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By J. ROBERT SEALY

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THE ROYAL HORTICULTURAL SOCIETY

VINCENT SQUARE, LONDON, S.W.1

R.H.S. RHODODENDRON AND CAMELLIA YEAR BOOK 1961

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THE RHODODENDRON AND CAMELLIA

YEAR BOOK—1961

THE ROYAL HORTICULTURAL SOCIETY

WE are privileged this year to show pictures, including one in colour, of three very attractive camellias which were shown by H.M. The Queen at one of the Society's Spring Shows and which received Awards of Merit. We are also honoured to be able to include a very interesting account of the famous rhododendron collection at Sofiero of H.M. The King of Sweden, written by Prof. B. Lindquist. Rhododendrons in the favoured Howth Peninsular near Dublin are described by Mr. R. C. Jenkinson and there are a number of other unusual and interesting rhododendron articles.

The Camellia section of the book is also strong and includes an important article on new hybrid camellias by Mr. David Feathers which will whet the appetite of many growers. The book is thoroughly illustrated and contains a number of fine coloured plates.

COVER ILLUSTRATION

Camellia japonica 'Kelvingtoniana'

Colour photograph by
J. E. Downward

12s. 6d. postage and packing **1s. 3d.**
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Acknowledgements

TO THIS ONLINE EDITION

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Photo: J. E. Downward

Camellia japonica 'Mrs. D. W. Davis' A.M. 5 April 1960. Exhibited by Her Majesty The Queen. One of a collection of varieties presented to Her Majesty by the Men's Camellia Society of Birmingham, Alabama. (See pp. 105 and 125).

THE RHODODENDRON AND CAMELLIA YEAR BOOK 1961

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FOREWORD

TO start on a sad note, we have to record this year the death of two very fine and distinguished plantsmen. Many rhododendron enthusiasts will recall the kind welcome, the hospitality, and the vast knowledge, of the late Mr. George Johnstone of Trewithen, Cornwall. What a splendid man he was in every way. It is good news to hear that Mrs. Johnstone is carrying on at Trewithen.

Then the sudden and sad death of Mr. Ralph Peer of America. Mr. Hanger has written an appreciation of this great camellia expert, which appears in this issue. We shall all miss his annual visits to this Country, and we all recall his enthusiasm and generosity.

Then from deaths to the joy of marriage. All those who know Mrs. R. M. Stevenson and Major General E. G. W. W. Harrison will be delighted to hear of their engagement, and will wish them every happiness in the future.

The Rhododendron and Camellia Year Book for 1961 is as interesting as ever, though, with the exception of the article on the culture of rhododendrons by Mr. Adams-Acton, not so provocative as usual.

Readers will find an article by Dr. A. F. Serbin on his visit to the island of Yaku Shima in search of *R. yakusimanum* in its native habitat. I wish Dr. Serbin had had time to visit more than one mountain top, so that he could tell us whether there were other type variations to those which he noted on Mt. Hanano-Ego. I wish, too, that he had found it possible to be a little kinder to the hybrids raised with *yakusimanum* as a parent! There are some very fine new plants at Wisley and Windsor and elsewhere as the result of crossing *yakusimanum* both with species and with hybrids.

Breeders and growers of rhododendrons should note with care the article by Henry Tod on mineral deficiencies in rhododendrons.

Those who have visited Ireland may have seen the wonderful hillside covered with rhododendrons at Howth Castle and so we welcome Mr. Jenkinson's article about this and also the younger garden planted by Dr. and Mrs. Mill on the same peninsular. The plant of R. 'Victorianum' at Howth, an old but alas very tender hybrid, must be of unusual beauty.

Noteworthy amongst the articles in this Year Book is Professor Lindquist's informative writing on The King of Sweden's gardens in the south of Sweden. It will not come as a surprise to many readers that a member of the Royal Family is a keen rhododendron grower; it is almost traditional. What will surprise some is that so many species and hybrids can be grown in a Country reputedly arctic in climate. We wish His Majesty continued success with his gardening.

The highlight of the camellia year was the Award of Merit granted to three fine varieties of *Camellia japonica* shown by Her Majesty, in April last. It is a great encouragement to us all to know that The Queen takes such an interest in this genus.

Mr. Puddle and Mr. Hanger have contributed another descriptive list of *Camellia japonica* varieties, and we hope that they will continue this excellent work.

It is not possible in a short foreword to refer to all the articles in this Year Book. Perhaps it is as well, for readers who have glanced at this foreword first will enjoy all the more the unexpected.

ERIC SAVILL

PLATE 1.—Koster azaleas in the formal garden

PLATE 2.—View up lower rhododendron dell to the castle. 'Britannia' is in the left foreground. Koster azaleas on the right with a glimpse of *Rhododendron ponticum* types behind

THE RHODODENDRON COLLECTION OF H.M. THE KING GUSTAF ADOLF AT SOFIERO IN SOUTH SWEDEN

By PROFESSOR B. LINDQUIST

OVER a period of more than 50 years His Majesty King Gustaf Adolf of Sweden has accumulated an extensive collection of azaleas and rhododendrons at Sofiero, his summer resort in Scania. This has been done not only to improve the beauty of the garden but also to test under the climatic conditions of south Sweden new and interesting rhododendrons.

The castle of Sofiero, surrounded by deep green beech-woods, is situated close to the exposed western shores of Öresund's steep schist banks, and commands a fine view over the strait to the Danish coast, with Elsinore and Kronborg castle clearly visible on the opposite side.

This estate was bought by King Oscar II in the latter part of the eighteenth century for use as a summer resort for the royal family. The castle-looking building, situated in the centre of the park, was erected in 1865 and was named after Queen Sofia.

The slopes close to the castle are covered with old beeches with a meagre ground flora in which mosses are dominant, and give an appearance reminiscent of the artistic Japanese moss-gardens. This type of ground indicates lack of lime in the surface layer of the soil. The humus-type is a somewhat degenerated mull, on the top of the very acid, more or less clayey morain. The morain covers a bedrock of silurian and triassic sandstone schistose material. In the valleys the schist layers are visible and are occasionally interrupted by narrow coal-beds. The soil is poor and contains very little phosphorus and lime, but it has a certain fertility on account of its high percentage of fine soil fractions. The pH varies between 4.3 and 5.9 with the highest values in the valleys.

In these valleys, and in the areas above them, the Crown-Prince Gustaf Adolf and the Crown-Princess Margret, who died in 1920 and was the daughter of the Duke of Connaught, in the years 1907–10 created a flower-garden with perennial borders, a fruit-garden and a traditional rock-garden. Groups of azaleas and rhododendrons were placed in a natural way in this garden and were

primarily used as a transition from the garden to the park. Through the years this rhododendron collection has become a model both for Swedish amateur gardeners and for specialists. The garden is well described by the late Crown-Princess Margret, whose books *Vår trädgård på Sofiero* (*The Sofiero Garden*) (1915) and *Från blomstergården* (*From the Flowergarden*) (1917) competently and sympathetically deal with the origin and development of these features.

From the very beginning, groups of rhododendrons were used to separate the park from the surrounding areas and the more conventional gardens, and in addition they also served occasionally to accentuate the steep slopes of the valleys.

Until 1921 the bulk of the rhododendron material at Sofiero was supplied from the Duke of Connaught's Bagshot estate. The *Rhododendron catawbiense* and *R. ponticum* hybrids, so popular at the beginning of this century, came originally from this source and thus one of the deep valleys north of the Castle derived its character from these early rhododendron groups. In certain parts of the dell north of the castle garden, hybrids of rhododendron and azaleas were at this early stage predominant.

About 1938 the first introductions of more interesting species of rhododendron took place, among which may be mentioned the tall and hardy *Rhododendron auriculatum* and later, *R. discolor*.

H.M. the King's interest in the genus increased with the enlargement of the garden and eventually developed into a desire to create, in the favourable climate of Sofiero, a collection which would be as representative as possible of both rhododendron species and garden hybrids. The import of rhododendron material from Great Britain and Germany was increased during the thirties and additionally, the King received material from Swedish growers. From Great Britain came a very rich assortment of Asiatic rhododendrons and Germany provided some rare species and also some valuable garden hybrids.

The second World War put a stop to the development of the rhododendron collection at Sofiero, but the existing plants were carefully tended during this difficult period. The heavy ice-winters in 1939–42, when temperatures of 30° C. below zero were recorded, caused great losses but as a result of these severe climatic tests it was possible to decide on the suitable selection of material according to hardiness and consequent ability to survive stringent winters.

After 1945 plants and seeds once again came to the King from

outside Sweden. There was a need to make up for lost years and wider representation of the genus was greatly helped by the material received from above all Kew Gardens, Edinburgh Royal Botanic Garden, and Windsor Great Park.

It was His Majesty himself who organized the acquisition of material and also the preparation for planting. The registration was done personally by the King. The origin of the material has been carefully recorded and also details of flowering, fruit-setting and the places to which the duplicate material has been sent. This record makes the Sofiero rhododendron collections especially valuable and the thousands of plants labelled in every detail afford extremely important material to assist future Swedish rhododendron culture.

Besides Sofiero garden's valuable old and new rhododendron hybrids, the collection is also of particular interest in having numbers of rhododendron species, of which a great many originate from natural habitats in different parts of the world.

In describing this large collection I want to go more into the details of the species collection but will mention incidentally the large numbers of horticulturally important hybrids.

Several garden hybrids, most popular at the beginning of this century, are to be found in some of the 2–4 metres high, thick rhododendron shrubberies in different parts of the park. *R. catawbiense* and *R. ponticum* hybrids dominate, such as 'Cunningham's White', 'Catawbiense Grandiflorum', 'Album Novum', 'Caractacus', 'Sappho', 'Mary Waterer', and 'Purple Splendour'; but in the rhododendron valleys there are also some beautiful specimens of the violet, double-flowered 'Fastuosum Flore Pleno' and big shrubs of red-flowered *Rhododendron ponticum* hybrids. Below the castle the red colours mix in an exquisite way with the white and lilac-white of 'Loder's White', 'Mrs. Lindsay Smith' and 'Mrs. John Millais' and further down the rhododendron garden ends in thickets of mixed old garden hybrids, 4 metres high. Here also are found beautiful shrubs in different yellow shades such as 'Goldsworth Yellow', and *R. wardii* hybrids.

In the deep valley north of the Castle the planting of garden hybrids was much enlarged after the second World War, and here are situated the bright red 'Souvenir de Dr. S. Endtz' and 'Britannia' together with vigorous plants of 'Graf Zeppelin'. In the rock garden west of the castle the King has tried *R.* 'Laetevirens', a hybrid between *R. carolinianum* and *R. ferrugineum* and R. 'Arbutifolium', most interesting types for exposed rock gardens.

The collection of course includes *R.* × *praecox*, which is represented by a form so hardy that it largely escapes damage during frosty spring nights. A particularly luxuriant shrub of this hybrid stands by the pond in front of the Castle.

Azalea hybrids are also numerous. In the border between the formal garden and the valley, big plantings of Kurume azaleas and Arendsii hybrids give an introduction to the splendour of the early spring, and such specimens are also planted here and there in the rock garden. However, the south Swedish climate does not seem to be well fitted to the rather delicate Japanese garden forms and climate selection gives fast, but often rather depressing results. The best of these types are the true *R. obtusum* with its form 'Hinomayo' and *R.* 'Amoena Coccinea'.

In a special stand of Koster azaleas, Ghent azaleas and Molle hybrids, 'Gloria Mundi' and 'Raphael de Smet' attract attention. West of the cottages belonging to the Royal children is another collection of azalea hybrids. 'Koster's Brilliant Red,' 'Hotspur', 'Lady Rose' and 'Brazil' should be mentioned. Finally, early plantings of *R. occidentale* hybrids have been made in the east parts of the valley.

The Sofiero collection of rhododendron species which numbers about 230 is one of the foremost in Scandinavia as regards number and development.

AMERICAN SPECIES

Among the American rhododendron species at Sofiero mention first of all must be made of the *R. catawbiense* forms, widely different in type, which flower richly in white and lilac. Of *R. maximum* Sofiero owns but a single specimen. It is not of great horticultural value, but seems to grow well in the south Swedish climate. There are reasons to believe that this hardy species in the future will thrive in the valleys at Sofiero. *R. carolinianum* as well as its close relative *R. minus* were first planted here after the second World War. The latter flowered for the first time in September 1958.

The American azaleas are more fully represented. Big thickets of *R. viscosum* extend through the centre of the rhododendron valley. This species was planted here in 1938 and now reaches a height of more than 2 metres. It stands on the alluvial clay in the bottom of the valley together with a number of Japanese azaleas, *R. vaseyi* and *R. arborescens*. The same remarks apply to specimens of *R. occidentale*. All of these azalea species thrive well on the schist in the valley slopes and seem to be fully hardy.

EUROPEAN SPECIES

The spontaneous European rhododendron species at Sofiero are few and occur in a limited assortment. *Rhododendron ponticum* was obtained for the garden more than 40 years ago, both as seedlings and as grafting stocks for the improvement of rhododendron species, and these dominate some of the thickets on the slopes between the Castle and the seashore where they appear, both as typical specimens with red-lilac flowers and in a variety of undeterminable hybrids. *R. ponticum*, which is generally considered not to be reliably hardy in the south of Sweden grows very well down at Sofiero though it flowers only moderately. *R. smirnowii* is well established and there is no doubt whatever about its hardiness. Sofiero park has during the last few years obtained material of *R. ungernii* from the natural habitat at Melo Dagh near Artvin in the Pontic Range of Eastern Turkey. This species is very rare in Europe and has not yet been sufficiently tried even in Great Britain. The Sofiero plants are still rather young.

To the European group of *Rhododendron* species belong also the alpine *R. ferrugineum* and *R. hirsutum*, which are both widely cultivated in south Sweden. *R. flavum* (*luteum*) was planted at Sofiero rather late and has just reached the flowering stage.

ASIATIC SPECIES

Many very interesting results may in the future be expected from the King's collection of Asiatic rhododendron species.

The Chinese rhododendron species predominate numerically in the Sofiero collection. Here His Majesty has obtained valuable material from Kew Gardens, Windsor Great Park, Edinburgh Royal Botanic Garden and also from botanic gardens in Sweden. This has made possible a very interesting examination of promising novelties.

Foremost of the rather easy-to-handle, more common Chinese rhododendron species is *R. fargesii*, which has been cultivated at Sofiero for more than 20 years. Beautiful specimens have developed, reaching heights of 1–2 metres. It flowers abundantly in the spring. *R. oreodoxa* seems hardy and is well established. Other easily cultivated species are the deep green *R. adenophorum*, which has flowered for some years at Sofiero, and *R. concinnum* at the bottom of the valley with some well-developed 15-year-old specimens, unfortunately not yet at a flowering stage. *R. fortunei* was obtained in the beginning of the 1950's and some single

specimens have flowered. Some of the more well-known hybrids of this species, such as 'Loder's White', 'Loderi King George', etc., have been tried here but seem to be rather tender in the south Swedish climate.

A group of species which has always fascinated rhododendron cultivators are the tall, large-leafed Chinese and Himalayan types. Many rhododendron cultivators hope to achieve the flowering of one or more of these extraordinary decorative plants. However, most of them are sensitive to climate and the most congenial part of Europe for their cultivation is limited to the rainy and damp regions of south and west central Europe and to the milder areas of the British Isles. Most magnificent are the tall species of eastern Himalaya and Yunnan, such as *R. fictolacteum*, *R. protistum* and other types of the Falconeri and Grande Series. On the whole the experiment of introducing these types has failed at Sofiero as well as in all other parts of Scandinavia. *R. fictolacteum*, a 1-metre-high frost-hit specimen, grows at Sofiero in the sheltered old rock garden below the Castle. It has not yet flowered, but it has at least been kept alive. *R. macabeanum*, introduced at Sofiero for the first time in 1955, grows in a sheltered place but has been badly hurt by frost and has only a small chance of normal development.

A couple of other less exclusive species of the same series seem to thrive better. One species collected by Rock, a *R. praestans* type, grows well in the nursery and has survived winter damage. *R. galactinum*, a promising member of the Falconeri series from Szechuan, seems to grow well and is hardy. Another frost-resistant large-leaf type from these districts is *R. calophytum*.

Other types with rather large leaves include *R. discolor* and *R. auriculatum*. At Sofiero *R. discolor* is represented by tall, 20-year-old specimens at the bottom of the main valley. Seedlings of these specimens have also been planted in the western part of the valley. No frost damage has been observed and the growth is good.

R. auriculatum, one of His Majesty's favourite rhododendrons, has been cultivated in the garden for more than 20 years and has developed into a very luxurious specimen about 2 metres in height. It flowers in the later part of July, with exquisite pale yellow racemes. In other places in Scandinavia some trouble with the ripening of the vegetative shoots has been noticed but at Sofiero they have developed well in the shelter of the high beeches. During the last years, however, this species has suffered from an abnormal loss of leaves. This fortunately has not restricted its growth or flowering.

These trials of the relatively big-leafed rhododendron species will in all probability show certain positive results and so far the experiments made at Sofiero appear to confirm the disappointing fact that the big-leafed species of the Grande and Falconeri series are not hardy enough even for the comparatively mild climate of southern Sweden.

Both in the dell and in the rock garden His Majesty has tried some interesting small-leafed asiatic rhododendron species. Well-developed specimens of *R. chryseum*, *R. russatum* and *R. hippophaeoides*, belonging to the *lapponicum* group deserve mention. Also *R. camtschaticum* and the small mandshurian and Japanese *R. chrysanthum* seem to thrive very well. From Rock's Chinese collections have come hardy specimens of the *R. neriiflorum* and the *R. oleifolium* Series along with some not yet determined specimens belonging to the Saluenense series. On the other hand *R. lapponicum* defies all efforts to establish it.

