flushed Yellow-White Group 158A in upper throat. Collector not recorded. Raised and introduced by Mrs Elizabeth Mackenzie, Hill Cottage, Fressingfield, Diss, Norfolk. A.M. 1979.

Magic Moments

(*aberconwayi* or hybrid thereof × *yakushimanum*). Truss 16-22-flowered, corolla White Group 155D, large blotch Red-Purple Group 59B-C on upper lobe. Crossed (1966), raised and introduced by John G. Lofthouse, Vancouver, Canada.

Margaret Mead

(form of *veitchianum*). Truss 2-3-flowered, corolla White Group 155C with faint yellow-orange flush in upper throat. Origin uncertain. Raised and introduced by Geoffrey Gorer, Sunte House, Haywards Heath, Sussex, U.K. A.M. 1978.

Martin's Pride

(Blue Peter × (Purple Splendour × Trilby)). Truss 12-15 flowers, corolla strong Reddish Purple 10 P 4/10 (Nickerson), lightly spotted strong Yellowish Brown 10 YR 5/6. Crossed and raised by Martin Wapler, and introduced by Del's Lane County Nursery, Eugene, Oregon 97401, U.S.A.

Marvee

(Louise Gable × Ward's Ruby). Truss 3-5-flowered, corolla Red Purple Group 61B. Crossed (1962), raised and introduced by W. L. Guttormsen, Canby, OR 97013, U.S.A.

Marydel
(Deciduous Azalea)

(*atlanticum* × *nudiflorum*). A seedling selected in the wild at Pierson's Corner, Delaware in 1967. Corolla white, lobe margins and base of tube deeply flushed Red Group 54B; reverse strong purplish-red Nickerson 10 RP 5/12. Introduced and registered by Mary Louisa B. Hill, Barnard's Inn Farm, Vineyard Haven, MA 02568, U.S.A.

Mary Elizabeth

(Parentage unknown). Truss 2-3 flowers, corolla Phlox Pink 625 (HCC) with small, slightly darker blotch on 3 dorsal lobes. Crossed (1966), raised and introduced by G. Albert Reid, Linwood, N.J. 08221, U.S.A.

Mary Tasker

(Jalisco × Fawn). Corolla Dawn Pink 523/2 (HCC), Naples Yellow 403/1 in from edges, lower part of throat Currant Red 821/1. Crossed, raised, introduced and registered by H. R. Tasker, Ashburton, New Zealand.

Merry May White

(Parentage unknown). Truss 11-flowered, corolla white with two small dorsal rays Greyed Purple Group 187D. Crossed (c.1960) by Donald Hardgrove, and raised and introduced by Mrs Doris Royce, Remsenburg, N.Y. 11960. U.S.A.

Michael Rice

(Complex parentage which includes *catawbiense, maximum* and possibly unknown hybrids). Truss 15 flowers, buds deep purplish red 7.5 RP 3/9 (Nickerson), corolla deep purplish pink 2.5 RP 6/10 with deep purplish red 7.5 RP 3/9 spotting and strong reddish purple 2.5 RP 5/10 edging. Crossed (1970), raised and introduced by W. David Smith, Spring Grove, PA 17362, U.S.A.

Milton Hollard

(*macabeanum* × unknown). Truss 22 flowers, corolla Phlox Pink in bud 625/2 (HCC), opening Primrose Yellow 601/3, flushed pink slight red flecking inside top lobe. Crossed, raised, introduced and registered by Mr Bernard Hollard, Taranaki, New Zealand.

Minas Maid	(Nova Zembla × *yakushimanum*). Truss 15-flowered, corolla Red Purple Group 62B (Phlox Pink) with dorsal ruby fleck (near 61B). Crossed (1966) by George S. Swain, raised by G. S. Swain and D. L. Craig, and introduced by Dr D. L. Craig, Agriculture Canada, Research Station, Kentville, Nova Scotia, Canada.
Mollie Coker	(Loderi seedling. Corolla Red-Purple Group 68B to C, with frilled purplish/red blotch). Crossed (c.1957), raised, introduced and registered by Mrs R. J. Coker, Christchurch, New Zealand.
Moonlight Sonata	(*macabeanum* × Pamela). Truss 24 flowers, corolla Yellow Group 4D, edges stained Purple Group 62A, blotch at base Red Purple Group 59A. Crossed (1967) and raised by New Zealand Rhododendron Association, and introduced and registered by Mrs J. Kerr, 17 Kitchener Square, Timaru, New Zealand.
Mount Siga (syn. Gable's Selection 1, *vernicosum* aff. Rock 18139)	Truss 7-10-flowered, corolla Red Group 36D blending to 36B *in* throat; indistinct dorsal blotch and spotting 179C in throat; reverse between 48C and 48D, buds (1929) in China. Raised and introduced by Joseph B. Gable and introduced by Caroline Gable, Stewartstown, P.A.
Mrs A. J. Holden	(Polar Bear × Evening Glow). Truss 8-10-flowered, corolla Yellow Group 8C with Red Group 37D mottling at lobe edges and Yellow Green Group 145B spotting in dorsal lobe sector; reverse near calyx Yellow Group 10B, buds Yellow Green Group 154D. Crossed (1967), raised and introduced by A. John Holden, Shelton, WA 98584, U.S.A.
Mrs Percy McLaren	(Loderi × pink seedling). Corolla pale shell pink, frilled petals. Crossed, raised, introduced and registered by Dr R. W. Medlicott, Ashburn Hall, Dunedin, New Zealand.
Nathaniel	(Hummingbird × Elizabeth). Truss 6-flowered, corolla Red Group 45C. Crossed, raised and introduced by Dr Robert C. Rhodes, Maple Ridge, B.C., Canada.
Nina	(Parentage unknown, but probably a *fortunei* hybrid). Truss 10-flowered, corolla Red Purple Group 63D fading to 69A somewhat mottled, heavy blotch 64A deep in and encircling throat, spotting towards outer edges. Origin uncertain (about 1958), raised and introduced by Edward T. Wytovich, Buck Laurel Acres, 497 First Street, Port Carbon, PA 17965, U.S.A.
Norma Hodge	(Unknown hybrid × Fabia). Truss 8-flowered, corolla Red Group 48A-D, basal blotch Greyed-Red Group 181A/46C radiating in spotted flare 47C on 4 upper petals. Crossed by Eric Langton, and raised and introduced by Dr R. C. Rhodes, Maple Ridge, B.C., Canada.
Norman Colville	(*calophytum* × *arizelum*). Truss 16-18-flowered, corolla white with blotch of Greyed-Purple Group 187A in upper throat. Crossed (1954) and raised by Colville, Penheale Manor, Launceston, Cornwall. A.M. 1979.

Olin O. Dobbs — (Mars × Purple Splendour). Truss 12-15-flowered, corolla deeper than deep Reddish Purple Group 2.5 RP 3/8 (Nickerson) with slight dorsal brown spotting. Crossed (1955) and raised by Olin O. Dobbs, and introduced by Harold E. Greer, Eugene, OR 97401, U.S.A.