At Sofiero *R. yunnanense* has been a most successful species and extremely well-developed specimens with an abundance of flowers in the spring-time are growing at the bottom of the valleys. *R. oleifolium*, *R. williamsianum* and *R. orbiculare* are situated in moist areas on well-sheltered sites, all of them relatively small, but nevertheless fully hardy.

Finally some real rarities at Sofiero, mostly of Asiatic origin, some of them received as seed from American, English and Swedish expeditions must be mentioned. Among these are *R. insigne* of China, the most beautiful of all yellow-flowering rhododendron species, *R. thayerianum* and *R. vellereum*. All of them seem to thrive well in the winter climate of southern Sweden, as does *R. wiltonii*, which flowers every year in the lower part of the rhododendron valley, and is perfectly hardy and is in habit similar to the species of the *R. bullatum* group. The expeditions of Sven Hedin and Harry Smith respectively brought from China among others the interesting *R. watsonii*, *R. rufum*, *R. argyrophyllum*, *R. dryophyllum* and *R. vernicosum* from Szechuan and the mountains of Kansu.

The Japanese rhododendron species at Sofiero form a very interesting, rather varying and extremely promising group. There are several superb types of *R. degronianum* as well as of *R. brachycarpum* both well-grown, fast-growing and fully hardy species which may favourably compete in the future with the best Chinese species.

These species also stand the windy exposure and the dried-up

mineral soil far better than many others. *R. makinoi*, probably just a variety of *R. degronianum*, flowers profusely in the valleys and is 1½ metres high. The Sofiero collection also owns an extremely beautiful specimen of *R. yakusimanum* at the bottom of the main valley. To this group also belongs the small, carpet-forming, vigorous *R. chrysanthum* of which Sofiero has an original collection from Daizetsu of Hokkaido.

Among the Japanese azalea types there are beautiful and fully hardy specimens of *R. schlippenbachii*, which in early May decorate the garden with an exquisite flowering of white and pale red, and the more insignificant *R. albrechtii*. There are also shrubs of *R. japonicum*, more modest than the modern garden hybrids, but more fascinating with its brick-red flowers. This collection also contains *R. quinquefolium* and a very large specimen of *R. reticulatum*.

So far, experience has shown that the rhododendrons from the Indo-Himalaya behave uncertainly when grown in Scandinavia, and few species are really of use for Swedish rhododendron culture.

The most hardy and probably most promising of these Himalayan species is *R. campanulatum*, which in its natural habitat is very typical of altitudes above the forest limit. Several specimens of it are planted in the alluvial soil in the central part of the big valley. This species grows vigorously and does not seem to be spoiled in the rough winter climate.

R. cinnabarinum, one of the Himalayan species, was imported from Great Britain to Sofiero in the beginning of 1950. It has been frost-bitten and so far has not yet flowered. *R. glaucophyllum* was imported during the same decade and has, thanks to a heavy protective covering, hibernated without damage, but has also not yet flowered. In the greenhouses *R. triflorum* is still under preparation for future planting. The same applies to *R. arboreum* which was collected for His Majesty from the summit areas of Mt. Victoria, Burma, during the last Kingdon-Ward expedition.

Unfortunately, of all these rhododendron species confined to the Himalayas only *R. campanulatum* may prove of permanent value to the gardens of southern Sweden, and then only if one succeeds in selecting the vigorous attractive types with deep mauve flowers.

In this brief summary I have tried to convey a picture of the interesting rhododendron material, which has been collected by H.M. the King of Sweden during the last 50 years. However, this has not been written with the intention of describing the personal charm of the garden or the beauty of the rhododendron flowers

FIG. 1.—View of the middle of rhododendron dell with old rhododendron hybrid specimens in the background

FIG. 2.—*Rhododendron catawbiense* 40 years old below the castle

FIG. 3.—Group of *Rhododendron catawbiense* below the castle. H.M. the King of Sweden and Mr. Svensson, the Head-Gardener, discussing plans for further rhododendron cultures

FIG. 4.—Iris pond at the top of the rhododendron dell

Fig. 5.—Group of azaleas (*left*) and thickets of various *Rhododendron ponticum* hybrids (*right*)

in the beech-shadowed valleys in the vicinity of the smooth water of Öresund. I have confined it to a report of how His Majesty the King has endeavoured to unite aesthetic aspects with his wish that this model establishment should prove of benefit to science and gardening.

LIST OF SPECIES AT SOFIERO

Rhododendron achroanthum Balf. f. & W. W. Sm.
adenogynum Diels
adenophorum Balf. f. & W. W. Sm.
adenopodum Franch.
aechmophyllum Balf. f. & Forr.
aeruginosum Hook. f.
albrechtii Maxim.
alutaceum Balf. & W. W. Sm.
amagianum Mak.
ambiguum Hemsl.
amesiae Rehd. & Wils.
arboreum Sm.
argyrophyllum Franch.
atlanticum Rehd.
augustinii Hemsl.
auriculatum Hemsl.
baileyi Balf. f.
balfourianum Diels
basilicum Balf. f. & W. W. Sm.
bauhiniiflorum Watt.
beesianum Diels
bodinieri Franch.
brachyanthum Franch.
brachycarpum D. Don
brevistylum Franch.
bureavii Franch.
californicum Hook.
callimorphum Balf. f. & W. W. Sm.
calophytum Franch.
calostrotum Balf. f. & Ward
campanulatum D. Don
campylocarpum Hook. f.
campylogynum Franch.
camtschaticum Pallas
canadense Torrey
carolinianum Rehd.
catawbiense Michx
caucasicum Pallas
cephalanthum Franch.
chaetomallum Balf. f. & Forr.
charianthum Hutch.
chartophyllum Franch.
chloranthum Balf. f. & Forr.
chrysanthum Pallas
chryseum Balf. f. & Ward
ciliatum Hook. f.
cinnabarinum Hook. f.
cinnamomeum Wall.
cloiophorum Balf. f. & Forr.
complexum Balf. f. & W. W. Sm.
concatenans Hutch.
concinnum Hemsl.
coriaceum Franch.
coryphaeum Balf. f. & Forr.
crinigerum Franch.
croceum Balf. f. & W. W. Sm.
cuneatum W. W. Sm.
cyanocarpum (Franch.) W. W. Sm.
cyclium Balf. f. & Forr.
dauricum L.
davidsonianum Rehd. & Wils.
degronianum Carr.
desquamatum Balf. f. & Forr.
detonsum Balf. f. & Forr.
diaprepes Balf. f. & W. W. Sm.
dichroanthum Diels
didymum Balf. f. & Forr.
discolor Franch.
dryophyllum Balf. & Forr.

Rhododendron eclecteum Balf. f. & Forr.
edgarianum Rehd. & Wils.
esetulosum Balf. & Forr.
exquisitum Hutch.
fargesii Franch.
fastigiatum Franch.
fauriei Franch.
ferrugineum L.
fictolacteum Balf. f.
fimbriatum Hutch.
flavum G. Don
floccigerum Franch.
floribundum Franch.
fortunei Lindl.
fulgens Hook. f.
fulvoides Balf. f. & Forr.
fulvum Balf. f. & W. W. Sm.
galactinum Balf. f.
glaucophyllum Rehder
glomerulatum Hutch.
haemaleum Balf. f. & Forr.
haematodes Franch.
heliolepis Franch.
hippophaeoides Balf. f. & W. W. Sm.
hirsutum L.
hookeri Nutt.
hormophorum Balf. f. & Forr.
houlstonii Hemsl. & Wils.
hunnewellianum Rehd. & Wils.
hyperythrum Hayata
hypolepidotum Balf. f. & Forr.
impeditum Balf. f. & W. W. Sm.
imperator Hutch. & Ward
insigne Hemsl. & Wils.
intricatum Franch.
japonicum Sur.
,, f. aureum Wils.
jucundum Balf. f. & W. W. Sm.
kaempferi Planch.
keleticum Balf. f. & Forr.
kiyosumense Mak.
ledifolium G. Don
lepidostylum Balf. f. & Forr.
lepidotum Wall.
liliiflorum Lév.
litangense Balf. f.
lochmium Balf. f.
longesquamatum Schn.
lowndesii Davidian
lutescens Franch.
macabeanum Watt.
makinoi Tagg
mariesii Hemsl.
maximum L.
megacalyx Balf. f. & Ward
melianthum Balf. f. & Ward
micranthum Turcz.
microphyton Franch.
minus Michx
monosematum Hutch.
morii Hayata
mucronulatum Turcz.
myrtilloides Balf. f. & Ward
nakaharai Hayata
neriiflorum Franch.
nikoense Nakai
niphargum Balf. f. & Ward
nudiflorum Torrey
obtusum Planch.
occidentale A. Gray
oleifolium Franch.
oporinum Balf. f. & Ward
orbiculare Decaisne
oreodoxa Franch.
oreotrephes W. W. Sm.
paludosum Hutch. & Ward
pemakoense K. Ward
pentaphyllum Maxim.
pholidotum Balf. f. & W. W. Sm.
polylepis Franch.
ponticum L.
praestans Balf. f. & W. W. Sm.
przewalskii Maxim.
pseudoyanthinum Balf. f.
pubescens Balf. f. & Forr.
puralbum Balf. f. & W. W. Sm.
quinquefolium Bisset & Moore
racemosum Franch.
radicans Balf. f. & Forr.

repens Balf. f. & Forr.
rigidum Franch.
roseum Rehd.
roxieanum Forr.
rubiginosum Franch.
rufum Batal.
rupicola W. W. Sm.
russatum Balf. f. & Forr.
saluenense Franch.
sanguineum Franch.
sargentianum Rehd. & Wils.
scabrifolium Franch.
schlippenbachii Maxim.
scintillans Balf. f. & W. W. Sm.
scopulorum Hutch.
searsiae Rehd. & Wils.
selense Franch.
semibarbatum Maxim.
serotinum Hutch.
sigillatum Balf. f. & Forr.
smirnowii Trautv.
souliei Franch.
sphaeranthum Balf. f. & W. W. Sm.
spiciferum Franch.
stictophyllum Balf. f.
sutchuenense Franch.
tapetiforme Balf. f. & Ward
temlateium Balf. f. & W. W. Sm.
tephropeplum Balf. f. & Farrer
thayerianum Rehd. & Wils.
thomsonii Hook. f.
timeteum Balf. f. & Forr.
traillianum G. Forr. & W. W. Sm.
trichostomum Franch.
triflorum Hook. f.
tschonoskii Maxim.
ungernii Trautv.
uvarifolium Diels
vaseyi A. Gray
vellereum Hutch.
vernicosum Franch.
verruculosum Rehd. & Wils.
villosum Hemsl. & Wils.
viscosum Torrey
wardii W. W. Sm.
wasonii Hemsl. & Wils.
watsonii Hemsl. & Wils.
websterianum Rehd. & Wils.
williamsianum Rehd. & Wils.
wilsonae Hemsl. & Wils.
wiltonii Hemsl. & Wils.
xanthocodon Hutch.
yakusimanum Nakai
yedoense Maxim.
yunnanense Franch.

RHODODENDRONS ON THE HOWTH PENINSULAR

By R. C. JENKINSON

BEFORE embarking on some account of the two gardens with which this article is concerned, I think it may be interesting to give a short description of the Howth Peninsular. It lies on the north side of the Liffey estuary, its West–East axis being parallel to the Dublin–Dunlaoghaire road. From Dublin one comes round the head of the estuary and then turns east along a narrow strand or causeway to the western foot of the peninsular, which in shape is rather like a dolphin's head. On the South, East and North the rocky ground rises steeply to a central plateau about 500 feet above sea level. The South side is a hot sun-trap, while the North, with 30 inches of rain, is protected from the wind by steep cliffs, and woodland belts on the seaward side.

The Rhododendron Garden at Howth Demesne lies about a mile from the ancient Castle and must be well nigh unique. From its base, about half a mile long, the rocky cliff rises for some 200 feet. A humid atmosphere is preserved throughout summer by the sea-mist which sits on top of the cliffs, picturesquely called Lord Howth's Night Cap. It was originally planted by Lady Emily St. Lawrence in the 1850's, who had soil carried up in sacks into holes in the bare rock. Planting was continued by her heirs, Captains Julian and Thomas Gaisford St. Lawrence, intermittently until 1939. The latter, whose log-book is a monumental record, lists 400 species and 600 hybrids. As a result of the second World War and thereafter for other reasons, maintenance and cleaning could not be kept up. Brambles and other weeds took considerable toll, especially of the smaller plants, and fallen tree branches have done much damage; but much remains. Unfortunately most of the labels have been lost or stolen.

The present owners, Major and Mrs. Christopher Gaisford St. Lawrence, do what is possible to keep the many paths cleared and to preserve the remarkable collection of rhododendrons which still remain; but a five-year plan would be necessary to do two things: eradicate brambles and cut out the less good hybrids which

are spoiling their neighbours. Close planting, unless closely watched, can only end in expensive trouble.

An arid catalogue of plants is most boring. It will be better to consider the general planting scheme over nearly 100 years. The earliest introductions were *R. ponticum* and some of the early hybrids such as 'Cornish Early Red', now enormous clumps flowing up and down the almost vertical rock face. I think *ponticum* can be a very much maligned shrub. Against the cool grey, boulders the various mauves—pinkish, bluish and purplish—look magnificent. Like the vast clumps in Windsor Great Park, surely many of these are hybrids? Right up at the top are such good species as *falconeri*, *eximium* and others with big foliage, great plants. As you look at this towering bluff from the seat just inside the main entrance which is approached from the Castle by the Cherry Walk, it is a thrilling sight. Indeed one could describe it as a bit of the Himalayas in Ireland.

Now let me try and tell of some of the plants. From the entrance the visitor would do well to follow the Rhododendron Walk to the right—the garden is well sign-posted. There are many good things on the right or flat lowest area, but the majority lie on our left running up to the "foothills". Most of these, I think, must have been collected by the late Captain T. Gaisford St. Lawrence, judging from their size. Passing some hybrids, we come to some big *decorum*, up to 12 feet, with fine *crinigerum* and *floribundum* in front; there is a splendid bush of the slow-growing *recurvum* of 4 feet, with very narrow rugose leaves, rusty beneath and with white flowers tinged pink. Then come several *neriiflorum* and *sperabile*, with a couple of large plants of the pale yellow *campylocarpum* hybrid, 'Dairymaid', a very pleasant combination. On the right we have some very good forms of *augustinii* with a variety of S.S. *yunnanense*, and the lovely pink *triflorum*, so far unnamed, the original plant of which was raised at Caerhayes. A little further on there are some large plants of 'Gill's Triumph' and 'Gill's Crimson', and several 'Ascot Brilliant', of which much use is made, and 'J. G. Millais'.

Here on the left are two fairly young (but not small) plants of *praestans* and *coriaceum* in very good health. And then a 12 feet tree of *sinogrande* var. *boreale*—this is on our right. Next comes a charming group of pale pink *decorum*, the white *caeruleum* and a red Japanese Maple. Then comes perhaps the pride of the collection, 'Victorianum', a hybrid raised in 1879 between *dalhousiae* and the very tender *nuttallii*. Protected, if I may use the word, by a

beautiful great piece of Loderi, this is a superb specimen, alas! needing two or three days for its large tubular white, rose-tinted flowers to open.

While I make no mention of the many dwarf series, *lapponicum*, *saluenense* and so forth because they are much overgrown and drawn up, there are beside the path splendid bushes, Mr. J. C. Williams's famous 'Blue Tit', and I think 'Blue Diamond': and a big *glaucophyllum* (lately *glaucum*) and *tsangpoense*. A little back from the path are four or five good bushes of 'Tally Ho' (*griersonianum* × *eriogynum*), and as the path rises and begins turning to the left to breast the hill slopes, on the right a large 'Cornish Cross'. In front by the path is a remarkably fine specimen, rather crowded at the moment, of *genestierianum* with leaves snow-white beneath and small plum-purple flowers. Raised on a bank to our left, in front is a lovely plant of *caloxanthum*, scarlet in bud opening to pale yellow. Just opposite across the path *insigne* is very happy: in the *arboreum* series, it has hard iron-green leaves covered on the underside with a "tawny-grey skin-like indumentum", and pinkish-white flowers. Behind *caloxanthum* and above it are a large rather drawn-up *xanthocodon*, and a very fine *burmanicum*, marked "F" in the Handbook; here the flowers were clear sulphur yellow and sweet scented.

Climbing more steeply up the Mountain Walk, an opening to the right has some very fine modern hybrids. First, the best 'May Day' (*griersonianum* × *haematodes*) I have ever seen. Growing on a steepish slope, it appeared to be 12 feet × 10 feet. This, one of the hardiest of these early May scarlets, was raised at Werrington in N.E. Cornwall. Nearby is a good plant of Lord Headfort's wonderful cross, 'Vanguard' (*venator* × *griersonianum*). It is dwarfer, rather later, and the colour is a brilliant blood scarlet. It gets its stiffer more spreading habit from *venator*. Still climbing, our Walk becomes a single-file path cut into the hillside as it turns sharp left. Below us a steep shaly slope runs right down to the Rhododendron Walk to which we are walking parallel. Here we find *agglutinatum*, a rare species in the *lacteum* series: not in flower but luckily labelled! A healthy young *mallotum*, with a beautiful ferrugineous tomentum or "fleece" beneath the leaves, is well placed on a small bank on the right, so as to display this characteristic. Other good specimens along this short path are *calophytum*, *fulvum*, and *diaprepes*, and the lovely 'Lady Chamberlain'—the only hybrid up here.

There is, at the S.W. corner of the garden lying off the Mountain

Walk by which we must return, a very sheltered bay bisected by a path. Here grow some very good *macabeanum*—the flowers were over—and a *basilicum*: and nearer the path a 10 foot plant of *faberi*, a scarce species with white flowers. Across the path there is a fine piece of the cream form of 'Penjerrick', asking for more light and room, with below it thriving *giganteum*, as yet unflowered, but growing perfectly.

Returning towards the Entrance Gate, on each side of the path are several plants of *edgeworthii* straggling as is its wont among and through other shrubs. One plant, I was told, was an especially good form. And of course various forms of *arboreum* disposed throughout the garden. The last plant of outstanding merit is a young *sinogrande* about 17 feet tall in great vigour and with very large leaves.

As I have written earlier, this is no catalogue. I have left out all the old and so-called "Hardy Hybrids", numbering some 600 varieties, and have only selected plants in good health and vigour, and of course not all of these. It is greatly to be hoped that Major Gaisford St. Lawrence may find it possible to help some at least of his fine rhododendrons. Luckily the majority are growing in the lower, easier area. Any lover of this great genus would be well rewarded if he could spend a few hours in Howth Demesne.

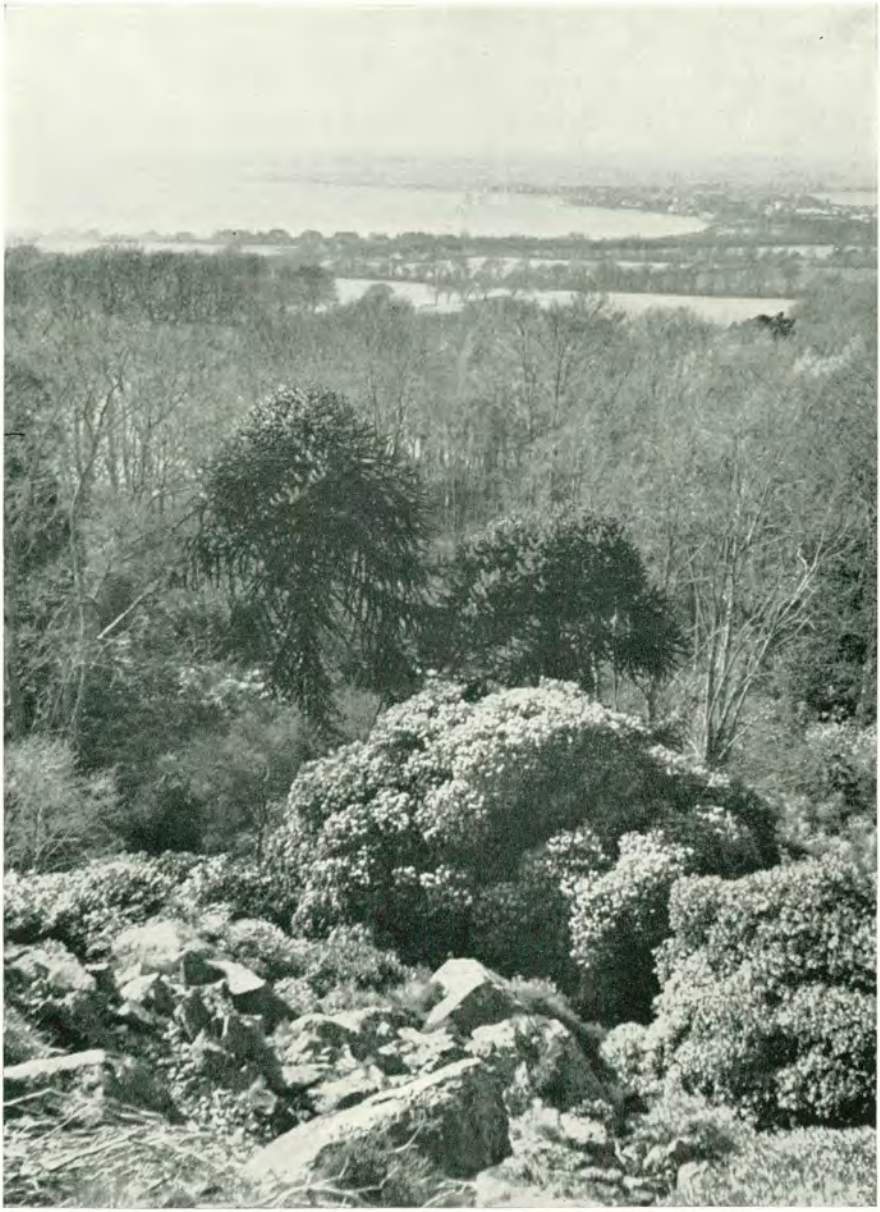
Turning right out of the main, and seaward, entrance of Howth Castle, in the village one turns right uphill to find the garden of Dr. and Mrs. Mill, Woodside, Balkhill Road, Howth, situated a little to the east of the Howth Cliff, but on top of this elevation, not on the face of it: the actual Cliff ceases with the Demesne boundary. I gather the garden was formed about 1900 from a typical rough meadow, with intermittent protuberances of natural rock, by Mr. Hart and his four sons with no outside labour. The first task was the provision of shelter, chiefly using Scots and Monterey Pines, and griselinia. The garden is completely informal, gently undulating and I surmise a little under two acres between the House and Western boundary, the area in which the rhododendrons are grown. A wandering grass path circumvents this area, never more than a few yards from the perimeter, with a few subsidiaries leading into the interior. To those who know Rowallane in Co. Down, the Rhododendron Wood there is in many ways comparable.

Selection and planting began soon after the shelter was in, and has continued up to the present year. The space available—for this part of the garden contains also a rock garden and moraine near the House, various trees and shrubs, and a charming little stream

garden—made the choice of rhododendrons a matter of the first importance. Here, as in so many good gardens, Mr. Hart had the advice and help of Sir Frederick Moore: I hesitate to write "the late" because he still lives vividly through the many rare and beautiful plants he so ubiquitously distributed. On this fairly open plateau plants do not make the same lush growth as at Derreen or in the sheltered valleys of Cornwall, an advantage, perhaps, as witness the magnificent tree of *grande*. Both my visits to Woodside were in early May, so that I only caught the last few flowers, but from the faded trusses the freedom with which it blooms was evident. Then comes an equally big tree of *falconeri*, equally floriferous (Fig. 7). Near by there are three very attractive 15-foot bushes, each varying in shades of pale pink, unspotted, bell-shaped flowers, the leaves silvery white beneath. I thought at first *argyrophyllum*, but these have 22 flowers to a truss: perhaps a hybrid. A beautiful dome of the Kew hybrid 'Temple Belle' (*orbiculare* × *williamsianum*) was a pink cushion, while blanketed from these pinks a 20-foot bush of old 'Ascot Brilliant' is a blaze of dark scarlet. This I think is the only "hardy hybrid" in the garden, with the exception of rough stuff as shelter on the periphery.

A large pink *arboreum* is next to a superb *griffithianum* from Ardnamona, that first home of the early Hooker introductions on the coast of Co. Sligo (Fig. 9). Under the lee of these two great plants come biggish bushes of *facetum* and *griersonianum*, not now in flower, and to the left a charming placing of a good blue *augustinii* from Henry's seed, with in front the pale yellow 'Damaris' ('Dr. Stocker' × *campylocarpum*). On the left the scent of a lovely pink Loderi, a layer off the Kilmacurragh plant, commands us to admire, while half-right a 5-foot plant of lemon-yellow *burmanicum* is astounding—I wish I had the adjectival competence of a Farrer! This was raised from seed sent home by Miss Cuffe and given, as I suspect the Loderi was, by Sir Frederick Moore. Behind, a healthy plant of the uncommon and not very easy *wightii* in the *lacteum* series, is very good, the pale yellow form with a crimson blotch; and nearer the front a wonderful 6 × 6 foot piece of 'Countess of Haddington' (*ciliatum* × *dalhousiae*), its tubular white flowers flushed with rose drenching the air with delicious scent (Fig. 8). There are several more of this and its allied hybrids which revel in this humid north-facing garden. Just before regaining the path, a happy 8-foot shrub of *sidereum* (*grande* series) is too young to have flowered.

Bending right-handed along the garden boundary, on the left



RHODODENDRONS ON THE HOWTH PENINSULAR

Fig. 6.—*Rhododendron arboreum* hybrids in Major C. Gaisford St. Lawrence's Rhododendron Garden on the Howth Peninsular

Fig. 7.—*Rhododendron falconeri* with Rhododendron 'Princess Alice' on right in Dr. Mill's garden on the Howth Peninsular (see p. 24)

Fig. 8.—*Rhododendron* 'Countess of Haddington' in Dr. Mill's Garden on the Howth Peninsular (see p. 24).

FIG. 9.—*Rhododendron griffithianum* in Dr. Mills' garden on the Howth Peninsular (see p. 24)

Photo: E. O. Birch

FIG. 10.—*Rhododendron schlippenbachii* growing as a hedge in Mr. Edward Birch's garden in New Jersey (see p. 26)

are two fine large bushes of 'Shilsonii' and his daughter 'Cornubia', two distinguished blood-red Cornish hybrids. A few yards farther on, to the left and right are a choice collection of hybrids introduced by Dr. Mill, as have been all the newer and young rhododendrons. All are immature and few have flowered, but I give a list to show the care taken in selecting only the best: the 'Ladies Chamberlain', 'Rosebery' and 'Berry', 'Fabia', 'Fusilier', 'Matador' and 'Hawk', 'Barclayi' and 'Naomi', and 'Princess Alice'. Bending sharply round to the right, there are *barbatum smithii*, and a big lump of *arboreum cinnamomeum*, and then, probably an offspring of the latter, a good 'Sir Charles Lemon', with leaves brightly tawny beneath and very white flowers. Tucked in for shelter is the beautiful, fragrant pure white *manipurense*.

We come to perhaps the best bit of planting in the garden, to which it is impossible to do justice. There is a sort of pit, or it might be a long-defunct river-bed, about 40 yards long and 4 or 5 wide, deep in rich old loam and leaf mould. On the left a natural shoulder-high barrier of boulders: on the right a sheer 12-foot cliff, its top forming a large flat pulpit. This pit is approached by skirting a glorious tree of *griffithianum*. On this morning in early May, I caught it in all its pristine beauty covered by a mixture of pink buds and huge nodding white flowers, flushed with pale pink. In the pit at the foot of the cliff and towering above it is a grand *falconeri*, with *campylocarpum* and *augustinii* in the middle, and 'Princess Alice' (*edgeworthii* × *ciliatum*)—the hardiest and most highly coloured of these tender hybrids—against and sprawling over the boulders. In front of us, two great bushes of the sisters 'Fragrantissimum' and 'Sesterianum' fling their rich fragrance abroad; and for good measure, leaving this pit there are against the cliff a big creamy-yellow *arizelum* and a fine *eximium*. So much for a close-up of these choice plants, but to see them at their best one must climb round on to the pulpit. To look down from three or four different view-points is about as lovely a rhododendron picture as one could wish for.

RHODODENDRON SCHLIPPENBACHII IN NEW JERSEY

By EDWARD O. BIRCH

IN spring gardens lavishly filled with bloom *Rhododendron schlippenbachii* (Royal Azalea) is pre-eminent, and worthy of being the central figure of a carefully planned picture. In my garden at Short Hills, New Jersey, U.S.A., the flowers, 3 inches or more in diameter, in clusters of four to six, appear about May the first and practically cover the plants. They are a beautiful shell-pink to deep-pink, no purple or lilac tinge, and the full bloom leaves nothing to be desired. The leaves start growth when bloom is about full, and by the time the flowers disappear the plants are in full leaf. The bloom drops gracefully and presents clean plants.

It has been said *R. schlippenbachii* is undoubtedly the prize package in the azalea bag. It certainly is that for gardens in temperate or cold climates. While a rugged plant, it has exceptionally good form. In the autumn its distinctive leaves, rather large and broadly ovate, take on the same colours as the dogwoods. In winter, when bare of leaves, the strong symmetrical wood takes on a purplish hue, and its silhouette is good to look at. In short, it is a wonderful all-season plant.

Every autumn the same heavy set of buds appears and blooms without fail the following spring, regardless of the type of past winter. Some of these winters have been 20° C. below zero for two consecutive weeks. This has been experienced through thirty winters, during some of which plants have been heavily coated with ice for several weeks at a time. There has been no loss of wood, as when the thaw takes place the branches immediately spring back to position. I have had the same reports on plants sent to the coldest sections of the country. This is as it should be considering that the seed from which the plants were grown came from parts of Asia when 30° C. below is not unusual.

These *R. schlippenbachii* have never been affected by insects or disease; in fact they have never been sprayed. But with all its merits this species is not as well known as it deserves to be; possibly because young seedlings do not make as rapid above ground growth during the first two or three years as run of the mill plants,

and therefore do not appeal to nurserymen who want a quick turnover. However, during its first years *R. schlippenbachii* makes heavy root growth and in time exceeds that of other rhododendrons and azaleas, thus extending its life span beyond that of the gardener who tends it.

Until plants were about 3 feet they were lightly fertilized with cottonseed meal—five pounds to 1,000 square feet—but only once a year, before growth started in spring; and during this time they had about one inch peat moss mulches. Never overfertilize or try to force; if growth is satisfactory be content. Soil texture is important; —best when spongy under pressure, but still firm. It should absorb heavy rains, no run off of water, and should not cake when dried by sun. In other words requirements are the same as for all members of the rhododendron family.

When plants were 3 feet and transplanted to the permanent border they continued on their own and since then the area around them has been taken over by a heavy growth of pachysandra. At first it was thought this might prove harmful, but such has not been the case. This cover holds falling leaves, and the specimens are thriving and doing all or more than should be expected.

R. schlippenbachii, if not crowded in planting will develop an almost globose habit. It will stand all exposures, summer suns and winter winds; wants no protection whatever, and should not be smothered in foundation planting. It is too good a plant for that. It should not be coddled; it is independent when established. If some of its strength and hardiness could be crossed to other species it would be something; but do not think it could improve itself. Nature evidently intended *schlippenbachii* should not be promiscuous but stand on its own merits, always recognizable with no doubt as to what it is.

Plants referred to or pictured were grown from seed planted in open ground in May, 1928. They are now up to 12 feet high, some with trunks 6 to 8 inches in diameter; annual growth now about 5 to 7 inches from all terminals (Fig. 10).

RANDOM COMMENTS ON THE CULTURE OF RHODODENDRONS

By MURRAY ADAMS-ACTON
F.I.R.A. F.I.A.L., Hist. Inst. of France

TO record some of my work on the hybridization of rhododendrons and indicate what I have accomplished, or hope to achieve, appeared to be an easy question when first put to me, but upon reflection I find that the answer will take some time. There was no incentive nor specific purpose when I started; there seldom is when one gradually becomes interested in a subject, therefore procedure cannot be condensed to any special activity at any one time. Collecting shrubs is not unlike collecting works of art, or collecting anything, one's ambition proceeds side by side with experience and governed always by personal preference.

With me the initial impulse was the same as that of anyone who pauses to purchase a bunch of flowers from a barrow in the street—and if they cannot afford to buy some flowers they purchase an armful of green leaves or a few branches—as many do, poor people—because few of us are unable to escape from our ancestral descent from the Arboreum age: we are not long down from the trees, as Voltaire reminded us. But my own attraction for trees, which I started to draw at an early age, and my love of the landscape may be more recent and inherent from a paternal forbear who, late in the eighteenth century, produced a vast plantation and erected twelve miles of wall around it wherein ". . . winding paths led through lofty rhododendrons and here and there the magnolia displayed its white blooms, while clusters of azaleas mingled with other exotics in the richest harmony of colour and fragrance".

To begin with I would emphasize that any observation I make is advanced in a casual manner for what it is worth. Horticulture is but one aspect of my business and I drifted into it without previous study; I had to learn as I went along.

In this I was fortunate because following my student days abroad I had to develop and plan an extensive landscape garden around a house I had designed among the vineyards in Southern France. I worked in France for five years and then, soon after I

returned to England, went back again—not to dig in gardens but in trenches.

After that noisy and painful interruption, and back once more in England, I bought and restored an ancient Gothic abbey in Devonshire, but the soil held too much lime for rhododendrons. I planted trees for posterity. It was only when, later, I went to live in Buckinghamshire and was fortunate to find the late Mr. E. H. Wilding, a near neighbour, that my interest turned to flowering shrubs. Moreover, there were many well-known rhododendron plantations near to us, e.g. Bulstrode Park, Langley Park and others, wherein I could study the species which were all named, obtain pollen, and also use the shrubs at will for my own pollination—in fact, had it not been for this, any extensive work would have been impossible. Furthermore, he was able to procure shrubs for me which were then unobtainable elsewhere. I joined the Rhododendron Association—as it then was—and I would like to record the constant help and advice I obtained from the late E. J. P. Magor, to whom I was greatly indebted.

Alderbourne Manor near Fulmer was then the centre of all my work on hybridization between the two wars. It stands on a site—like so many others in different countries where houses have been built for centuries—I believe that it is mentioned in the Doomsday record—though there are only slight traces of the earlier buildings existing to-day. The character of the present building leans more to the refined elements of Regency, with long shuttered windows opening on to a sheltered terrace providing views of a small lake and extending beyond to a distant landscape surrounded by 1,000 acres of woodland wherein gravel subsoil is ideal for rhododendrons.