Orient Express — (Duchess of Cornwall × *calophytum*). Truss 20-flowered, corolla white flushed Red-Purple Group 64D with a blotch of Red-Purple 59A in throat. Raised and introduced by R. N. Stephenson Clarke, Haywards Heath, Sussex, U.K. A.M. 1979.

Pacific Glow — (Loderi Venus × *strigillosum*). Truss 15-17 flowers, buds deep rosy red, corolla throat Red Group 50A, lobes 54C. Crossed (1952), raised and introduced by H. L. Larson; reg. by Evelyn Jack, University of British Columbia, Vancouver, B.C., Canada.

Parkside — (form of *charitopes*). Truss 3-5-flowered, Red-Purple Group 62C, with upper lobes suffused with darker shades of 62A and 63B, upper lobes extensively spotted with Red-Purple Group 60A. Collector not recorded, raised and introduced by the Crown Estate Commissioners, Windsor, Berks., U.K. A.M. 1979.

Note. The name 'Parkside' had previously been applied by the Crown Estate Commissioners in 1954, to a clone of the cross (Hawk × *souliei*) but the introducer has confirmed that this plant is no longer in existence and was never distributed.

Pastor Dunker — (((*decorum* × *discolor*) × (*fortunei* × (*wardii* × *dichroanthum*)) × Hon. Jean Marie de Montague). Truss 15-flowered, corolla Red-Purple Group 63A, throat faintly yellow. Crossed (1969), raised, introduced and registered by Alfred A. Raustein, 230 Union, Holbrook, N.Y. 11741, U.S.A.

Patricia Harewood — (General Sir John du Caine × Loderi King George). Truss 10-11-flowered, corolla Red-Purple Group 68B, suffused 68A externally. No spotting. Crossed (1959) and raised by Geoffrey Hall, Harewood House Gardens, and introduced by Lord Harewood, Leeds, Yorks., U.K.

Petra — (*christianae* × *jasminiflorum*). Truss 5-11-flowered, corolla palest rose pink Group 49C shading to white at base of tube. Crossed (c.1964) and raised by T. Lelliott, and introduced and registered by E. F. Allen, Felcourt, Copdock, Suffolk, U.K.

Phantom — (*griffithianum* × unknown hybrid). Corolla buds shell pink opening to white with wine blotch at base. Group 3C-D shading to 69C. Crossed (c.1957), raised, introduced and registered by Mrs R. J. Coker, Christchurch, New Zealand.

Pink Annette (syn. Annette) — ((Rose Greeley × Ward's Ruby) × Kirin). Truss 2-4-flowered, corolla Red Purple Group 61D. Crossed (1967), raised and introduced by W. L. Guttormsen, Canby, OR 97013, U.S.A.

Pink Fluff — (*racemosum* × *davidsonianum*). Truss 2-6-flowered, corolla slightly darker than Deep Purplish Pink 7.5 RP 6/12 (Nickerson). Crossed (c.1961), raised and introduced by Harold E. Greer, Eugene, OR 97401, U.S.A.

Polar Crest

(Red Cap × Polar Bear). Truss 9-flowered, inner corolla Grey-Orange 163D, barred Red Group 52A; rim flushed Red Group 55B; upper lobes spotted Red Group 42B, reverse heavily barred Red Group 52A, diffusing and mottling towards rim of corolla. Crossed (1962), raised and introduced by P. J. Urlwin-Smith, 2 The Glade, Ascot, Berks., U.K.

Pukeiti

(form of *giganteum* collected by F. Kingdon Ward from the Triangle, North Burma (1953). Truss up to 30 flowers, corolla Solferino Purple HCC 26/2, fading to Fuchsia Purple H.C.C. 28/1. Seed raised by Pukeiti Rhododendron Trust Inc., selected and introduced by Mr G. F. Smith of Pukeiti Rhododendron Trust, New Plymouth, New Zealand.

Quala-A-Wa-Loo

(Else Frye × *johnstoneanum*). Truss 4-5-flowered, corolla Yellow Group 11D with blotch of 53D. Crossed (1967) by Richard Anderson, M.D., raised and introduced by J. J. Braafladt, Eureka, CA 95501, U.S.A.

Quasar

(*wardii* L. & S. 15764 × Idealist). Truss 8-flowered, corolla Yellow Group 9D with prominent Red Purple Group 59A blotch deep in throat. Crossed (1970), raised and introduced by Howard A. Short, Bainbridge Island, WA 98110, U.S.A.

Queen Anne's

((*brachycarpum* × *catawbiense*) × (unnamed white *fortunei* hybrid)). Truss 10-13-flowered, corolla opens very pale violet 2.5 P 8/4 quickly fading to pure white as flower matures; buds light violet 2.5 P 7/7 (Nickerson). Crossed (1959), raised and introduced by Dr Henry R. Skinner, Bowie, MD 20715, U.S.A.

Red Beauty

((Louise Gable × Ward's Ruby) × James Gable). Truss 2-5-flowered, corolla Red Group 53C with darker blotch. Crossed (1968), raised and introduced by W. L. Guttormsen, Canby, OR 97013, U.S.A.

Redder Yet

(Parentage unknown). Truss 18 flowers, corolla Red Group 54A with minor brown spotting. Crossed (1949) by Dr David G. Leach, and raised and introduced by Orlando S. Pride, Butler, PA 16001, U.S.A.

Red Torch

(Mars × unknown). Truss 16-23 flowers, Red Group 53B, with small black blotch. Crossed, raised, introduced and registered by Research Station for Woody Crops, Boskoop, Netherlands.

Rim Fire

((Louise Gable × Ward's Ruby) × James Gable). Truss 3-9-flowered, corolla Red Purple Group 60C. Crossed (1968), raised and introduced by W. L. Guttormsen, Canby, OR 97013, U.S.A.

Robert Huber

(Everitt seedling No. 15, open pollinated). Truss 7-flowered, corolla Red Purple Group 62C with margins 62B; dorsal lobe spotted Orange Group 26A; reverse with darker stripes. Raised, introduced and registered by Charles Herbert, Phoenixville, PA 19460, U.S.A.

Robert Verne

(Marinus Koster × Pilgrim). Truss 11-flowered, corolla Tyrian Rose 24/2 (HCC) with prominent maroon spotting in dorsal 3 lobe sector, reverse 24/1; buds 24/1 (HCC). Crossed (1963), raised and intro-

duced by Sigrid Laxdall, Bellingham, WA 98225, U.S.A.

Ross Bigler — (Complex parentage which includes *catawbiense, maximum* and possibly unknown hybrids). Truss 19 flowers, corolla Deep Purplish Pink 7.5 RP 6/12 (Nickerson) with Deep Reddish Purple 2.5 RP 3/8 blotch and wide strong Purplish Red 7.5 RP 5/12 edging. Crossed (1971), raised and introduced by W. David Smith, Spring Grove, PA 17362, U.S.A.