I was fortunate to find in one section of the woods Ponticums and old Cornish reds, some of them 30 feet in height, which had been planted years ago to hold the birds at a shoot; these afford excellent protection, but elsewhere in the gardens continual changes of ownership were visible everywhere, as well as the neglect during the years of war, due to lack of labour when so many fine gardens almost perished. But it was largely the task of resurrection and replanning which attracted me. Little is more dull than to take over a ready-made house and garden—however great or glorious—where the creative impulse has been provided by other people. I hold the opinion that no man should call himself a gardener unless he can give evidence of continuous personal toil to the point of exhaustion—especially with an axe!

I have visited many of the plantations produced by some of the founder members of The Rhododendron Association, and my criticism is that they are essentially a collection of shrubs, as opposed to a garden carefully composed and containing variety of interest. Having been planted when the shrubs were small and at different times so many have now grown into trees, therefore the present composition and grouping was never, visualized—in fact this would have been almost impossible. These places seem strangely remote from the present and there will never be anything like them again. They belong to the period of considerable prosperity after the first war. New species were continually arriving. Intensive rivalry existed between certain collectors and labour was plentiful and cheap. Anyhow, such as they are, these gardens mark a very definite contribution to the aspect of English horticulture of their period and, personally, I have no regret that they now belong to the past. But what will they be like in the future? Not only was planting far too crowded—after which, propagation, being continuous, new crosses had to be accommodated somewhere; and it is not generally understood that unless continuously cared for a rhododendron plantation is dramatically impermanent —and in a very few years!

One collector I know had to transplant about 50 shrubs annually, and unless shrubs are transplanted annually the result is disastrous. Who was it who said that success in hybridization depends upon being unafraid of a bonfire? Azaleas too are a bother: mine grow like the devil. A drift not higher than 6 feet is delightful, but when taller the flowers are not seen from below. I think the best procedure is to remove a certain proportion of their growth at times; and all this adds up to more work. I wonder if there is a gardener anywhere who can comfortably relax in a chair in the knowledge that everything in his garden that needs doing has been done?

The hardest part about it is having to decide what to discard? It requires courage to cut out fine shrubs, well grown and loving every moment of their existance.

Some years ago, I remember, I read in one of our year books that the late Mr. Lionel de Rothschild said that if he had to retain only one rhododendron from his collection his choice would be R. 'Cilpinense' (*ciliatum* × *moupinense*, the cross 'Ailsa Jean' A.M. 1946, which is similar, had not then been made). I was surprised, because surely if there is one species outstanding for a dozen or more virtues it is *ponticum*?

To select one shrub would entail many considerations; such as suitability for situation and environment, decorative value, resistance to drought, frost and wind, which is more important than the beauty of a truss or rarity. Ponticum will grow in all aspects, sun or shade; it is rapid in growth and carries a wealth of foliage and said to be a protection against a forest fire; while its geographical distribution across the northern hemisphere to places thousands of miles apart is greater by far than that of any other species.

I am told that there are no pure species of *ponticum* in England, only natural hybrids, and I freely admit that quite often its trusses are miserable, although not always: for instance, when a well-established bank is seen from a distance, a solid sheet of colour reflected in water as they are at Alderbourne, few rhododendrons —or any other shrubs at all—are comparable. Perhaps I am partial to *ponticum* as it recalls my youth in the wet woods of the island of Arran.

But even though with Wilding's guidance I was for a long while distressingly ignorant. There was not—nor is there to-day—any publication which provides information regarding elementary procedure on hybridization. Only a few years ago I found the head gardener of a large estate in Cornwall crossing lepidotes with elepidotes by the score.

I also had to learn that the owner of a new cross held on to it tightly prior to exhibition. I recall one incident: I was walking round Wilding's garden with him one morning when Mr. de Rothschild arrived. He started rapidly and with great enthusiasm to describe a cross which he had just flowered for the first time. It was obviously something outstanding and he was certain it would create horticultural history. I listened in silence.

Well, later, when Rothschild had departed, I asked Wilding casually and quite innocently, "Do you think that Rothschild would give me a few of those crosses he was describing for my woodland?"

The effect of those words was remarkable. Wilding was walking along a path in front of me at the time and he shot clean up in to the air and turned a somersault and when he was facing me he gasped: "My dear boy, my dear friend, do you realize what you are saying . . .?" You would not be asking him for his cheque book and every penny he has in the world—yo*u would be asking him for the eyes out of his head*!

I was, needless to say, in deep disgrace. I was also perplexed. I

had previously thought that gardeners, the world over, were linked together as a friendly species, kindly and ready to give as freely as Father Christmas, to exchange onions for a few carrots over a garden wall. I subsequently realized that Mr. de Rothschild was indeed one of the most generous of men with his plants.

It was not so long afterwards, when I had studied the technique, that I started to make crosses which followed annually like the fall of autumn leaves. I have recorded a list of those I made the first year, sixty-one of them, and the majority were—I was about to write "a lavish waste of time!" But I have no regret, we learn from failures.

I remember when one of my crosses exposed a bud and was about to flower. It was a stimulating emotion, not unlike the sense of achievement when one exhibits for the first time at the R.A. I was expecting a fine blue—nothing like the washed-out claret of an *augustinii* which I had purchased, and I felt sure it would be good, because mixing colour was habitual with me—I had said nothing to Wilding about it; I was out to wipe Wilding's eye! I could hardly wait, and my gardeners were also in a state of nervous expectation. But when it flowered I blinked. It was not at all what I had expected—in fact, the truss was small and of a colour unpleasantly reminiscent of mud.

Wilding had discontinued work on the larger rhododendrons and concentrated on azaleas and made crosses annually; but apart from some charming sweet-pea pastel shades there was not much variety between the azaleas he produced. Previously, I think one of his best crosses was Dido g. (*decorum* × *dichroanthum*). I obtained pollen from his garden and used some of his finer shrubs; and he once reminded me of the debt which I and others owed to the experimental work which he and other pioneers had accomplished; e.g. when they had sown seeds outside in the open, etc., which I realized and I was, and still remain, grateful.

But I wanted colour, strong colour. I remember that I desired a shrub described by Mr. de Rothschild as a variety of *R. geraldi*, which he said was "virulent magenta and only fit for a bonfire" (*Year Book*, 1935). I should have put it on to *R. eriogynum*—or even crossed it with *R. griersonianum* which at that time was fairly rare. The result might have been good—anyway interesting.

I have used *griersonianum* fairly frequently: she was friendly with me from the start, but since then—like the old lady who lived in a shoe—her activity has been somewhat unconventional—150 affairs, and still at it—seems glaringly indecent! I would not mind

FIG. 11.—Stone stairway to the Azalea Garden, in Mr. Murray Adams-Acton's garden

FIG. 12.—Natural hybrids of *Rhododendron ponticum* and flowering cherries across the water in Mr. Murray Adams-Acton's garden (see p. 29)

FIG. 13.—The general aspect of the garden at Alderbourne Manor looking down from the level of the house (see p. 29)

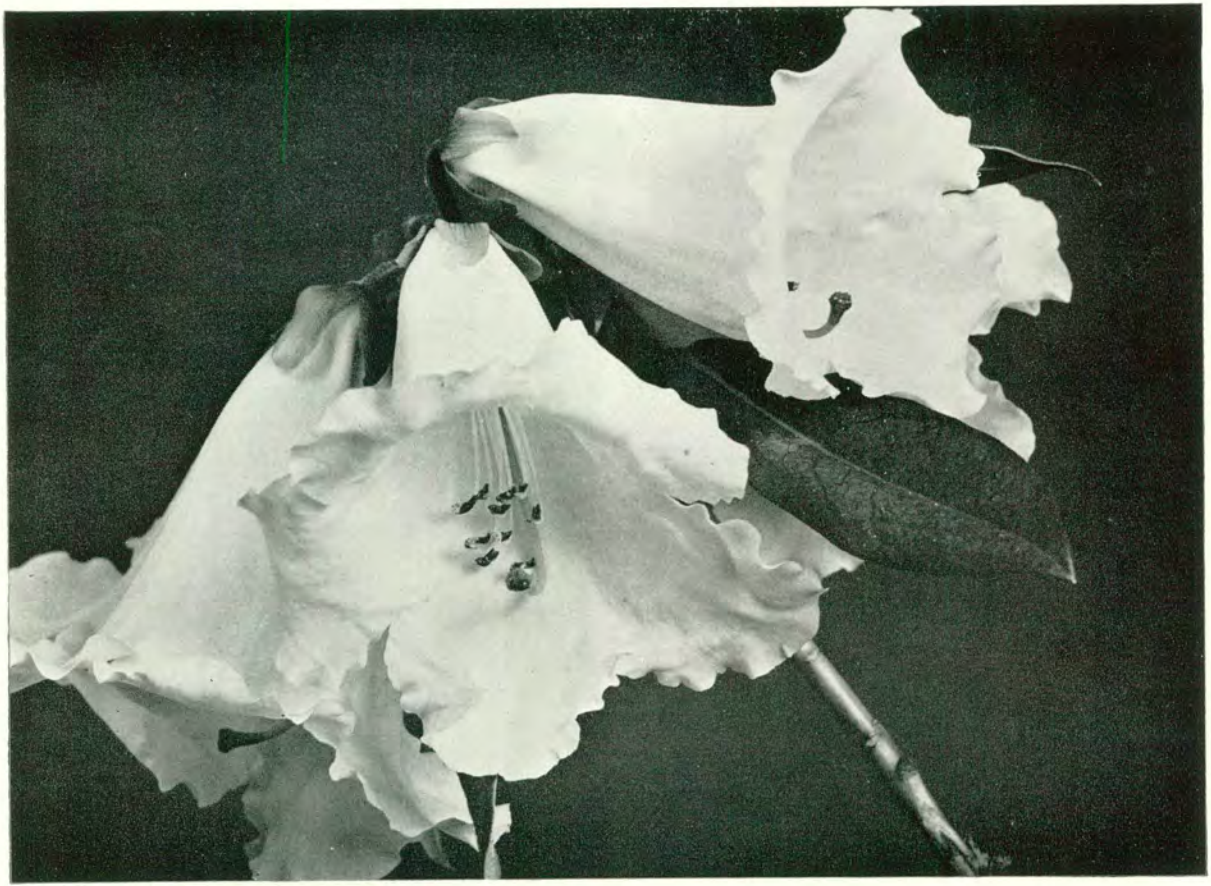


Photo: Reginald Malby

FIG. 14.—*Rhododendron taggianum* one of the most beautiful of the tender rhododendrons

(see p. 36)

that so much, but I think that if half the work had been concentrated upon the tender species of rhododendron—to produce hardy hybrids—it would have been better garden work (e.g. I produced 'Perseverance' which is polar bear hardy because 'Lady Chamberlain' and all her generation are bud-tender in Buckinghamshire). I think that the primary crosses of *griersonianum* are useful as they flower late and escape frost. It is a shrub which must be united with others near in colour to the geranium scarlet if this is to be preserved. Crossed with anything lighter or darker this is lost. And if a really good bread and butter shrub is required—one which provides a sensational splash of colour annually and is of rapid growth—the cross between 'Purple Splendour' and 'Tally Ho' (*eriogynum* × *griersonianum*) surpasses anything I know, i.e. 'Lady Malcolm Stewart'. 'Leonardo' is perhaps better in colour but requires some protection.

I found that all *griersonianum* crosses with a white gave a rose colour leaning towards the former, but with *R. decorum* the colour was darker, a rich rose, and when putting it back again both ways the colour was darker and richer. It pays to cross shrubs of the same colour and then put the hybrid back on to the best parent. *R. aureum* × *lutescens*, *campylocarpum* put on to *lacteum* or *dichroanthum* should be good, or *wardii* × *croceum*, and so on.

Most of my crosses with yellows were too pale, e.g. *R. burmanicum* with *aureum*, *ambiguum*, *lutescens*, but a cross I made between *chrysodoron* (vivid citron) and *leucaspis* is exceptionally good, with excellent formation and fine foliage. I can also strongly advise *ciliatum* crossed with *burmanicum* which throws a soft peach colour and grows well, though this also needs slight protection ('Felise'). Good yellows can be obtained from such progressive evolutions of secondary crosses in the absence of *R. lacteum*—a difficult shrub both to procure and grow.

Leaving yellows for a moment I would like to record one of my complete failures. For years I tried to cross a member of the Cinnabarinum Series with *ciliatum*. *Ciliatum* is an excellent shrub with compact foliage of a good colour, and flowers early on in mid-March. As a parent it has produced 'The Countess of Haddington', *praecox* and many more without effort; and I hold the opinion that foliage as a background to a truss from any shrub is as important as its colour. Only twice I succeeded in crossing *ciliatum* with *roylei*—as there is considerable difference between the periods when these two species flower, but late frosts prevented success. *Ciliatum* marries well with *tephropeplum*, i.e. 'Manon'.

Crosses between *ciliatum* and yellows are also somewhat pale and uninteresting—shades of pink and primrose without much vigour, and I am left guessing why some species are fertile and some sterile with their own pollen—and this occurs among plants of the same species. The best advice I can give to anyone starting hybridization is not to depart too far from the same colours. I would not cross orange or yellow with red and expect good results, and with white I would stick to near-blue and mauve—but not white with red to produce pink (e.g. such as *griffithianum* with *griersonianum*) and in all cases to remember that success depends upon using the finest specimens of each species.

The mixture of certain colours on a palette is easy to understand. Yellow with blue produces green, and with red, orange; blue with red, purple, while all the three together, viz. red, blue and yellow, provide black. With these few primary colours almost any intermediary shade can be obtained. Quite another matter though arises in the proximity or combination of one colour with another, and far more people are completely colour blind than is generally known.

A painter has every colour on his palette or can quickly mix it, but success depends upon *restraint* more than anything.

The colour of a copper beech tree in late summer, i.e. dried-up liver with blood, is distasteful to a landscape painter; and landscape painters hate like poison the shape of the large-leafed rhododendrons and also their great clumsy trusses, saying that cauliflowers are far more decorative and paintable—which, of course is true. They refer to the geometrical growth of shrubs such as *R. calophytum* and others. Women are the greediest creatures alive for colour. Watch them when they flock in to the tents at Chelsea. Their eyes come out on stalks. They want the lot!

The late Claude Lowther produced a notable garden at Hurstmonceaux Castle of which he was rightly proud, but he avoided the introduction of white anywhere, saying that white destroyed breadth and the white spots drew the eye to them and resembled the aftermath of a paper chase. But we used white by itself along the length of a central walk of lilies with a rigid band of blue violas underneath at ground level which looked good. It is surprising how many of the gardens around ancient houses have been spoilt because they have so often changed hands and degenerated into a horticultural mess. A new owner brings new ideas. Sometimes ostentation.

In the years before the war my tastes drifted to the tender species of rhododendron which I still prefer to any other; not only because their lily-like trusses are more beautiful and decorative, but there is the added attraction of delicate and fragrant scent. Moreover, growing from below the 10,000 feet altitude they required a cold house, and having plenty of glass I acquired every species available —except *R. rhabdotum*—which was not then obtainable.

At that time, 1938, very little work had been done on the Maddenii Series with a view to raising garden hybrids which I had in mind; *bullatum* had been crossed three times, *crassum* once, *dalhousiae* thrice and *edgeworthii* six times (with me an obstinate shrub), so there was also these few hybrids to use if I could have procured them. But I understand now that few would have been of use, as J. C. Williams' had used *lutescens* with *edgeworthii*, and E. J. P. Magor *chartophyllum*, both of the Triflorum Series and too trivial. More successful were several crosses produced by the late Sir John Ramsden at Bulstrode Park, such as one he named 'Phillida'—between 'Forsterianum' and *edgeworthii*—and 'Helena', equally interesting though smaller. These I obtained, though having never had a chance to develop normally outside a flower-pot they were sickly and unhealthy: it could not be otherwise. They stood in rows in a magnificent greenhouse, more than a hundred plants rising on staging to the roof, and moreover, each pot had to be watered daily!

I planted my shrubs of the tender species in troughs I built about 3 feet from the ground, with excellent drainage, and fed them on what Wilding described as the Lord Mayor's Banquet. It paid. They were sprayed constantly and when spring drew near every shrub was moved outside to a nursery in partially shaded woodland during the summer and autumn; while in another house of less importance the glass was removed from the roof for some months. My experience is that if healthy rhododendrons are desired little is so essential as fresh air and rain, plenty of rain, and then more rain!

This procedure was excellent, few will deny, even if new and healthy growth and space indoors became a problem, but even so, far rather heavy roots to move than a plant with yellow leaves in a pot!

There are, in England to-day, about 100 rhododendrons of the tender cold-house variety, apart from Javanese, but not more than a dozen predominate, and of these only three or four stand out. I refer to natural species, i.e. *taggianum*, *nuttallii* and *lindleyi*.

I place *taggianum* first without hesitation, it has good foliage and grows well when looked after, the pips fall loosely from their apple-green calyx, superb in shape and colour—sometimes I have eight to a truss—while if there is another rhododendron which gives off such exquisite fragrance, as I said, I have not found it. Scent, I think, is of importance when assessing merit. A woman—given a flower of any kind—automatically lifts it to her nose (Fig. 14).

I was aware of the beauty of *taggianum* before I noticed a footnote in *The Species of Rhododendron* which reads: "This will probably prove to be the gem of Mr. Forrest's collection", and as several other authorities have been of this opinion I am surprised that more work has not been done to produce hardier shrubs with these larger specimens of the Maddenii group. Only twice to my knowledge has *taggianum* been crossed—by Lord Stair and Dr. Hutchinson—with great success. It was advanced from the A.M. to F.C.C. when I sent it for inspection a few years ago—but it is still only a three-star shrub in our handbook.

The late Mr. C. P. Raffill of Kew, of whom few had greater experience, told me that he had crossed *R. dalhousiae* with *griersonianum*, which was a good reddish pink, and that if he were twenty years younger he would cross the chinese form of *sinonuttallii* with *griersonianum*. I think he was optimistic. Though, strange as it seems, the cross with *dalhousiae* was made by the late Admiral Heneage-Vivian and it is recorded as 'Grierdal'.

As to 'Tyermannii' F.C.C. produced in 1925 (*formosum* × *nuttallii*) this is the most magnificent and spectacular cross which produces a white truss without rival—except for *nuttallii* itself, though neither of these shrubs has the same fragrance, elegance or perfume as *taggianum*. Although a fine truss I entered in competition some years ago of *sinonuttallii* was the runner-up for the McLaren cup, the scent is heavy and sickly. Incidentally, I find that in a cross between two scented shrubs no scent of either parent comes through. *R. seinghkuense* is also a deliciously scented shrub while—apart from the tender species—there is nothing comparable for scent than the azalea *R. arborescens*.

Among the less spectacular but none the less attractive species are *seinghkuense*, *edgeworthii* and *megacalyx*, three very lovely shrubs, (the finest specimen known to me of the latter being at Kew), while *maddenii* and *crassum* are similar to each other and strong in growth, the latter more hardy; while both have proved splendid shrubs for hybridization. I made a few crosses with a shrub labelled R. "Virginale", with beautiful foliage, but found it

too tender even for a cold house. I have never been able to trace its parentage.

Prior to the war I had successfully obtained seeds from some crosses which would have been of interest—such as *taggianum* with *crassum*, *seinghkuense*, *megacalyx*, *edgeworthii*, and a few others, but when I was again in the army, and my place was requisitioned, proper attention to these seedlings became impossible. It matters little, except that I am able to record this effort as well as some failures. I tried a dozen times to cross *taggianum* with 'Perseverance', both ways, and others of the Cinnabarinum Series, and though at times seeds were obtained, they proved useless. I am inclined to believe that a plausible explanation is that members of the tender species will only cross with those with flowers of tubular formation.

It will be obvious that these notes have been written at random, as they may be of some use to others about to start on this highly involved and at times most disconcerting occupation; though I fear at the present time work such as I have indicated on the Maddenii series will not be possible except to the few who possess plenty of space indoors. Space, time and proper personal attention has always presented a problem—and, even so, if a collector, however enthusiastic, can obtain a specimen of one of the larger shrubs it will not be more than about ten inches high, which means that increasing allocation of space will have to be provided for it annually—for ten years or more—before it flowers, and when it does there is no guarantee that it will reflect a good specimen of its class and kind—and, alas, glasshouses seem to be getting smaller.

MINERAL DEFICIENCIES IN RHODODENDRON

By HENRY TOD

(*Chemistry Department, The Edinburgh School of Agriculture*)

THIS note is by way of being an "interim report" and is submitted for publication as the results reported are of rather an unsuspected nature.

The present writer appealed in an earlier article[1] for leaf and soil samples from ailing rhododendrons, and this appeal was reprinted in the Society's Journal, from whence it reached some other gardening publications. The result has been a series of twenty-three sets of matching samples, the last five of which have been sent through the co-operation of Mrs. M. D. Bennett of Messrs. Geigy Ltd.

These samples showed all sorts of variations of chlorosis of the leaf, with some very startling colour schemes in yellows, oranges and reds, but perhaps the oddest feature was that most of the senders commented that they had acid soils, and that there was no question of lime being the cause of the trouble. In sixteen of these cases the soil pH showed this to be true, the pH values ranging from 3·6 to 6·2, while six of the others were near to, or just past, neutrality.

This, then, was the first major surprise, as it has usually been assumed that leaf chlorosis in rhododendron is caused by a high lime content of the soil. The second unexpected finding was the real cause of the trouble which, in nineteen of the twenty-three was either magnesium deficiency (8 cases), potassium deficiency (2 cases), or combined magnesium and potassium deficiencies (9 cases). The six cases with high soil pH values were also interesting, for these also showed low magnesium and/or potassium levels as well as manganese deficiency as shown by the two values quoted in the earlier paper. These are given in the table of results (Table I) as "I" and "II", *R. kyawi* and *R. nuttallii*.

The difficulties arising in this problem are well shown by the samples numbered Rh. 12. These were sent from a garden in Cornwall, and the specimens sent were (i) a leaf sample of 'Pink Pearl'

[1] Tod, H. (1959) *Rhododendron and Camellia Year Book*, p. 19.

TABLE I

Reference No.	*Species or hybrid*	*Soil pH*	*Mg* (*m.eq.* %)	*K*	*Mn* (*ppm.*)	*Leaf condition*	*Deficiency**		
Rh. 1	thomsonii	5·6	15·0	14·3	866	mottling, red, orange and yellow patches	Mg		
2	fortunei § ×	4·9	19·2	6·7	153	chlorosis, very yellow		K	
3	ferrugineum § ×	6·5	4·2	14·3	n.e.	chlorosis	Mg		
4	ponticum ×	5·6	14·2	11·3	855	chlorosis, very yellow	Mg	K	
7	ponticum ×	—	15·8	15·9	254	chlorosis	Mg	K	
8	ponticum ×	5·5	11·7	20·5	428	very strong mottle	Mg		
9	ponticum ×	7·0	9·2	23·6	179	mottling and patches	Mg		
10A	ponticum ×	4·5	13·4	10·8	804	leaves pale green, brown interveinal mottle necrotic patches	Mg	K	
10B	ponticum ×	4·1	17·5	17·9	1240	leaves pale green, orange, yellow, brown i.v. mottle and necrotic patches	Mg		
10C	ponticum ×	3·6	12·5	11·3	455	leaves pale green, brown and yellow mottle, necrotic patches	Mg	K	
12	ponticum ×	5·1	12·5	4·6	187	leaves bright yellow, only faint green near veins	Mg	K	
26	ponticum ×	5·8	13·2	8·2	107	chlorosis	Mg	K	Mn
27	ponticum ×	5·3	9·9	9·2	212	chlorosis with necrosis	Mg	K	
28	ponticum ×	5·8	11·5	1·5	69	chlorosis, leaves very yellow, a few pale green	Mg	K	Mn
29	arboreum × maximum	7·7	12·4	26·9	9	severe interveinal chlorosis, margins yellow	Mg		Mn
30	irroratum § ×	7·3	9·9	26·1	233	severe interveinal chlorosis	Mg		
31	thomsonii	6·2	12·4	16·1	155	severe "tip burn" (necrosis)	Mg		
32A	campylocarpum × griffithianum	4·1	14·2	20·7	645	interveinal chlorosis, spotting and patching, orange to yellow with mid-line necrosis	Mg		
32C	griffithianum × fortunei	4·5	17·5	12·1	399	as last, but more extensive on leaf, marked necrosis	Mg	K	
34A	irroratum § ×	5·9	18·3	5·6	354	severe interveinal chlorosis		K	
34B	fortunei § ×	5·7	17·5	7·2	489	severe interveinal chlorosis with necrosis	Mg	K	
35	catawbiense ×	6·9	15·8	3·6	54	chlorosis	Mg	K	Mn
36	catawbiense ×	7·2	15·8	5·9	162	chlorosis, orange colours, a little necrosis	Mg	K	
I	kyawi	alk.	53·4	53·4	12	severe interveinal chlorosis			Mn
II	nuttallii	alk.	41·8	15·3	23	severe interveinal chlorosis, slight tip necrosis			Mn

* The threshold values are given in Tod, 1959, for Mg, K and Mn

with matching soil, (ii) a magnolia leaf showing severe chlorosis, from the same part of the garden as (i), and (iii) a number of leaves of a variety of fruit trees and bushes in the kitchen garden, together with a matching soil sample. All of these showed much the same picture, very severe chlorosis, the leaves being almost completely yellow with only slight tinges of green close to the veins. The soils, however, showed pH values of 5·1 for (i) and 7·6 for (iii), in other words the picture in the first and second cases was due to a very severe magnesium and potassium deficiency as shown by the leaf analysis and in the third was a lime-induced deficiency of, most probably, manganese. (There was not enough leaf-material for analysis in (iii.) If, now, matching soil samples had not been sent, and the garden soil had been assumed to be uniform throughout, one or other treatment would have most probably been quite wrong, according to where the soil sample had been taken.

Figs. 16 and 17 show that it is difficult to separate the leaf pictures arising on acid soils due to magnesium and/or potassium deficiency (Rh. 32C, 34A and B) and those shown in neutral or alkaline soils (I and II, 29, 30), but severe magnesium or potassium plus manganese deficiencies tend to show more irregular and highly coloured patterns (Fig. 18, Rh. 8. 12, 32A). It is unfortunate that the black-and-white reproductions of the colour transparencies lose so much of these very striking leaf-colour changes. For this reason a separate column has been inserted in Table I listing the leaf condition verbally.

It is, perhaps, odd that more attention has not been given before this to the importance of magnesium in rhododendron, for the present writer quoted a number of relevant papers, and numerous other writers have similarly mentioned rather casually that magnesium "was of importance"—and left it at that.

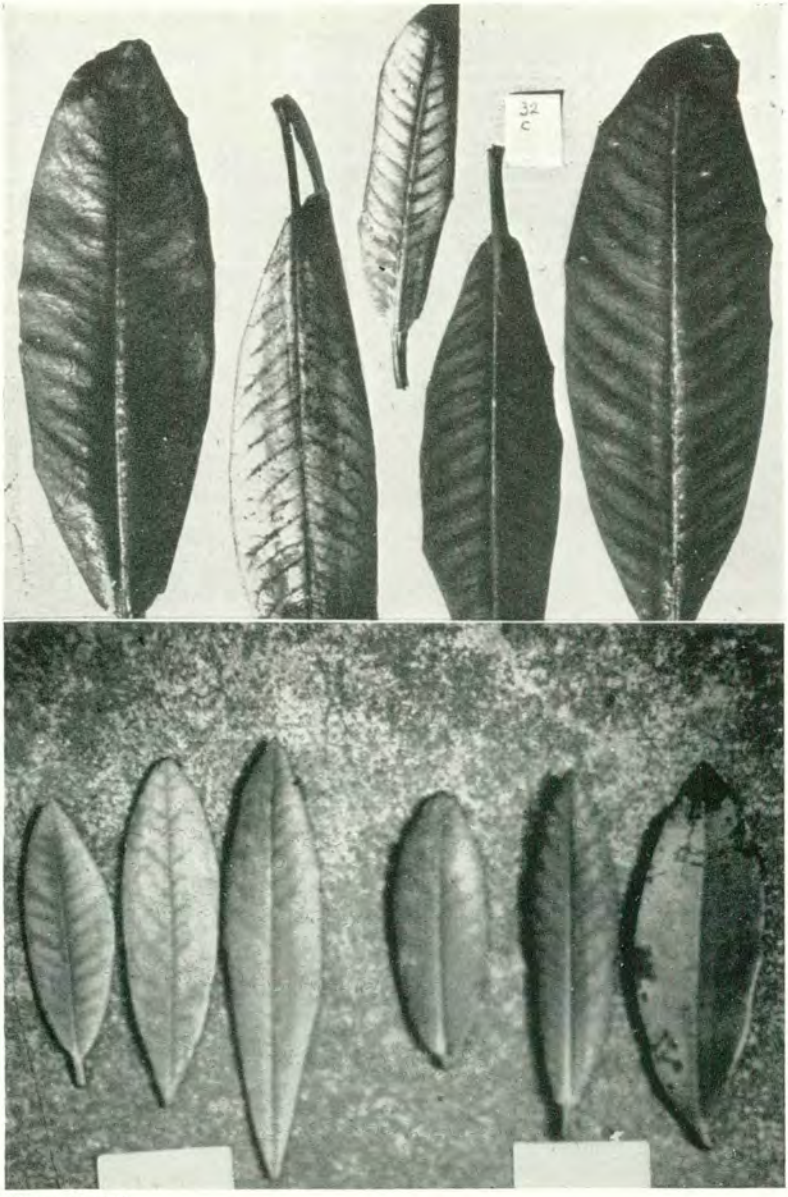
Of the seven cases investigated where the soil pH was 6·9 or higher, *five* showed magnesium deficiency, and of these two showed

TABLE II

Ref. No.	*Soil pH*	*Deficiency*
9	7·0	Mg
29	7·7	Mg Mn
30	7·3	Mg
35	6·9	Mg K Mn
36	7·2	Mg K
I	alk.	Mn
II	alk.	Mn

Photo: Ken Brunton Lander

FIG. 15.—The Hon. Lady Bowes Lyon with Mr. Francis Hanger, V.M.H., at the British Exhibit at the Ghent Floralies, 1960, looking at *Rhododendron* 'Lady Bowes Lyon' which won a First Prize as the best new plant in the Show, having been raised by Mr. Hanger at the R.H.S. Gardens, Wisley



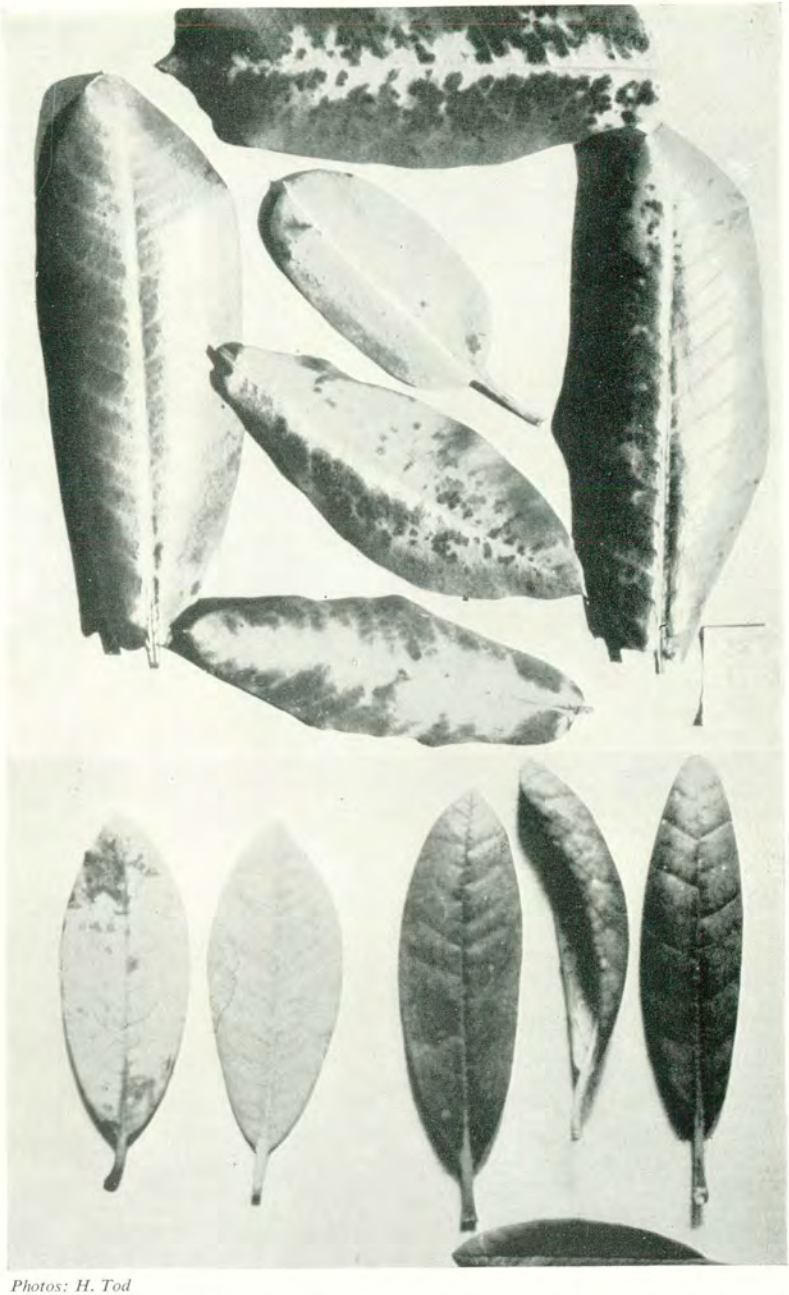
Photos: H. Tod

MINERAL DEFICIENCIES IN RHODODENDRONS

FIG. 16 (*above*).—*Rhododendron* Loderi showing extensive interveinal chlorosis, spotting and patching, orange to yellow, with marked dead patches and suffering from a deficiency of magnesium and potassium (see p. 40)

(*below right*) *Rhododendron* Fortunei Series showing severe interveinal chlorosis and dead patches from a deficiency of magnesium and potassium. (see p. 40)