Rubicon — (Noyo Chief × Kilimanjaro). Truss 17-18 flowers, corolla Cardinal Red 822 (HCC), spotted black inside upper lobes. Crossed (1958), raised, introduced and registered by Mr R. C. Gordon, Rongoiti Road, Taihape, New Zealand.

Saint Mary's — ((*brachycarpum* × *catawbiense*) × unnamed *fortunei* hybrid). Truss 9-13-flowered, corolla opens very pale Violet 2.5 P 8/4 (Nickerson) becoming strikingly pure white as it matures with short basal dorsal flare varying from 2 streaks of light grey/green to the same lightly overlaid with maroon or purplish red, buds pale lavender. Crossed (1945), raised and introduced by Dr Henry T. Skinner, Bowie, MD 20715, U.S.A.

Sherry — ((Louise Gable × Ward's Ruby) × James Gable). Truss 2-4-flowered, corolla Red Group 53C. Crossed (1968), raised and introduced by W. L. Guttormsen, Canby, OR 97013, U.S.A.

Show Time — ((Louise Gable × Ward's Ruby) × James Gable). Truss 2-8-flowered, corolla Red Purple Group 63A. Crossed (1968), raised and introduced by W. L. Guttormsen, Canby, OR 97013, U.S.A.

Silver Streak — (A sport of Deep Purple). Truss 1-2-flowered, corolla Red Purple Group 72B. Propagated by registrant 1973 or before. Raised and introduced by W. L. Guttormsen, Canby, OR 97013, U.S.A.

Sofus Eckrem — (Marinus Koster × Pilgrim). Truss 10-11-flowered, corolla Rose Pink 427 (HCC) with ¼ inch border of much deeper pink, some dorsal deep pink spotting, buds Phlox Pink 625 (HCC). Crossed (1963), raised and introduced by Sigrid Laxdall, Bellingham, WA 98225, U.S.A.

Spatter Paint — (form of *irroratum*). Truss 13-flowered, corolla Red Group 49B with heavy spotting 53B, at ⅛ inch from lobe edges to base. Seed collected in 1948. Raised by John Henny and Cecil Smith and introduced by Cecil Smith, registered by Meldon Kraxberger, 8450 S.W. Oleson Rd., Portland, OR 97223, U.S.A.

Springfield — (Umpqua Chief × Fawn). Truss 11-flowered, corolla strong Pink 2.5 R 7/8 (Nickerson) with vivid Red 5 R 5/13 slight spotting and ring of colour at base of throat. Crossed (c.1954) by Del James, and raised and introduced by Harold E. Greer, Eugene, OR 97401, U.S.A.

Star of Spring — (Parentage unknown). Truss 13-flowered, corolla soft pink fading to White Group 155B with 67A spotting, reverse edging Red Purple Group 63C to 62D. Crossed (c.1960) by Donald Hardgrove, raised (after

1964) and introduced by Mrs Doris Royce, Remsenburg, NY 11960, U.S.A.

Sugar Pink — (Trude Webster × (Fawn × Queen of the May)) Truss 12-flowered, corolla lighter than Light Purplish Pink 2.5 RP 8/5 (Nickerson) with very light brown spotting. Crossed (c.1960), raised and introduced by Harold E. Greer, Eugene, OR 97401, U.S.A.

Su-lin — ((Louise Gable × Ward's Ruby) × James Gable). Truss 3-5-flowered, corolla Red Group 53B. Crossed (1968), raised and introduced by W. L. Guttormsen, Canby, OR 97013, U.S.A.

Sunspray — (Alice Franklin × Crest). Truss 9-10 flowers, corolla Yellow Group 4A-B in centre, shading to 4C (primrose yellow) at outer edges. Crossed (1969) and raised by Willard J. Swenson, and introduced by Harold E. Greer, Eugene, OR 97401, U.S.A.

Super Jay — (Else Frye × *johnstoneanum*). Truss 2-5-flowered, corolla white with Yellow-Orange Group 21B blotch; reverse with Red Group 53D blush. Crossed (1967) by Richard Anderson, M.D., raised and introduced by H. J. Braafladt, Eureka, CA 95501, U.S.A.

Sylvia V. Knight — (J. H. Van Nes × Bow Bells). Truss 10-flowered, corolla Red Group 54A with white flares extending into each lobe and with small streaked dorsal blotch. Crossed (1963) by B. T. Briggs, raised and introduced by E. L. Knight, Box 79, Shelton, WA 98584, U.S.A.

Tanana — (*decorum* × *yakushimanum* Exbury clone (selfed)). Truss 12-15-flowered, corolla white with yellowish-green spotting on two dorsal lobes. Crossed (1962/3), raised, introduced and registered by Arthur and Maxine Childers, Rhodoland Nursery, 46451 McKenzie Highway, Vida, OR 97488, U.S.A.

The Bridge — (Parentage unknown). Truss 14-15 flowers, corolla Red Group 54A to C. Crossed, raised, introduced and registered by Mr and Mrs A. G. Holmes, Rakaia, New Zealand.

The Dream — (Loderi seedling). Truss approx. 10 flowers, corolla Red/Purple Group 62A to D. Crossed (1957) and raised by Mrs A. M. Coker, and introduced and registered by Mrs R. J. Coker, Christchurch, New Zealand.

Thoron Hollard — (*macabeanum* × unknown). Truss 17-18 flowers, corolla phlox pink in bud 652/2 (HCC), opening creamy white flushed pink in lines on outside of lobes; striking red blotch inside throat on upper 3 lobes. Crossed, raised, introduced and registered by Mr Bernard Hollard, Taranaki, New Zealand.

Tina — ((Rose Creeley × Ward's Ruby) × Kirin). Truss 2-flowered, corolla Red Purple Group 58D. Crossed (1967), raised and introduced by W. L. Guttormsen, Canby, OR 97013, U.S.A.

Tombola — (Tortoiseshell Wonder × Romany Chai). Truss 12-16 flowers, bright red-pink (HCC 23 Rose Madder), blotch brown-orange. Crossed, raised,

introduced and registered by Research Station for Woody Nursery Crops, Boskoop, Netherlands.

Tomeka — ((*dichroanthum* × *griersonianum*) × *decorum*). Truss 5-9-flowered, corolla Vermilion (HCC 18/2) with underlying orange shading and heavy yet inconspicuous dorsal spotting and veining close to Currant Red (HCC 821/2). Crossed (1964) by Del James; raised and introduced by Del and Ray James; registered by Hadley Osborn, Strybing Arboretum Society of Golden Gate Park, San Francisco, CA 94122, U.S.A.

Tom Etherington — ((Virginia Scott × Alice Franklin) × *yakushimanum*). Truss 12-flowered, corolla Yellow Group 4D; buds Red Group 55C. Crossed (1964), raised and introduced by Mr and Mrs H. L. Larson, Tacoma, WA 98466, U.S.A.