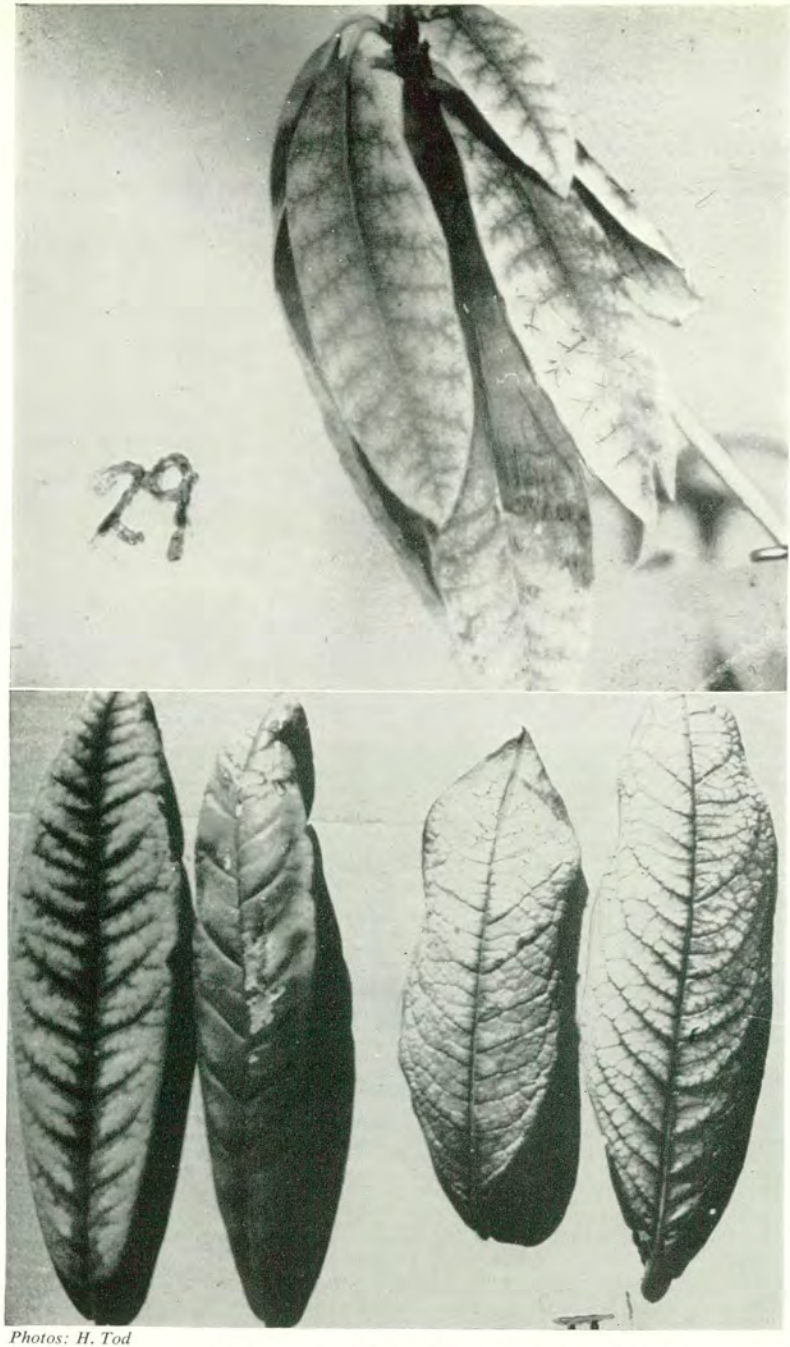
(*left*) *Rhododendron* Irroratum Series showing severe interveinal chlorosis from a deficiency of potassium (see p. 40)



Photos: H. Tod

FIG. 17 (*above*).—*Rhododendron* 'Penjerrick' showing interveinal chlorosis spotting and patching, orange to yellow, with mid-line dead patches, due to a deficiency of magnesium

(*below*) *Rhododendron ponticum* hybrids showing, *left*, very strong mottled effect on the leaves from a deficiency of magnesium and *right*, leaves bright yellow, only faintly green near the veins, from a deficiency of magnesium and a severe deficiency of potassium (see p. 40)



Photos: H. Tod

FIG. 18 (*above*).—*Rhododendron* 'Lady Eleanor Cathcart' showing severe interveinal chlorosis and yellow margins due to a deficiency of magnesium and manganese

(*below, left*) *Rhododendron kyawi* showing severe interveinal chlorosis due to a deficiency of manganese

(*right*) *Rhododendron nuttallii* showing severe interveinal chlorosis with a slight dead patch on the tip of the leaves, due to a deficiency of manganese

(see p. 40)

added manganese deficiency, but only *two* showed manganese deficiency alone.

These results would seem to indicate that at neutral to alkaline soil reactions, magnesium is as important as manganese, and perhaps more so, and that "lime-induced chlorosis" may, in rhododendron, be more a manifestation of magnesium deficiency induced by the excess of calcium than a deficiency of other elements such as manganese or iron.

The question of iron levels in the plant is one fraught with very considerable difficulty from an analytical point of view. The problem is not really that of the *total* iron in the plant, for on soils of high pH this seems usually to be within normal limits, or even high. The real question is the proportion of the total iron which is in such a form *in the plant tissues* that it can be utilized by the plant. The discrimination between these two forms of iron depends purely on analytical techniques, and the final results depend on the method used. A consensus of the literature seems to indicate that the chlorotic leaf has a lower available iron content than the healthy; other equally reputable workers, however, using different techniques have obtained results which do not support this idea.

It would seem that these findings on magnesium deficiency, if they are really substantially supported by the results from further specimens now in hand, may offer a prospect of a relatively new line of attack on the problem of leaf-chlorosis in the genus *Rhododendron*.

The writer would like to express his thanks to Mr. Shearer McIntosh for the analyses of plant material, and to Mrs. M. D. Bennett of Messrs. Geigy Ltd., for her very helpful co-operation in obtaining samples of leaf and soil, and finally to Mr. H. H. Davidian, B.Sc., for checking the species or hybrid identifications.

NOTES ON SOME HYBRID RHODODENDRONS WHICH HAVE RECEIVED AWARDS AT THE RHODODENDRON TRIALS, WISLEY, DURING THE LAST TEN YEARS

By FREDERICK STREET

TO examine the result of the Trials of the Rhododendron Hybrids at Wisley during the last ten years in scientific detail would require a careful study of weather conditions, day-by-day records of the state of the flowers, when they opened and how long they lasted in good condition, together with measurements of growth, incidence of the lacewing fly and bud blast, and a number of other relevant observations.

This would be interesting and, no doubt, a number of facts would emerge from which some conclusions could be drawn; but, unfortunately, many of them would only be of small value to the future development of hybrid rhododendrons because so little is known of the parentage of the older varieties. Their aesthetic value is easy to see and describe. And it is desirable that this should be perpetuated and improved without losing the valuable inheritance of hardiness. But many hybridists hesitate to use the older varieties because their mixed ancestry makes breeding too much of a gamble.

Started at Exbury in 1930, when requests were made to a number of leading nursery gardeners to send in one plant of each of their hybrids raised since 1918, the trial was originally under the joint control of The Royal Horticultural Society and the Rhododendron Association. It was moved to Wisley in 1938 and planted on Battleston Hill. Conditions in both places are kind, if not indulgent, to hardy hybrid rhododendrons. They are thus seen at their best in size of leaf and general habit, but with some varieties the conditions can cause the flowers to be rank, both in size and colour; this would not be so in a more exposed position. A great advantage of the air drainage, which is the benefit from the high ground, is that there is less chance of early frost damage in years

with cold springs, enabling the committee to examine the plants more regularly than would otherwise be possible.

This was a difficulty at Exbury, when the trial was planted in a slight frost pocket; and in the first four years very few flowers opened in a condition suitable for judging. The first report, in the *Year Book* of the Rhododendron Association for 1934, warned readers that the first awards constituted a preliminary list which would be supplemented as the trial continued.

This has happened, but it is none the less interesting to note that the plants which received an Award of Merit, Rhododendrons 'Mrs. A. M. Williams', 'Blue Peter' and 'Mrs. Charles Pearson', in that first list of 15 varieties, were upgraded to a First Class Certificate in the period under review. (One other from that list, 'Mrs. Furnival' had also been given this higher honour a few years before.)

These do not indicate a consistent taste in rhododendrons during the last 30 years. The two higher awards to 'Blue Peter' and 'Mrs. Charles Pearson' are symptomatic of a newer appreciation of colour, for the flowers of both are in shades of mauve. And no less than nine varieties out of the 38 which received awards were either mauve or purple. This is a new trend, provided the taste of the members of the various sub-committees which judged the trial in the last 10 years may be taken to be representative.

Some rhododendron growers have been suffering from a slight inferiority complex for several years in the matter of mauves and purples. And it would be true to say that the general public have been even more affected. The remark—"Oh, no, I don't like that, it's too much like the 'common' rhododendron!," has often been levelled at such fine varieties as 'Fastuosum Flore Pleno', 'Countess of Athlone' and others. The result is that many delightful flowers have been neglected, largely through a surfeit of *Rhododendron ponticum*.

There is a slightly theatrical reason for this change in taste. With the greater number of yellow rhododendrons that have been grown, the popularity of the mauves has increased because they make excellent foils for the yellows—in exhibitions and flower shows. The only difficulty is that few of the two colours flower at the same time. They appear together at shows by means of forcing and retarding but they do not often do this in the garden. The alternative is to plant the mauves and purples with some of the old-fashioned creams and whites which have prominent yellow centres. In time, it will be possible to have later flowering yellow rhododendrons.

These are coming from the second and third generations of hybrids between some of the *R. dichroanthum* first crosses and the older hardy hybrids.

Three very old rhododendrons with mauve or purple flowers have received awards. R. 'Mrs. Davies Evans' (H.C., 1957, A.M., 1958, sent by Knap Hill Nursery) is one that thoroughly deserves the honour. The form of the flower is particularly attractive. The individual florets are frilled and held in a truss that is in nice proportion. It is also firm and stands up well to the weather. The centre of the flower is rather lighter than the outside, which also adds to the charm. *Rhododendron* 'Cetewayo' (raised by Knap Hill Nursery and sent by Messrs. W. C. Slocock, A.M., 1958) is dated by the name to somewhere around 1880. It is the darkest purple rhododendron of all—the colour is almost black. The third of these old-fashioned mauves and purples to receive an award, R. 'Madame A. Moser' (sent by the Knap Hill Nursery, A.M., 1954) is something of a mystery plant. In the first place, it is doubtful if anybody would be brave enough to be able to say whether they can distinguish between this variety and 'Madame Jules Porges'. They both have mauve buds and the flowers are mauve when they first open. They fade to a very delicate shade of lilac with a prominent yellow blotch. The plant in the trials goes under three different forms of the name—'Madame Albert Moser', 'Madame A. Moser' and 'Madame Moser'. This is further confused by a very old double red variety also known as 'Madame Moser'.

R. 'Purple Emperor' (sent by the Knap Hill Nursery, A.M. 1953) might also be of this same vintage. For it is one of those plants that were discovered in the Knap Hill Nursery when it was taken over and revived by the late Mr. Gomer Waterer who started the present company. The colour is a rich purple and it is rather stronger growing, making a better big plant than 'Purple Splendour'—a quality only visible in a trial. However, it lacks the frilled edge, and the dark blotch in the centre of the flower is less striking. This is one of the characteristics of 'A. Bedford' (introduced by the late L. de Rothschild, sent by Messrs. W. C. Slocock, F.C.C., 1958) in a flower that is almost blue. But for the nearest of all to blue, 'Susan' (raised by the late J. C. Williams, sent by Messrs. W. C. Slocock, of Woking—A.M., 1930, and F.C.C., 1954) is one of the best. It is a very lovely plant with an excellent habit and good foliage, attractive at all times of the year. It has been suggested that this is a form of *Rhododendron campanulatum* and it was once known as 'William's Campanulatum Hybrid'.

'Blue Peter' (raised and sent by Messrs. John Waterer, Sons and Crisp of Bagshot—F.C.C., 1958) is, possibly, not quite as true blue but the name is very suitable to the effect—the colour is light mauve, almost blue, and it has a white shading in the centre which surrounds a black spot. The petals are also frilled and the general impression of the flower is of the sea.

'Lavender Girl' (raised and sent by Messrs. W. C. Slocock of Woking, A.M., 1950) is of a light shade of lavender mauve and is one of the few hardy hybrids in the trial of which the breeding is known exactly. It is a cross between the very old rhododendron 'Lady Grey Egerton', a light mauve which looks so much better under the tent at Chelsea than it does outside, and *R. fortunei*. It is one of the many successful crosses with this species that have been raised by Messrs. Slocock. It is probable that their form is better than others for not all the plants that have *fortunei* as a parent have been as good. One other was Highly Commended in 1957, although there might be some possible doubt about the trueness of the *fortunei* blood from the records but not from the form of the flower. 'Admiral Piet Hein' is one of the rhododendrons raised by Messrs. C. B. Van Nes and sent to the trials when they first began. Its parentage is given as 'White Pearl' crossed with Sir Charles Butler'. This cross is particularly interesting for a number of reasons. There is no record of a rhododendron called 'Sir Charles Butler'. It is possible that this is a mistake for 'Mrs. Charles Butler' which was considered to be only a form of *Rhododendron fortunei* and one of the early introductions of Messrs. George Paul of Cheshunt.

'White Pearl' is, in fact, a form of 'Manglesii' and is synonymous with R. 'Gauntlettii'. Some authorities quote it as being synonymous with R. 'Halopeanum' although it is difficult to check the authority for this cross reference.

R. 'Manglesii' was raised by Messrs. James Veitch of Chelsea, Coombe Wood, etc., as the result of a cross between *R. griffithianum* and R. 'Album Elegans'. 'White Pearl', 'Princess Juliana', 'Gauntlettii' and 'Loder's White', are forms of this same cross. It was, in fact, a very important hybrid. It transmitted the size of flower and quality of *R. griffithianum* to many hardy hybrids.

There is also a connection here with another light mauve which received an Award of Merit in 1933 and a First Class Certificate in 1955, 'Mrs. Charles Pearson'. The flowers of this excellent hybrid are palest mauve when they first open, turning to pure white with brown spots in the centre of the petals. The flower has

the delicate air of a tender rhododendron but the constitution of the plant is tough. The reason for this is that it was raised by Messrs. M. Koster and Sons of Boskoop, Holland, for the American market, for growing on the cold East Coast. Mr. Peter Koster has told me that the parentage of this plant is 'George Hardy' × *R. catawbiense.*

Here is another link with R. 'Manglesii'. In an article in the *Gardeners' Chronicle*, Vol. 39, R. 'George Hardy' was described by "J. C." of Bagshot as being synonymous with R. 'Manglesii'. It is a little doubtful if this is quite true. For there is no resemblance between 'George Hardy' and the other hybrids of the 'Manglesii' group. But there is a very strong indication that it is the same plant as 'Alice Mangles' which was raised by Mr. H. J. Mangles and is a cross between *R. ponticum* and *R. griffithianum* and was exhibited in 1882. There is everything in the appearance of 'George Hardy' to suggest that these same two species were its parents.

The change in taste in favour of mauve may be surprising, but the revival of white rhododendrons is startling. Another Mangles hybrid is the most striking example—'Rose Newcome' (raised by the late H. J. Mangles, Esq., sent by Messrs. W. C. Slocock of Woking). It was marked "Y" (not up to present-day standards in the British Isles) in the *Year Book* of the Rhododendron Association in 1939 but in 1957 it was given an Award of Merit after trial. It has a large full truss of white flowers and the habit is wide-spreading.

Another nomenclatural puzzle is set with 'Dawn' (raised and sent by Messrs. John Waterer, Sons and Crisp of Bagshot, A.M., 1950). It flowers with pink buds and retains a flush of pink when they are fully open. It was one of the original plants sent to Exbury, when it was under the name of 'May Day'. However, when the register of names was started it was found that this name had already been taken for the well-known hybrid between *R. griersonianum* and *R. haematodes*, raised by the late Mr. A. M. Williams in 1932. Accordingly, the name of the variety in the trial was changed to 'Dawn'. Unfortunately, this is not the end of the story as a 'Dawn' was shown by Mr. H. J. Mangles before The Royal Horticultural Society on 17th May 1904, when it received a unanimous Award of Merit. It is just possible that this might be the same plant as 'Dawn's Delight', another Mangles Hybrid, but the colour description of 17th May 1904 does not seem to connect the two.

One of the most striking of all the Mangles hybrids is 'Beauty of Littleworth' (sent by Messrs. W. C. Slocock, of Woking, F.C.C.,

1953). The large flowers open with a touch of mauve and become pure white. They have a good texture and last well, and the foliage and habit of the plant are also attractive. Rather tall growing, it is, possibly, a little early flowering for some districts.

One of the very old hardy hybrids to receive an award after trial in the last ten years is 'Mrs. J. C. Williams' (raised by the late A. Waterer, and sent by Knap Hill Nursery, A.M., 1960) which has a dark spot in the centre of the flower. In the opinion of many, it is one of the best of its type. The habit is particularly good, lacking the rather ungainly growth of some of the others of this colouring.

In the more modern varieties, the influence of *R. fortunei* can again be seen. R. 'Mount Everest' (A.M., 1953, F.C.C., 1958), a pure white with a faint scent, also with a sharp red spot in the flower is one, and R. 'Queen Souriya' (A.M., 1957), a well-named plant with a dusky pink flower and dark-veined foliage, is another. (Both were raised and sent by Messrs. W. C. Slocock.)

R. decorum has seldom been used to improve the hardy hybrid. This is one of the parents of 'White Swan' (raised and sent by Messrs. John Waterer, Sons and Crisp of Bagshot—F.C.C., 1957), one of the finest whites to have been raised in recent years. But this was not the intention when the cross was made. The parentage of 'White Swan' is *R. decorum* × 'Pink Pearl', an attempt to produce a pink "decorum". Even though it failed in its original object, it has been a very successful rhododendron, and when shown in America it received the All American Award for the best Rhododendron Truss.

Among the lighter colours, there are fewer yellows than might be expected. The introduction of new blood can be seen in 'Moonshine Glow', raised at the R.H.S. Gardens at Wisley, which was Highly Commended in 1957. The parentage of this rhododendron, a good clear yellow, is R. 'Adriaan Koster' × *R. litiense*.

It is always a little puzzling that *R. discolor* should not have produced more really good hardy hybrids than it has. One of the few exceptions to this is R. 'James Burchett' (raised and sent by Messrs. W. C. Slocock, Woking, A.M., 1960), a very late flowering white of good texture, tall growing but without being leggy. The plant in the trials is particularly well shaped. It received an A.M. this year which is, incidentally, the bi-centenary of the Goldsworth "Old" Nursery, where it was raised. The plant commemorates the first foreman to work under the late Walter Charles Slocock who took over the nurseries in 1877.

A hybrid rhododendron which has been generally disappointing

as a parent, although it is one of the finest that can be grown, is 'Corona'. The habit is close and compact, the flower is bell-shaped and there is a nice contrast between the unopened buds with their deeper colour against the pale shade of the fully opened flower; the truss is conical and shapely. *R. thomsonii* with its brilliant scarlet flowers of shiny texture, has also produced few good hardy hybrids, and it is in the context of hardiness and general garden use that the trials should be reviewed. But these two are the parents of 'Sir John Ramsden' (raised and sent by Messrs. John Waterer, Sons and Crisp, A.M., 1948, F.C.C., 1955). The colour of the flower is straw yellow, suffused with pink and it has the shape of *R. thomsonii* rather more than that of R. 'Corona'. If it has a fault, it is that it does not flower well until it is a large plant, an inherited trait from *R. thomsonii*.

R. 'Marion' (sent by Messrs. J. Cheal and Sons, A.M., 1955), is another plant with a confused name. A description in words might make it sound as if it were similar in colouring to 'Sir John Ramsden', but this is not so. 'Marion' has a pink flower which has a yellow centre but with the marking clearly defined. Also it has the conventional shape, both of flower and truss, that is connected with the hardy hybrid type of rhododendron. The confusion in the name arises from the fact that there is an older hybrid, introduced by the Knap Hill Nursery, also in the trial but not yet well established enough to be judged. This is called 'Lord Fairhaven' and the colouring, shape of flower, habit of growth, leaf, etc., are exactly the same as those of 'Marion'. To make matters worse, there is also another plant which has been given the name 'Marion'—a 'Pink Pearl' type hybrid raised by Messrs. Felix and Dykhuis in Holland. This is not in the trial and is not yet widely grown in this country. The tangle of names of these plants will no doubt be straightened out in due course.

A slightly different problem arises with R. 'Azor', *discolor* × *griersonianum* (raised and sent by the late Mr. J. B. Stevenson of Tower Court, Ascot, F.C.C., 1960). This delightful hybrid which, in the example in the trials, is a late flowering pink with a suggestion of yellow or almost orange in the tone, is one that has caused some trouble in the past. The cross has been made by many different people—and all the plants have been called 'Azor'. Unfortunately, the results of the cross are far from consistent and the flowers can sometimes be a dull shade of mauve-pink. It is probably necessary that the particular plant that has now received an Award in the trials will need to have a clonal name.

Photo: J. E. Downward

FIG. 19.—*Rhododendron* 'Pink Glory' which won a First Prize in Class 14 of the Rhododendron Competition on April 5, 1960, when shown by Sir Giles Loder, Bt., Leonardslee, Horsham, Sussex (see p. 62)

Photo: J. E. Downward

FIG. 20.—*Rhododendron* 'Seta', F.C.C. March 8, 1960. Shown by the Lord Aberconway and the National Trust, Bodnant, Tal-y-Cafn, Denbighshire (see p. 127)

Yet another problem faces the committee with R. 'Furnivall's Daughter' (raised and sent by the Knap Hill Nursery H.C. 1957, A.M., 1958). This is a new hybrid which has a number of close relations and it is hard to distinguish which is best, year by year. The name is taken from the fact that it was raised from 'Mrs. Furnival' which has now received both an Award of Merit and a First Class Certificate after trial, and is undoubtedly one of the finest hardy hybrid rhododendrons introduced; the plant in the trial at Wisley is a magnificent specimen, even when it is not carrying its pink flowers strongly marked with a darker red blotch. R. 'Furnivall's Daughter' is similar in colouring but much larger in flower and with a rather more interesting leaf. The foliage is more deeply veined and the young growth has a slightly bronze colouring. To complicate matters, 'Chintz' is also in the trial, with a flower of similar colouring, but the habit of growth is a little ungainly and it now seems that it does not stand comparison with either 'Mrs. Furnival' or 'Furnivall's Daughter'.

The consideration of these plants raises an interesting point of policy. If it should prove that 'Furnivall's Daughter' is superior to, and in time will receive the same awards as 'Mrs. Furnival', how will it be possible for the merits of the two to be assessed by an enquiring beginner from the awards that the plants have received? Both will appear to be of equal value. It has been suggested by Captain Collingwood Ingram that a possible solution might be to review all awards every 25 years. There are, of course, many rhododendrons still being grown to-day which received First Class Certificates some fifty or sixty years ago but which are now poor plants in comparison with more modern introductions. This is by no means an easy problem to solve—as may be seen by the example of 'Rose Newcome'. A plant might be stripped of its honours in one year, and receive them back four or five years later.

Fashion plays a large part in the popularity of rhododendrons. Not only is it a matter of groups of colours, as we have seen by the mauves and the whites, but also in particular colour combinations. The dark eye has once more come into favour. It is very doubtful if 'Pauline', one of the old Lowinsky hybrids, would have received an Award of Merit between the wars. It is one of the original plants which came from Exbury and was, in fact, introduced by the late Mr. Lionel de Rothschild. The habit of growth is good and the colour is a rich crimson with a dark splash in the centre. In contrast, 'Thunderstorm' (raised and sent by Messrs. W. C. Slocock of Woking, A.M., 1955) is a glistening red with white anthers. This

gives it a light appearance which seems to increase the quality of the colour.

New species show their influence only occasionally. 'David', one of the finest reds to be raised in recent years, is a cross between 'Hugh Koster' and *R. neriiflorum* (raised and sent by Lord Swaythling in 1939; A.M., 1957, after having been given a F.C.C. at Westminster in 1939). This is another flower which has the shining texture, derived largely from *R. neriiflorum*, that helps red rhododendrons to display their colour and to withstand the heat of the sun and damage from heavy rain.

One of the hardiest of the reds, and a fairly recent introduction, is 'Scandinavia' (raised and sent by Messrs. M. Koster and Sons of Boskoop, A.M., 1950). It was developed for the countries from which the name is taken. Like 'David', it has something of 'Hugh Koster' in it. But it is a colour that could be described as distinct in hardy rhododendrons. It is a bronzy red, having something of the richness of 'Moser's Maroon', but without the purple shading. It received an A.M., in 1950.

Fortunately, however, 'Hugh Koster' has not transmitted its worst blemish, a tendency for the leaves to become badly spotted, to its many offspring. There are few hybrid rhododendrons raised from *R. griersonianum* which do not have something of the leggy habit which makes them undesirable for general planting. One of the exceptions to this rule is 'Vulcan' (raised and sent by Messrs. John Waterer, Sons and Crisp of Bagshot, A.M., 1957), a cross between *R. griersonianum* and 'Mars'. The colour is a balanced mixture between the two parents. It has all the richness of the deep red flowers of 'Mars' with something of the glowing scarlet of the best forms of *R. griersonianum*.

There are three main species which have had an equal influence in the raising of hardy hybrids which may be grown in any part of the British Isles—*R. catawbiense* has given hardiness, *R. arboreum* has given colour and *R. griffithianum* has given a quality of flower which has helped to bring the rhododendron up in popularity to become an evergreen rival to the rose. The influence of *R. griffithianum* is never more clearly shown than in the flowers of 'Mrs. A. M. Williams'. This plant, one of the originals sent to the trials at Exbury by Messrs. C. B. Van Nes of Boskoop, Holland, was one of those which received an A.M. when the plants were first judged in 1933. After a very difficult year, with heavy thunderstorms which would normally have been enough to knock the colour out of many reds, 'Mrs. A. M. Williams' was given a

F.C.C. at the trials in 1953. This is a most interesting rhododendron because it is a first cross with *R. griffithianum*. It is one of the batch of hybrids that were raised in the greenhouses attached to the Royal Porcelain factory in Berlin and were purchased by Messrs. C. B. Van Nes in 1898. Unfortunately, the other parent is not recorded. It might be any one of the following—'Koh-i-noor', 'Dr. Mill', 'Stattsrath von Massenbach', 'Prince Camille de Rohan', 'Wilhelma', 'Ludwig Leopold Liebig', 'Carl Laeckner', and 'Gabriel Liebig'. The only one of these which is not the other parent, that I can say for certain, is 'Prince Camille de Rohan'. In fact, the only other plant from that list which I know is 'Ludwig Leopold Liebig', and that is certainly a possibility. It has the bright colour, though with rather a small flower, which would be influenced for the better by *R. griffithianum*; but the only difficulty is that the foliage is rather light in colour whereas that of 'Mrs. A. M. Williams' is a rich dark green.

It is sad that this plant has almost died out of cultivation, apart from a few odd plants and the specimen in the trials. Messrs. C. B. Van Nes, the firm which gave us so many fine rhododendrons and azaleas, is also regrettably no longer in existence. It was taken over by the propagator, Mr. J. Blaauw, and subsequently by Mr. J. Dekens, who was the traveller for the firm. Sad to say it is now closed down and Mr. Dekens has started his own nursery in the United States.

But there is no doubt that this plant is one of the sights of the Wisley Gardens. When it is in full flower, it can compete in brilliance with the finest display of azaleas on the top of the hill.

To-day, a red rhododendron has to be really outstanding if it is to command attention. Only seven reds out of thirty-eight received awards at the trials in the last ten years. *R. griersonianum* has not yet created the influence that it was once thought that it might. Perhaps 'Vulcan' may be a good parent for future breeding.

Softer colours are more in favour, largely through using *R. fortunei* and *R. campylocarpum* with the older hardy hybrids, and the advent of *R. dichroanthum* may accelerate this trend.

R. YAKUSIMANUM AND ITS HOME, YAKU SHIMA[1]

By A. F. SERBIN, M.D.

THE great Japanese botanist T. Nakai first described *R. yakusimanum* (or more properly, 'Yakushimanum') in 1920. Very little is found in the world's literature regarding *R. yakusimanum* except in the Japanese writings describing the flora of Japan. The Japanese list two rhododendrons under the title of *R. yakusimanum*. The first *R. yakusimanum insulare* is an azalea and is found widespread throughout the island of Yaku Shima and closely resembles the species of *R. indicum*. The other variety and the one to which this paper is devoted, is *R. yakusimanum montanum*. This rare and highly prized rhododendron species is found only at the summits of Mt. Kuju, Mt. Yaedake and Mt. Hanano-Ego on Yaku Shima.

The first plant reaching the western world was received by Lionel de Rothschild of Exbury, England, some 35 years ago when it was sent to him by K. Wada of Numazushi, Japan. This plant was a specimen of particular excellence in that it was a perfectly formed hemisphere, densely compact with dark green foliage. Its leaves were about 3 inches long and rolled in an extremely convex manner completely obscuring the tomentous undersurface. Its flowers maintain a perfectly erect truss of pale pure pink. This aristocrat is an ideal dwarf and had attained a height of 2–3 feet and a breadth of some 4 feet at maturity.

It is little wonder that M. H. Sumner entitled his paper in the October issue of 1958 American Rhododendron Society Bulletin "An Outstanding Rhododendron". He considered this the most outstanding rhododendron of any he had ever seen, which is in complete agreement with the author. Mr. Francis Hanger, curator, Wisley Gardens has compared the plant at the test gardens of the Royal Horticultural Society as a much larger and perhaps better specimen than that of the original plant from which it was derived in Exbury. Comparing the plant at Exbury which I saw some seven years ago with those occurring in the wild at the summit of Mt.

[1] Reproduced in part from the Bulletin of the American Rhododendron Society by kind permission of the Editor and Dr. Serbin.

Hanano-Ego, it is my impression that cultivation under ideal conditions in the western hemisphere produced a better plant than is seen in its native habitat.

A few years later at the Great Park in Windsor, I was afforded the privilege of seeing with Sir Eric Savill, Deputy Ranger at that time, the new *R. yakusimanum* hybrids which had flowered for the first time. I was sadly disappointed in the offspring, perhaps because I had expected too much of its wonderful parent. To begin with, the unique form of *R. yakusimanum*, almost semi-globular, was lacking. Indeed, some of the hybrids were quite leggy. The exquisitely convex, small leaves and extremely dense pattern had been lost. The greatest blow of all was the disappearance of the woolly, velvet-like indumentum which is so much a character of the species. Largely due to the choice of the other parent, almost no dwarfs resembling *R. yakusimanum* were observed. Lastly from the viewpoint of the New Englander and his harsh climate, none of the crosses included bone-hardy second parents. Until recently the hybrid flowers left much to be desired. In short, the species to date by far excels in beauty any of its hybrid offspring.

The rarity of the *R. yakusimanum* has made it a collector's item. It is easy to root from cuttings but is a slow grower. In 1952 a nurseryman in England asked £5 ($14.00) for a tiny rooted cutting. In more recent years a few plants have found their way to fanciers both in the north-west U.S. and a scattered few on the eastern seaboard. My single plant rooted from a cutting given to me by Donald Waterer at Knap Hill was a tiny showpiece in two years. Despite some 400 species of rhododendrons under cultivation, it became my pet and was given the most select spot in the pit-house for continued growth.

One thing is quite certain. The plant is not to be found in any other part of the earth except on Yaku Shima and the chief forester of this island claims that the plant is not available anywhere on the island except at the very peaks of the mountains. *R. yakusimanum* resembles *R. degronianum* and perhaps to a lesser degree *R. makinoi*, a native of mid and northern Japan. *R. makinoi* does not grow on Yaku Shima.

Yaku Shima is an almost perfectly circular mountainous island lying in the sub-tropical China sea 150 kilometres south of the Kyushu mainland. It is in the typhoon highway and during August and September averages between 20 and 25 typhoons. The approach to the island is only by a tiny tramp steamer which plies between it and Kagoshima whenever weather permits. The trip to

the island was tremendously aided by the Japanese Government, Department of Agriculture, I had written several months in advance for permission to explore the plants of the island and to bring back seeds and cuttings of *R. yakusimanum*. In Kagoshima, the chief forester greeted me at the ship and sent a government employee along with me on the overnight ride. On Yaku itself, the local superintendent of forests was prepared for my arrival. I was lodged in a tiny Japanese inn operated by the department of forestry. Then came the exciting ascent of Mt. Hanano-Ego.

The island is a rain forest of some note. Japanese say that it rains for 35 days every month at Yaku! The forestry department reports an average of 10,000 mm. of rain per year (about 370 inches). Its shrubbery and tree population is jungle-dense on all parts of the island but especially so on the mountain slopes. The mountains rise sharply and are creased by deep ravines through which cold mountain streams race down to the sea. The pride and joy of the island is the giant Yaku cedar (*Cryptomeria japonica*) which easily rivals our own great California cedars. These are logged on the mountain-sides by government foresters under the most perilous surroundings. The huge sectioned logs are hoisted on tiny platform cars and rolled down the mountain side on the most perfectly graded railroad system. The narrow guage tracks run from the port of Anbo some 27 kilometres winding along the narrow paths of the steep slopes to a level of 1,200 metres above sea-level. Passage for me and the two guides provided by the Japanese government was provided in the form of a tiny gas-engined car half the size of a jeep. It chugged its way, curving and climbing the slopes at about 10 miles per hour. We crossed hundreds of trestles supported by mammoth cedar beams without railings. We crossed ravines 500 feet deep which tightened my clutch on the seat.

At the rail's end a huge number of tremendous cedar logs were being stacked by the loggers. All greeted us with friendly bowing and smiles. I have never met more friendly or gentle people.

We started our hike up the mountain with no let up in the torrential downpour. The climb to Mt. Hanano-Ego (1,800 metres) did not require ice axe or rope but it did necessitate climbing on all fours some of the way. We crossed deep ravines walking on single cedar logs over gushing mountain streams below. The walking surface of the log had been roughened long ago by axe for better footing. I was amazed that my rubber shoes did not slip on even moss-covered logs. Although we had a hundred or more such crossings, I did not meet with a single mishap. Thigh and leg

cramps were mild experiences which disappeared in a short while.