Tornado — (Wilgen's Ruby × May Day) × Billy Budd). Truss 9-14 flowers Currant Red (HCC 821/1. Crossed, raised, introduced and registered by Research Station for Woody Nursery Crops, Boskoop, Netherlands.

Trail Blazer — (Mrs Furnival × Sappho). Truss 19-flowered, corolla Roseine Purple 629/1 (HCC) at margin, shading to 629/3 in throat, with Ruby Red 827/1 dorsal blotch. Crossed (c.1970), raised and introduced (c.1976) by Arthur A. Wright, 1285, S.E. Township Road, Canby, OR 97013, U.S.A.

Trinity — (Powell Glass, selfed × *yakushimanum* Koichiro Wada). Truss 14 flowers, corolla white with faint green dorsal spotting and shaded Red Purple Group 62D on lobe edges and reverse when newly opened. Crossed (1961), raised and introduced by Orlando S. Pride, Butler, PA 16001, U.S.A.

Trisha — (Dorothy Gish × Purple Splendor). Truss 2-4-flowered, corolla Red Purple Group 67C with Red Group 53B spotted blotch. Crossed (1968), raised and introduced by W. L. Guttormsen, Canby, OR 97013, U.S.A.

Trula — (Belvedere × Jasper). Truss 10-flowered, corolla Yellow-Orange Group 19A, with green spotting in dorsal 3 lobe sector; edging and reverse Red Group 39B; buds Greyed-Red Group 179A. Crossed (1959), raised and introduced by Mr and Mrs H. L. Larson, Tacoma, WA 98466, U.S.A.

Tui — (*edgeworthii* hybrid × unknown). Truss 3-5 flowers, corolla Sulphur Yellow HCC 1/1 in bud, flushed red on lobes, opens white with yellow flare inside upper lobe, pedicels red on upper side. Crossed and raised by Pukeiti Rhododendron Trust Inc., and introduced and registered by Mr G. F. Smith, New Plymouth, New Zealand.

Van — (*griersonianum* × Countess of Derby). Truss 13-15-flowered, corolla slightly lighter than Deep Purplish Pink 7.5 RP 6/12 (Nickerson) with medium heavy Deep Purplish Red 7.5 RP 3/9 spotting in middle of dorsal lobe. Crossed (before 1950) by Theodore Van Veen, Sr., raised and introduced by Paul Griebnow; reg. by Harold E. Greer, Eugene, OR 97401, U.S.A.

Walter Curtis

(Complex parentage which includes *catawbiense, maximum* and possibly unknown hybrids). Truss 18 flowers, buds light Reddish Purple 10 P 6/9 (Nickerson), corolla Moderate Purplish Pink 10 P 7/7 with brilliant Yellow Green 2.5 GY 8/9 spotting. Crossed (1969), raised and introduced by W. David Smith, Spring Grove, PA 17362, U.S.A.

War Dance

(Mars × Pygmalion). Truss 17-21-flowered, corolla Red Group 48A with dorsal black moderate blotch to spotting. Crossed (1970) by Maurice E. Hall, and raised and introduced by Edward J. Brown, County Road, R.F.D. 5, Lakeville, MA 02346, U.S.A.

Warm Glow

((*dichroanthum* hybrid × Vida). Truss 10-12-flowered, corolla strong Reddish Orange outside 7.5 R 6/12 (Nickerson); inside tube strong Orange 5 YR 7/11, lobes lighter, slight spotting in dorsal lobe sector Dark Red 2.5 R 3/7. Crossed (1960), raised and introduced by Harold E. Greer, Eugene, OR 97401, U.S.A.

Waxeye

(Loderi seedling). Truss 12-15 flowers, corolla White Group 155D, eye Yellow-Green Group 144B. Crossed, raised, introduced and registered by Mr and Mrs A. G. Holmes, Rakaia, New Zealand.

White Bird
(syn. Snow Bird)

(King Tut × *yakushimanum* Koichiro Wada). Truss 14 flowers, buds pink, corolla White Group 155C with faint green spots. Crossed (1961), raised and introduced by Orlando S. Pride, Butler, PA 16001, U.S.A.

White Gold

(Mrs J. G. Millais × unknown). Truss 10-flowered, corolla white with large Brilliant Yellow 2.5 Y 9/9 (Nickerson) flair from base. Crossed (1960), raised and introduced by Harold E. Greer, Eugene, OR 97401, U.S.A.

White Gull

(*yakushimanum* open pollinated). Truss 20-flowered, corolla White Group 155D with faint touch of pink at lobe edges and with chartreuse spotting on dorsal lobe. Seed collected (1970) and raised and introduced by Charles Herbert, Phoenixville, PA 19460, U.S.A.

Winifred Murray

(form of *cephalanthum*). Truss usually 8-flowered, tubular section of corolla Red Group 55B fading to white at lip. Collector not recorded. Raised and introduced by Mrs K. Dryden, 30 Sheering Lower Road, Sawbridgeworth, Herts., U.K. A.M. 1979.

Yates Purple

(*catawbiense* Grandiflorum × Purple Splendour). Truss 10-13 flowers, corolla Purple Group 78A with large dorsal 79A blotch and spotting out to tip of lobe. Crossed (1965) and raised by Henry Yates and introduced by Mrs Henry Yates, Box 379, Frostburg, MD 21532, U.S.A.

Yellow Fellow

(form of *mekongense* var. *mekongense*). Truss 3-5 flowered, corolla Yellow Group 5B-C with yellow-green spotting in throat on upper 3 lobes. Collected by F. Kingdon-Ward, under No. 406, raised by Col. S. R. Clarke, and introduced by R. N. Stephenson Clarke, Haywards Heath, Sussex, U.K. A.M. 1979.

Yellow River	(*austrinum* × *canescens*). Truss 10-12-flowered, corolla lobes and upper tube Brilliant Yellow 2.5 Y 9/9 (Nickerson). Lower half of tube moderate Orange Yellow 7.5 YR 8/8 with inconspicuous blotch Vivid Yellow 2.5 Y 8/12. Collected (1951) and registered by Dr Henry T. Skinner; introduced by U.S. National Arboretum.
Yucondus	(form of *erythrocalyx*). Truss 1-3-flowered, corolla in bud close to Red Group 55A, fading on opening to near white variably stained and suffused with shades of Red Group 55, base of each corolla lobe blushed with Red Group 53B. Collected by Forrest under No. 21741, raised by Col. S. R. Clarke, and introduced by R. N. Stephenson Clarke, Haywards Heath, Sussex, U.K. A.M. 1979.
Zig Zag	(Addy Wery × Salmon Elf). Truss 2-9-flowered, corolla Red Group 52B. Crossed (1964), raised and introduced by W. L. Guttormsen, Canby, OR 97013, U.S.A.

AWARDS AT LONDON SHOWS

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

CAMELLIAS

Camellia 'Carolyn Williams' (parentage unknown). **P.C.** April 3, 1979, as a hardy flowering plant. Flowers semi-double, up to 10 cm (4 in.) across, Red-Purple Group 62B, petals occasionally streaked Red-Purple Group 57D. Raised and exhibited by F. Julian Williams, Caerhays Castle, Gorran, St Austell, Cornwall.

RHODODENDRONS

Rhododendron niveum 'Crown Equerry' F.C.C. May 1, 1979, as a hardy flowering plant. Truss tight and rounded, containing up to 32 flowers; corolla 5-lobed, tubular campanulate, up to 3.8 cm (1½ in.) long by 5.2 cm (2 1/16 in.) across, Purple-violet Group 80D in throat, darkening to 80C towards lip and with deeper veining of 80A; stamens 10, irregular, held within; filaments white, anthers black; style held within, yellowish green; stigma purple-black; calyx 5-lobed rudimentary; calyx and pedicel heavily white felted. Leaves obovate-lanceolate, up to 16.5 cm (6½ in.) long by 6.4 cm (2½ in.) across; dark green above, brown felted below. Collector not recorded, raised by Stevenson (Tower Court), exhibited by the Crown Estate Commissioners, The Great Park, Windsor, Berks.

Rhododendron 'Baron Phillipe de Rothschild' ('Exbury Naomi' × 'Crest') **A.M.** May 21, 1979, as a hardy flowering plant. Trusses loosely held, 1 to 12-flowered; corolla 7-lobed widely funnel campanulate up to 6.7 cm (2¾ in.) long and 10 cm (4 in.) across, Yellow Group 4C paling to 4D towards rim of corolla and with a faint flush of red deep in throat; stamens 14, irregular, held within; filaments greenish yellow, anthers light brown; style held within; style and stigma green, the latter glandular; calyx 7 irregular deeply divided lobes up to 7 mm, green fringed with red glandular hairs. Leaves elliptic up to 10.7 cm (4¼ in.) long and 5.4 cm (2¼) in.) across, dark dull green above, glabrous beneath. Crossed, raised and exhibited by Edmund de Rothschild, Exbury, Southampton, Hants.

Rhododendron 'Birthday Greeting' (Naomi × *fortunei*) A.M. May 21, 1979, as a hardy flowering plant. Trusses 6 to 7-flowered; corolla 6-lobed, openly funnel-campanulate, up to 6.8 cm (2¾ in.) long and 9.5 cm (3¾ in.) across, inner corolla Yellow-Orange Group 18D diffusing towards rim to Red-Purple Group 68B; reverse diffused shades of Red-Purple Group 68B and Red Group 51C, with some deep red markings in the throat close to Red Group 46A; stamens 12-14, irregular held within; filaments white, anthers brown; style held within, yellow green; stigma green; calyx 6 irregular joined lobes to 5 mm (¼ in.) green. Leaves elliptic up to 16.5 cm (6 in.) long and 7.5 cm (3 in.) across, dark dull green above, glabrous below. Crossed, raised and exhibited by Edmund de Rothschild.

Rhododendron cephalanthum 'Winifred Murray' A.M. April 18, 1979, as a hardy flowering plant. Flowers carried in loose rounded heads, usually 8-flowered; corolla tubular, up to 8 mm (⅜ in.) long and 10 mm (5/16 in.) across, tubular section Red Group 55B fading to white at lip; stamens 5, irregular, carried deep within hair-fringed throat, filaments white, anthers brown; style short, sturdy; style and stigma reddish brown; calyx 5 irregular deeply divided lobes, to 4 mm (⅛ in.) green, hair fringed, scaly. Leaves oblong-elliptic to broadly oblong, up to 12 mm (½ in.) long and 9 mm (⅜ in.) across, impressed-reticulate above, densely covered below with several layers of flaky brown scales. Collector not recorded; raised and exhibited by Mrs K. Dryden, 30 Sheering Lower Road, Sawbridgeworth, Herts.

Rhododendron charitopes 'Parkside' A.M. May 1, 1979, as a hardy flowering plant. Flowers in clusters of 3-5, campanulate, 5 joined lobes, up to 10 mm (⅜ in.) long by 38 mm (1½ in.) across, Red-Purple Group 62C with upper lobes suffused with the darker shades of 62A and 63B; upper lobes extensively spotted with Red-Purple Group 60A; stamens 10, irregular, of equal length or held free, filaments flushed red-purple, hairy; anthers brown, style deflexed, red-purple; stigma green; calyx 5-lobed, to 1 cm (½ in.) scaly. Leaves obovate, up to 5.8 cm

(2⅝ in.) long by 3 cm (1⅛ in.) across; dark green above, glaucous, scaly below. Collector not recorded, raised and introduced by the Crown Estate Commissioners, Windsor.

Rhododendron coryanum 'Chelsea Chimes' A.M. May 21, 1979, as a hardy flowering plant. Flowers up to 8 to 9 per truss; corolla 5-lobed, widely funnel-campanulate, up to 2.9 cm (1⅛ in.) long and 3.3 cm (1⅜ in.) across; White Group 155D with sparse spotting in upper throat of Red Purple Group 57A; stamens 10, irregular, held within; filaments white, anthers black; style held free, white, stigma yellow-green; calyx 5-lobed, to 1·mm, reddish. Leaves narrowly elliptic up to 9 cm (3½ in.) long and 2.4 cm ($\frac{9}{10}$ in.) across, dark green, glossy above, reverse brown felted. Collected by F. Kingdon-Ward under KW 6311. Raised by Col. S. R. Clarke and exhibited by R. N. Stephenson Clarke, Borde Hill, Haywards Heath, Sussex.

Rhododendron erythrocalyx 'Yucondus' A.M. May 1, 1979, as a hardy flowering plant. Trusses 1 to 3-flowered; corolla widely funnel-campanulate 5 joined lobes up to 3.8 cm (1½ in.) long and 5.5 cm (2$\frac{1}{10}$ in.) across; flowers in bud close to Red Group 55A, fading on opening to near white variably stained and suffused with shades of Red Group 55D; base of each corolla lobe blushed with Red Group 53B; stamens 10, irregular in length, held within or of equal length; filaments white, anthers dark brown; style of equal length, glandular at base, stigma red; calyx 5 irregular joined lobes to 3 cm (1$\frac{1}{10}$ in.) red, densely fringed with red glandular hairs; pedicels glandular to 3 cm (1$\frac{1}{10}$ in.). Leaves elliptic, dark green above, glaucous beneath. Collected by G. Forrest under Forrest No. 21741, raised by Col. S. R. Clarke, exhibited by R. N. Stephenson Clarke.

Rhododendron iteophyllum (syn. *R. formosum*) 'Lucy Elizabeth' A.M. May 1, 1979, as a flowering shrub for the cool greenhouse. Flowers in trusses of 2 to 3, funnel-shaped; corolla 5-lobed White Group 155D flushed Yellow-White Group 158A in upper throat; stamens usually 10, irregular, held within or of equal length; filaments white held free, stigma yellow-green; calyx rudimentary, 5 irregular lobes to 3 mm ($\frac{1}{8}$ in.), green, scaly. Leaves narrowly oblong-lanceolate, up to 5.6 cm (2⅛ in.) long by 1.5 cm (⅝ in.) across, dark green, sparingly scaly above, scaly below. Collector not recorded, raised and introduced by Mrs Elizabeth Mackenzie, Hill Cottage, Fressingfield, Diss, Norfolk.

Rhododendron laxiflorum 'Anna Strelow' A.M. April 18, 1979, as a hardy flowering plant. Truss loose, 14 to 16-flowered; corolla widely funnel-campanulate, 5-lobed, up to 4 cm (1⅝ in.) long and 5 cm (2 in.) across, White Group 155D shading towards base of corolla to a yellowish White Group 155A; lobes of corolla faintly flushed red-purple; stamens 11 to 12, irregular, held within or of equal length; filaments white, anthers light brown; style of equal length, white, glandular; stigma reddish brown; calyx 5 irregular lobes to 4 cm (1⅝ in.) in length, greenish, densely covered with red glandular hairs. Leaves narrowly oblong, up to 13 cm (5$\frac{1}{10}$ in.) long and 3.5 cm (1⅜ in.) across, dull green above, glaucous beneath. Collected by George Forrest, under No. 27706, raised by Col. S. R. Clarke, exhibited by R. N. Stephenson Clarke.

Rhododendron 'Leonarran' (parentage unknown) **A.M.** April 18, 1979, as a flowering plant for the cool greenhouse. Trusses loose, 2 to 3-flowered. Flowers tubular 5 joined lobes, up to 7.5 cm (3 in.) long and 6 cm (2$\frac{3}{10}$ in.) across, White Group 155A, reverse sparingly and irregularly flushed with Red-Purple Group 57D; upper throat lightly spotted yellow-green; stamens 10, irregular, held within, filaments white, anthers dark brown; style yellowish green, scaly towards base, of equal length; stigma reddish brown; calyx 5 irregular lobes, to 1 cm (⅜ in.) reddish green, fringed with fine hairs and sparingly scaly. Leaves elliptic to broadly elliptic, up to 8.5 cm (3$\frac{3}{10}$ in.) long and 3.4 cm (1$\frac{3}{10}$ in.) across, dark green above, glaucous, and scaly beneath, fringed with bristly brown hairs; upper surface of younger leaves more or less bristly; petioles up to 14 mm (½ in.) long, flattened upper surface, densely hairy. An unnamed hybrid from Brodick Castle Gardens, Isle of Arran, raised and exhibited by Sir Giles Loder.

Rhododendron mekongense var. **mekongense 'Yellow Fellow' A.M.** May 1, 1979, as a hardy flowering plant. Flowers in trusses of 3-5. Corolla openly campanulate, up to 1.6 cm (⅝ in.) long by 3.6 cm (1⅜ in.) across. Yellow Group 5B-C with yellow-green spotting in throat on upper 3 lobes; stamens 10, irregular,

held within, or of equal length, filaments greenish yellow, densely hairy towards base; anthers dark brown; stigma green; calyx 5 irregular rounded lobes to 2mm, greenish yellow, sparingly scaly and fringed with long white hairs. A deciduous shrub, the leaves of this plant were only partially expanded, but in their immature form are hair fringed and densely scaly beneath. Collected by Frank Kingdon-Ward, under No. 406, raised by Col. S. R. Clarke, (or at Caerhays), exhibited by R. N. Stephenson Clarke.

Rhododendron 'Norman Colville' (*calophytum* × *arizelum*) A.M. April 18, 1979, as a hardy flowering plant. Flowers borne in rounded 16 to 18-flowered trusses; up to 15 cm (6 in.) across; corolla widely funnel-campanulate, 5 joined lobes, up to 5 cm (2 in.) long and 5 cm (2 in.) across, white with blotch of Greyed Purple Group 187A in upper throat; stamens 10 to 12, irregular, held within, filaments white, anthers brown; style of equal length, yellowish, stigma reddish brown; calyx rudimentary, green. Leaves narrowly elliptic, up to 20 cm (8 in.) long and 7 cm (3 in.) across, dark green above, brown felted below; petioles up to 3 cm ($1\frac{1}{10}$ in.) in length. Crossed and raised by Col. N. R. Colville, introduced by Mrs Norman Colville, Penheale Manor, Egloskerry, Launceston, Cornwall.

Rhododendron 'Orient Express' ('Duchess of Cornwall' × *calophytum*) A.M. April 3, 1979, as a hardy flowering plant. Trusses rounded, firm, comprising up to 20 flowers per truss; corolla widely funnel-campanulate, 4 cm ($1\frac{1}{2}$ in.) long and 6.5 cm ($2\frac{1}{4}$ in.) across; white flushed Red-Purple Group 64D with a blotch of Red-Purple 59A in the throat; stamens 16, irregular in length, held within; filaments flushed red-purple, anthers brown; style held within; stigma green; calyx rudimentary, 5-lobed, yellowish white. Leaves narrowly oblong, up to 25 cm ($7\frac{7}{8}$ in.) long and 7 cm ($2\frac{7}{10}$ in.) across, dark green above, reverse sparingly covered with light brown woolly indumentum. Raised and exhibited by R. N. Stephenson Clarke.

Rhododendron rigidum 'Louvecienne' A.M. May 19, 1975, as a hardy flowering plant. Flowers up to 5 to 6 per truss; corolla 5-lobed widely funnel-shaped, up to 2.2 cm ($\frac{4}{5}$ in.) long and 4.5 cm ($2\frac{4}{5}$ in.) across, Red Group 56D with speckled eye of Red-Purple Group 56B; calyx rudimentary. Leaves elliptic to oblanceolate, up to 5.5 cm (2 in.) in length and 2 cm (1 in.) across. Collector not recorded, raised by Lionel de Rothschild, and exhibited by Edmund de Rothschild.

Rhododendron vietchianum 'Margaret Mead' A.M. May 3, 1978, as a flowering plant for the cool greenhouse. Truss 2 or 3-flowered; flowers widely to openly funnel-shaped; corolla 5-lobed, up to 7 cm ($2\frac{3}{4}$ in.) long and 9 cm ($3\frac{1}{2}$ in.) across. White Group 155C with faint yellow-orange flush in upper throat; stamens 10 or 11, equal to slightly irregular, held within; filaments white, anthers yellow-white; style held free, greenish yellow, scaly, stigma green. Leaves narrowly obovate, up to 8 cm ($3\frac{1}{4}$ in.) long and 4 cm ($1\frac{1}{4}$ in.) across, a dull matt green above, younger leaves heavily scaly; reverse glaucous, scaly. Origin uncertain. Exhibited by Geoffrey Gorer, Sunte House, Haywards Heath, Sussex.

Rhododendron vellereum 'Far Horizon' A.M. April 18, 1979, as a hardy flowering plant. Trusses rounded 22 to 24-flowered. Corolla widely funnel-campanulate 5 joined lobes up to 3.5 cm ($1\frac{4}{5}$ in.) long by 4.5 cm ($2\frac{4}{5}$ in.) across; Red-Purple Group 68A, fading to white deep in throat; upper throat lightly spotted with Red-Purple Group 66A; stamens 12, irregular in length, held within, filaments white, anthers pale brown; style of equal length, flushed red-purple, stigma reddish; calyx rudimentary, 5 irregular lobes, greenish. Leaves lanceolate, up to 11.5 cm ($4\frac{1}{10}$ in.) long and 3.7 cm ($1\frac{2}{5}$ in.) across, upper surface dull dark green, reverse heavily felted with silvery-brown indumentum. Collected by Frank Kingdon-Ward, under No. 5656, raised by Col. S. R. Clarke, exhibited by R. N. Stephenson Clarke.

TRIALS AT WISLEY 1979

CULTIVARS OF CAMELLIA × WILLIAMSII

On the recommendation of the Rhododendron & Camellia Committee, Council has made the following awards to cultivars of *Camellia* × *williamsii*, after trial at Wisley. The number given in brackets after the description of the plant is that under which it was grown in the trial.

As cultivars for garden decoration

Mildred Veitch (C. *saluenensis* × *japonica* Elegans (Chandler)). (Raised, introduced and sent by Robert Veitch & Son, Ltd., The Nurseries, Alphington, near Exeter, Devon.) **F.C.C.** April 19, 1979. Described *R.H.S. Proceedings*, Vol. 100, p. 20. Flowering from April 15, 1979. (A.M. 1977.) (32)

A *C.* × *williamsii* clone entered as 'Lanarth', a name used previously for a clone of *C. japonica* that received an A.M. in 1960. Further investigation of the status of the two plants is required. (Supplied by The Director, The Royal Horticultural Society's Garden, Wisley, Woking Surrey.) **H.C.** April 19, 1979. Plant 243 cm (7ft. 11⅝ in.) high, 212 cm (6 ft. 11½ in.) spread, vigorous, erect and compact habit; free flowering. Leaves 7 cm (2¾ in.) long, 3.5 cm (1⅜ in.) wide, fairly dark, slightly glaucous green. Flowers 7 cm (2¾ in.) diameter, single, with 1-2 rows of petals, Red Group 55D, lightly flushed towards base, and finely veined with Red Group 55B. Flowering from March 26, 1979. (63)

CULTIVARS OF NON-WILLIAMSII PARENTAGE

Felice Harris (C. *sasanqua* 'Narumi-Gata' × C. *reticulata* 'Buddha'). (Raised by Mr Howard Asper, U.S.A., introduced by Nuccio's Nursery, U.S.A., and sent by James Trehane & Sons Ltd., Ham Lane, Longham, Wimborne, Dorset.) **A.M.** April 19, 1979. Plant 276 cm (9 ft. 2⅛ in.) high, 252 cm (8 ft. 3¼ in.) spread, vigorous, erect and compact habit; free flowering. Leaves 9 cm (3⅛ in.) long, 4 cm (1⅝ in.) wide, fairly dark, slightly glaucous green. Flowers 10 cm (3⅛ in.) diameter, semi-double, with 3 rows of petals, very pale pink nearest to Red Group 56C, becoming paler towards margins, with slightly deeper veining. Flowering from April 12, 1979. (57)

Inspiration (C. *reticulata* wild form × C. *saluenensis*). (Raised by the late Francis Hanger, sent by James Trehane & Sons Ltd.) **A.M.** April 19, 1979. Plant 165 cm (5 ft. 5 in.) high, 77 cm (2 ft. 6⅛ in.) spread, vigorous, erect and compact habit; free flowering. Leaves 6 cm (2⅜ in.) long, 3.5 cm (1⅜ in.) wide, dark glaucous green. Flowers 9 cm (3⅛ in.) diameter, semi-double, with 3 rows of petals and 2 to 6 petaloids, a delicate shade of Red Group 55B flushed towards base and finely veined with Red Group 55A. Flowering from April 4, 1979. (68)

RHODODENDRONS

On the recommendation of the Rhododendron & Camellia Committee, Council has made the following awards to Rhododendrons, after trial at Wisley. The number in brackets after the description of the plant is that under which it was grown in the trial.

HARDY HYBRID RHODODENDRONS

Dopey ((R. *eriogynum* hybrid × R. 'Fabia') × (R. *yakushimanum* × R. 'Fabia Tangerine')). (Raised and sent by John Waterer, Sons & Crisp Ltd., The Nurseries, Bagshot, Surrey, introduced by The Waterer Group.) **F.C.C.** June 1, 1979. Described *R.H.S. Proceedings*, Vol. 102, p. 93. Flowering from May 27, 1979. (A.M. 1977.) (280)

Hydon Hunter (R. *yakushimanum* × R. 'Springbok'). (Raised by Mr A. F. George; introduced and sent by Hydon Nurseries Ltd., Hydon Heath, Godalming, Surrey.) **F.C.C.** June 1, 1979. Plant 104 cm (41 in.) high, 94 cm (37 in.) spread, vigorous, upright, compact habit; free flowering; leaves 10 cm (4 in.) long, 3.7 cm (1½ in.) wide, dark slightly glossy green. Flower truss 12 cm (4¾ in.) diameter, 9 cm (3½ in.) deep, dome-shaped, compact, 14 flowers per truss; corolla 5.5 cm (2⅛ in.) diameter, 4.5 cm (1¾ in.) long, funnel-shaped, white, flushed on upper half of segments with a tinge of Red-Purple Group 62C, spotting of Yellow Group 3C on upper segment. Flowering from May 19, 1979. (293)

Ernest Inman (R. *yakushimanum* × R. 'Purple Splendour'). (Raised by Mr A. F. George; introduced and sent by Hydon Nurseries Ltd.) **A.M.** June 1, 1979. Plant 56 cm (1 ft. 10 in.) high, 100 cm (3 ft. 3⅜ in.) spread, vigorous, spreading, compact habit; very free flowering; leaves 11 cm (4⅜ in.) long, 4 cm (1⅝ in.) wide, dark slightly glossy green. Flower truss 13 cm (5¼ in.) diameter, 11 cm (4⅜ in.) deep, globular-shaped, compact, 15 flowers per truss; corolla 6.5 cm (2⅝ in.) diameter, 4.7 cm (1⅞ in.) long, funnel-shaped, a colour nearest to Purple Group 75B fading to silvery white at base, spotting of Greyed-Orange Group 163A tinged green at centre, on upper segment. Flowering from April 25, 1979. (24)

Grumpy (R. *yakushimanum* × Unknown Hybrid). (Raised and sent by John Waterer, Sons & Crisp Ltd.; introduced by The Waterer Group.) **A.M.** June 1, 1979. Plant 66 cm (2 ft. 2 in.) high, 80 cm (2 ft. 7½ in.) spread, vigorous, spreading, compact habit; very free flowering; leaves 8 cm (3⅛ in.) long, 3 cm (1⅛ in.) wide, dark dull green. Flower truss 11 cm (4⅜ in.) diameter, 6 cm (2⅜ in.) deep, globular-shaped, lax, 11 flowers per truss; corolla 5 cm (2 in.) diameter, 4.5 cm (1¾ in.) long, funnel-shaped, cream very lightly tinged with Red Group 55D at margins, spotting of Yellow-Orange Group 22B on upper segment. Flowering from May 25, 1979. (279)

Venetian Chimes ((R. *eriogynum* × R. 'Fabia') × (R. *yakushimanum* × R. 'Britannia')). (Raised and sent by John Waterer, Sons & Crisp Ltd.; introduced by The Waterer Group.) **A.M.** June 1, 1979. Plant 57 cm (1 ft. 10⅞ in.) high, 74 cm (2 ft. 5⅛ in.) spread, vigorous, upright, compact habit; free flowering; leaves 10 cm (3⅞ in.) long, 3 cm (1⅛ in.) wide, medium dull green. Flower truss 13 cm (5¼ in.) diameter, 11 cm (4⅜ in.) deep, globular-shaped, compact, 11 flowers per truss; corolla 6 cm (2⅜ in.) diameter, 5 cm (4⅛ in.) long, campanulate-shaped, Red Group 47B becoming flushed with Red Group 46C towards base, spotting of dark red almost black on upper segment. Flowering from May 25, 1979. (282)

Anna Baldsiefen (R. 'Pioneer' selfed). (Raised and introduced by Warren Baldsiefen; sent by Glendoick Gardens Ltd., Perth.) **H.C.** April 19, 1979. Plant 66 cm (2 ft. 2 in.) high, 56 cm (1 ft. 10 in.) spread, vigorous, upright, compact habit; very free flowering; leaves 4 cm (1⅝ in.) long, 2 cm (¾ in.) wide, fairly dark slightly glossy green. Flower truss 6 cm (2⅜ in.) diameter, 6 cm (2⅜ in.) deep, globular-shaped, compact, 17 flowers per truss; corolla 3.3 cm (1⅛ in.) diameter, 2.2 cm (⅞ in.) long, funnel-shaped, a colour nearest to Red Group 56D lightly flushed in places with Red-Purple Group 66D. Flowering from April 14, 1979. (193)

Eider (R. *carolinianum* var. *album* × R. *leucaspis*). (Raised by Mr P. A. Cox; introduced and sent by Glendoick Gardens Ltd.) **H.C.** April 19, 1979. Plant 45 cm (1 ft. 5⅛ in.) high, 56 cm (1 ft. 10 in.) spread, vigorous, spreading, compact habit; very free flowering; leaves 6 cm (2⅜ in.) long, 2.2 cm (⅞ in.) wide, medium dull green. Flower truss 7 cm (2¾ in.) diameter, 5 cm (2 in.) deep, globular-shaped, compact, 5 to 8 flowers per truss; corolla 5 cm (2 in.) diameter, 3 cm (1⅛ in.) long, funnel-shaped, white. Flowering from April 17, 1979, (210)

Vintage Rose (R. *yakushimanum* × (R. 'Jalisco Eclipse' × R. 'Fusilier.)) (Raised, introduced and sent by John Waterer, Sons & Crisp Ltd.) **H.C.** June 1, 1979. Plant 60 cm (1 ft. 11⅝ in.) high, 87 cm (2 ft. 10¼ in.) spread, vigorous, spreading, compact habit; very free flowering; leaves 10.5 cm (4⅛ in.) long, 4 cm (1⅝ in.) wide, dark dull green. Flower truss 12 cm (4¾ in.) diameter, 10 cm (3⅞ in.) deep, dome-shaped, compact, 9 flowers per truss; corolla 6 cm (2⅜ in.)

diameter, 5.7 cm (2¼ in.) long, funnel-shaped, white very lightly flushed with a tinge of Red-Purple Group 57D becoming deeper towards base, margins rimmed white, slight spotting of Red Group 42B on upper segment. Flowering from May 20, 1979. (73)

AWARD MADE TO A PLANT OTHER THAN THOSE GROWING IN THE TRIAL

Hope Findlay ((R. *loderi* × R. 'Earl of Athlone') × R. 'Creeping Jenny'). (Raised, introduced and sent by The Crown Estate Commissioners, Crown Estate Office, The Great Park, Windsor, Berks.) **A.M.** April 19, 1979. Plant 120 cm (3 ft. 11¼ in.) high, 162 cm (5 ft. 3¾ in.) spread, vigorous, spreading, compact habit; very free flowering; leaves 10 cm (3 15/16 in.) long, 2.7 cm (1 1/16 in.) wide, dark glossy green. Flower truss 16 cm (6 5/16 in.) diameter, 9 cm (3 9/16 in.) deep, globular-shaped, lax, 8 to 10 flowers per truss; corolla 6 cm (2⅜ in.) diameter, 5 cm (2 in.) long, funnel-shaped, a slightly deeper colour than Red Group 46C lightly flushed towards margins with a dull bloom of Red Group 47B, fine veining along midribs of Greyed-Red Group 181B.

EVERGREEN AZALEAS

Mary Meredith (R. 'Eira' × R. *kaempferi*). (Raised by Mr A. F. George; introduced and sent by Hydon Nurseries Ltd.) **A.M.** June 1, 1979. Plant 100 cm (3ft. 3⅜ in.) high, 120 cm (3ft. 11¼ in.) spread, vigorous, upright, compact habit; very free flowering; leaves 3.5 cm (1⅜ in.) long, 1.5 cm (⅝ in.) wide, fairly light dull green. Flowers borne in pairs; corolla 4 cm (1 9/16 in.) diameter, 2.5 cm (1 in.) long, widely expanded funnel-shaped, a colour between Red-Purple Group 73A and Red-Purple Group 73B becoming paler towards base, spotting of Red-Purple Group 74A on upper segment. Flowering from May 21, 1979. (110)

Princess Juliana (R. *griffithianum* × Unknown). (Raised and introduced by Vuyk van Nes; sent by G. Reuthe Ltd., Foxhill Nurseries, Jackass Lane, Keston, Kent.) **H.C.** June 1, 1979. Plant 44 cm (1 ft. 5 5/16 in.) high, 65 cm (2 ft. 1 9/16 in.) spread, vigorous, spreading, compact habit; very free flowering; leaves 4 cm (1 9/16 in.) long, 1.5 cm (⅝ in.) wide, medium slightly glossy green. Flowers borne in pairs; corolla 5.5 cm (2⅛ in.) diameter, 4 cm (1 9/16 in.) long, funnel-shaped, Red Group 39A becoming slightly deeper towards base, spotting of Red Group 53A on upper segment. Flowering from May 24, 1979. (29)

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* Denotes award after trial at Wisley

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