The heavy rains changed to mist which is almost always present on the slopes. Fresh cold mountain water collected in my waterproof cap provided refreshment both stimulating and thirst-quenching. I was soaked through and through despite the foul weather gear so that I could not be sure how much was perspiration and how much was due to rain. Through all this the guides chatted away completely oblivious of my presence. All the way up the vegetation was dense. Numerous tiny flowering shrubs, *Pieris japonica*, camellia, roses, *R. keiskei* and lycopodium everywhere. A fern fancier would go out of his mind with the tremendous varieties available in the forest. Sphagnum 6 inches thick lay on water-soaked boulders like a soft carpet. Giant cedars, hemlock, red pine, cypress, spruce and magnolia trees dotted the steep hillside. No signs of *R. yakusimanum* as yet despite the fact that we had reached the level of 1,400 metres. At our next stop for a breather, I again questioned the guides—"no *yakusimanum*"? They pointed to the summit with a laugh. When we reached 1,550 metres, the first appearance of *R. yakusimanum* as an occasional shrublet in beds of *Pieris japonica* and moss was noted. These were scrawny in the dense shade of the slope. On a sheltered plateau we came to a camping ground with a tiny stone hut built for those stranded during storms. We stopped here and built a fire, broiling fish and eating our cold steamed rice carefully packed for us at the inn. Another gulp of delicious cold stream water and we headed for the top. Some 30 or 40 metres higher I noted that most of the trees had been left behind and only low-growing cedar brush and occasional pieris covered the mossy ground. The wind now began to whine. The shrubs of *R. yakusimanum* were now becoming more plentiful. I couldn't resist stroking the thick glossy leaves. None were as compact as those I had seen under cultivation. Seed-pods were found only on those plants in the open. Although only one variety of *R. yakusimanum montanum* is listed by Japanese botanists, I believe there are actually three varieties and perhaps even more (Fig. 21). As we approached the summit, the plants became more numerous growing in clumps (Fig. 22). At the peak I observed a strange mixture of the elements. Despite the bright sunshine a constant fine rain kept falling and the wind whipped our skin mercilessly. We hastily gathered our cuttings and seeds and packed them into plastic bags. Snapping photographs of the surrounding terrain was difficult because of the strong winds

whipping rain into the lens of the camera. With arms loaded I reluctantly left this wondrous garden and started our descent. It had taken us 6 hours to make the ride and climb.

The long ride down the mountain was a new experience. Our motor-car was no longer there. Instead we used a small platform, motorless truck (no railings on the sides). Words are so inept at describing this hair raising ride down the mountain.

A careful study of the cuttings which I have obtained from the top of Mt. Hanano-Ego indicates that there are at least three varieties of *R. yakusimanum*. One variety grows to a height of approximately 4–5 feet and is characterized by a loose habit in growth and leaves that average 3–4 inches in length. The leaves are moderately pointed but lack the convexity of the plant that we have been accustomed to see. I have no knowledge as to the flower of this variety. It resembles *R. degronianum* more than the next two varieties. I have taken the liberty of naming the three varieties largely in keeping with the characteristics of the leaf. The first variety which is the largest for the sake of convenience *R. yakusimanum planum* because of its flat leaf. It is found at the lowest portion of the summit and is the first variety that is encountered as one climbs the mountain (approximately 1,500 metres elevation). In its form and habit it is not a desirable plant.

The second variety is a true dwarf rarely attaining a height of more than 2½ feet in the wild. Invariably it is found on the exposed portions of the summit and is much more dense than the previous variety. The leaves are considerably smaller averaging 1½ to 2½ inches in length and have a tendency to rounded margins with slight convexity. Its indumentum is a darker beige than the previous variety. This form is conveniently called *R. yakusimanum parvum* because of its smaller stature and smaller leaf. From the gardener's point of view this is a much more desirable plant and since it grows in a rather cold spot which is exposed to full sun, it may prove sufficiently hardy for use in the northern United States.

The two varieties just described were found on the windless side of the mountain summit. In making our ascent to the mountain top we came to the windy side of the peak which was drenched with a filtered sunshine through a fog of mist with the wind bellowing at an estimated speed of 70 miles an hour. It was difficult to maintain a perfectly erect posture in this blow. However, on this wind-swept side the finest of the three varieties was found. This is a plant which reaches a height of about 3 feet growing in a mass of cypress brush

Photos: A. F. Serbin

RHODODENDRON YAKUSIMANUM AND ITS HOME, YAKU SHIMA

FIG. 21.—*Rhododendron yakusimanum* showing three distinct types of foliage on the plants growing on the island of Yaku Shima (see p. 55)

FIG. 22.—*Rhododendron yakusimanum* growing on the exposed portion of the summit of Mt. Hanano-Ego (see p. 56)

Photo: J. E. Downward

FIG. 23.—Rhododendron 'Youthful Sin', A.M. May 23, 1960. Shown by Lord Aberconway and the National Trust, Bodnant, Tal-y-Cafn, Denbighshire (see p. 128)

Photo: J. E. Downward

FIG. 24.—*Rhododendron sinonuttallii.* First Prize in Class 21 at the Rhododendron Show
(see p. 68)

Photos: J. E. Downward

FIG. 25.—*Rhododendron rubiginosum* 'Wakehurst', A.M. May 3, 1960. Shown by Sir Henry Price, Bt., Wakehurst Place, Ardingly, Sussex (see pp. 68 and 126)

FIG. 26.—*Rhododendron trichostomum* var. *radinum*, A.M. May 23, 1960. Shown by the Crown Estate Commissioners, The Great Park, Windsor, Berks (see p. 127)

interspersed with *Pieris japonica*. A carpet of 5 inches of lettuce-green sphagnum covers the sandy loam which is interspersed with the rocky sub-soil. A test of the acidity of the soil medium proved it to be a pH of 6·2. The foliage of the last variety is extremely dense only where it is fully exposed to the wind and sun. The individual leaf 3½ inches long and narrow is curled almost into a complete circle protecting the delicate hairy stomas of the under leaf from the brutal sun and wind to which it is exposed throughout most of the year. These plants are under snow for about 5 months of each year. The coldest temperature recorded at the summit of the mountain has been 5° F. below zero by the forestry department of the island. Comparing this last variety with those that I had seen in England, it was my impression that it was from this choice group that the plant sent to Exbury was selected. It is therefore also the same plant as that at Wisley. However, a plant that I saw at Knap Hill Nursery in Bagshot probably was of the *parvum* variety with the small round slightly convex leaf but with the indumentum resembling that of the other two varieties. Without doubt the convex variety is the gardener's choice. This select group therefore should be titled *R. yakusimanum convexum*. I was able to collect seeds from all three varieties. These were more plentiful only in the completely exposed areas. The plant is very shy in flowering in the semi-shaded zones and of course, no flowering was observed in the wooded areas where little sunshine permeates the trees.

R. yakusimanum roots readily from cuttings in a period of 8–12 weeks. It has survived to perfection in a pit-house where the temperature has reached zero degrees and at the end of two years is a compact globe of foliage measuring 6 inches in height and 5 inches in diameter. It is slow in growth and each year's growth is characterized by a short stem which is gnarled and rarely exceeds three quarters of an inch in length. The seeds germinate quite easily in a matter of three weeks and at the end of one year the seedlings measure between 1 and 1¾ inches in height when grown on pure sphagnum.

The crosses made with *R. yakusimanum* as noted by Mr. Sumner and others have been disappointing. As far as I can determine, rhododendrons *discolor* and *decorum* are the hardiest parents that have been used to date in the crosses. Undoubtedly in the very near future crosses will be made with the much hardier species as well as hybrid varieties and perhaps we shall one day acquire a dwarf or semi-dwarf hybrid of *R. yakusimanum* whose

indumentum will be preserved and some of its fine qualities of foliage and form may be retained.

Aboard the steamer on my way back to the mainland I kept thinking of the wondrous selectivity of nature as the mountains of Yaku Shima faded in the distance. Was it not remarkable that *R. yakusimanum* could be found only on this island and nowhere else in the world, and at that, only on its highest mountain peaks. What is there about this island that boasts of a Yaku cedar, a Yaku rose and even a distinctive Yaku dog. And to think that I had never heard of Yaku Shima until introduced to a certain rhododendron bearing its name!

RHODODENDRON COMPETITION

April 5 and 6, 1960

By PATRICK M. SYNGE

THE early-flowering rhododendron competition was held slightly later than last year and attracted quite a large number of entries, filling several benches at one side of the hall. This year the predominant scarlet colour of the benches was not so marked and it seemed that there was more variety. The season was a favourable one and prior to the show there had been several weeks of mild weather, although with some big storms especially in the West.

For Class I trusses of four species were required and there were 7 entries, curiously the same number as last year. The first prize was awarded to Maj.-Gen. E. G. W. Harrison of Tremeer, St. Tudy, N. Cornwall, whose group included a splendid truss of a good deep yellow *macabeanum*, a fine *calophytum*, a *thomsonii* with rather larger bells than usually seen and with a good full truss of flowers. His fourth was the uncommon *ririei* with its rather peculiar deep lilac-mauve flowers, a colour which would stand out in the garden as well as on the show bench. The second prize went to Lord Aberconway and the National Trust for a good group from Bodnant which included a fine white *calophytum* with unusually long deep red pedicels, *macabeanum*, *pachytrichum* a rather deep coloured form and a good deep pink *arboreum*. Mr. E. de Rothschild of Exbury won third prize with a good truss of *calophytum*, rather looser and with flowers more bell-shaped than that in Gen. Harrison's group. He also showed *arboreum*, *barbatum* and *irroratum*.

Class 2 for a spray or branch of any one species attracted 9 entries and the first prize went to Lord Aberconway for a large spray of a lilac-pink *fargesii* whose flowers were heavily speckled on the inside. The second prize was awarded to Mr. de Rothschild for a rather tight truss of *fulvum*. The flowers were pale lilac-pink outside and almost white inside while the striking dark rusty-red indumentum on the under surface of the leaves was well shown. The Crown Estate Commissioners, Windsor Great Park, won

third place with a very free flowering *neriiflorum* of bright scarlet. Among other exhibits in this class the following were also noteworthy, a spray of the deep yellow *sulfureum* with rather small but intensely-coloured flowers from Sir Ralph Clarke of Borde Hill, another fine spray of *fulvum* from Mr. R. Strauss, a good deep pink *arboreum* from Lord Aberconway, a rather paler *fargesii* from Sir Henry Price and the rare *erubescens* with pale rosy-lilac flowers from Mrs. R. M. Stevenson.

Class 3 of one truss of one species was very popular and there were 14 entries, the majority of which were of a high standard. The first prize was given to Gen. Harrison for a very fine deep yellow *macabeanum*, probably from the same tree as his specimen in the winning group in Class I. Lord Aberconway showed his white *calophytum* for second place and also won third prize with a slightly paler *macabeanum* than that which won the first prize. Mr. R. Strauss showed a noteworthy specimen of *R. eclecteum* var. *brachyandrum* with pink flowers very heavily speckled.

In Class 4 for three varieties of *arboreum* there was only one entry and a first prize was awarded to Lord Aberconway for three pink forms of varying depth of colour ranging from one with an almost white throat and no speckling to a deeper pink form heavily speckled.

In Class 5 for one truss from the Arboreum Series Lord Aberconway won first and second prizes with his good pink *arboreum* and a pale lilac-pink *arboreum* var. *campbellii* respectively. This had an almost white throat and slight speckling. Gen. Harrison was awarded third prize for his *ririei*. This is another of the excellent rhododendrons named after missionaries in the interior of China, in this case a friend and helper of E. H. Wilson.

Class 6 called for one truss of any rhododendron of the Barbatum Series, and Mr. de Rothschild won first prize with a deep red, almost blood red, form of *barbatum* itself. Lord Aberconway was second with a slightly less deep coloured but very bright crimson form of the same species and Sir Henry Price third with a small truss of the pale lilac-pink *glischroides* distinguished for its unusually bristly red pedicels, calyx and leaf stalks. Also of interest in this class was a good deep pink *pachytrichum* from Lord Aberconway.

Class 7 required one truss of any member of the Fortunei Series, and the first two prizes were awarded for fine pale-pink and white forms of *calophytum* shown respectively by Sir Henry Price and Lord Aberconway. An unusually big truss of *fargesii* also won the third prize for Lord Aberconway.

In Class 8 for a truss from the Neriiflorum Series Sir Henry Price was again first with an unusually good form of *haematodes* with very deep blood-red waxy bells. Lord Aberconway was second with a rather small truss of *beanianum*, but it had unusually large bells for this species. The Crown Estate Commissioners were third with a good scarlet *neriiflorum*. Also of interest in this class was a beautiful pale cherry-pink truss of *aperantum* from Lord Aberconway. It is unfortunate that this species, apparently so widespread and free flowering in the wild, is usually so shy to flower in English Gardens.

The first three prizes in Class 9 for a truss of the Thomsonii Series all went to good forms of the type species shown by Lord Aberconway, Major A. E. Hardy and the Crown Estate Commissioners respectively. Also of interest in this class were specimens of two rhododendrons which are rarely seen, a pale lilac-pink truss of *selense* var. *pagophilum* sent by Sir Henry Price and in which the flowers were almost white inside and a pale form of *setiferum* with rather wide open flowers sent by Mrs. R. M. Stevenson.

Class 10 allowed any rhododendron from a number of series of the smaller lepidote group and attracted 19 entries, the largest number for any class in the competition. It was won by Gen. Harrison with a most unusual form of *racemosum* which had long racemes of deep magenta-pink flowers. It would undoubtedly be a much more conspicuous plant in the garden than the more common forms. Col. N. R. Colville of Penheale Manor, Launceston won the second prize with a very free flowering spray of a pale creamy-yellow *flavidum*, while Sir Ralph Clarke of Borde Hill was third with an attractive pale lilac *virgatum* in which the flowers were considerably larger than in any of the *racemosum*. It is unfortunate that this species is rather tender in some areas. I also noted in this class the fine F.C.C. form of *lutescens* from Miss Gosney of Kingswood and a very deep mauve *russatum* from Mrs. R. M. Stevenson.

Class 11 for any species of a series not mentioned previously was also popular and allowed for either a truss or spray. The Crown Estate Commissioners won the first prize with an unusually fine spray of *ciliatum* from Windsor. Mr. R. Strauss exhibited a good *fulvum* for second place and the third prize was won by Lord Aberconway with a pale lilac-pink form of *uvarifolium*. Mrs. R. M. Stevenson showed a pale pink *tsariense* with compact neat trusses. This is an uncommon species in gardens but is quite hardy.

HYBRIDS

This year there were seven classes for hybrids. Class 12 required a truss of four separate hybrids and the first prize went to Mr. E. de Rothschild who showed 'Avalanche', an unusually good truss of pale lilac-pink flowers, 'Robin Hood' (*calophytum* × *sutchuenense*) with flowers rather similar in colour, *macabeanum* × *calophytum*, a large truss with big white waxy bells with a prominent dark purple blotch. His fourth was 'Milky Way' which had pale creamy white bells. The second place was gained by Lord Aberconway and the National Trust who showed from Bodnant a wonderful specimen of the blood red 'Choremia', *calophytum* × *thomsonii*, a very fine large pink-flowered truss, heavily speckled inside and with a deep crimson blotch, *thomsonii* × *arboreum*, a deep blood red flower and 'Cornish Cross' × *arboreum* with deep cherry-pink flowers in a rather loose truss. The Crown Estate Commissioners won the third prize with *calophytum* × 'Gill's Triumph' and 'Fargcalo' (*fargesii* × *calophytum*), both pale lilac-pink, the deep blood red 'Avis' (Barclayi G.) × *meddianum* and 'Queen Wilhelmina', an old favourite which should be planted more widely than it is. In General Harrison's group the truss of the pale 'Cream Cracker' was very beautiful.

Class 13 required a spray or branch of any hybrid and such wide terms of reference attracted a good range of entries. Mr. E. de Rothschild won first prize with a very heavy branch of 'Avalanche', with an enormous truss for so early in the season. Sir Giles Loder was second with 'Pink Glory' (*loderi* × *irroratum*) the buds of which are pink and open to white flowers in a large compact truss (Fig. 19). For third place Lord Aberconway showed *calophytum* × *griffithianum*.

Class 14 for one truss of any hybrid attracted 13 entries and was won by Sir Giles Loder with a superb specimen of his 'Pink Glory', showing slightly more pink than the one in the previous class. The second prize was won by Lord Aberconway with 'Choremia' and the third by Major A. E. Hardy with 'Queen Wilhelmina'.

In Class 15 for one truss of a hybrid of the Arboreum or Fortunei Series Lord Aberconway won the first two prizes; the first with 'Cardinal', a deep crimson-red hybrid from *arboreum* × Barclayi, which received an F.C.C. in 1937. His second exhibit was the bright blue-mauve cross *ririei* × *niveum*, a most unusual colour. Sir Henry Price was third with 'Red Admiral' that very fine cross

raised at Caerhays Castle by the late Mr. J. C. Williams between *thomsonii* and *arboreum*, presumably a blood red one.

In Class 16 for a hybrid of the Barbatum or Thomsonii Series Lord Aberconway again won both first and second places, the first with the very brilliant but yet deep scarlet 'Matador', the second with the slightly lighter 'Mureun' (*barbatum* × 'F. C Puddle'). Sir Ralph Clarke was third with 'Shilsonii'. Also notable in this class was a hybrid of *chaetomallum* × 'Portia' with deep blood-red waxy bells in a rather open truss.

Class 17 called for any lepidote rhododendron hybrid of which neither parent came from the Arboreum, Barbatum, Fortunei or Thomsonii Series, and was won by Lord Aberconway with 'Red Wing', a magnificent deep red and very free growing plant raised from Barclayi and 'Shilsonii'. He was also second with 'May Morn', a pleasing hybrid with pale cherry-red flowers. Gen. Harrison was third with a white hybrid from *lacteum* × *sinogrande*, although unfortunately it did not show either the yellow colour of *lacteum* or the fine foliage of *sinogrande*.

In Class 18 for a spray of a lepidote hybrid 'Bodnant Yellow' won first prize for Lord Aberconway and was outstanding with its heavy waxy bells of pale apricot-yellow. The Crown Estate Commissioners were second with 'Chink', a pale creamy-yellow hybrid with small flowers derived from *keiskei* × *trichocladum*. Lord Aberconway also won third prize with the pale cream 'Valpinense' which also had prominent crimson bud scales.

Class 19 for a tender species or hybrid grown under glass as usual included some of the most beautiful and perfect flowers in the Show. The first prize went to Sir Henry Price for an unusually fine truss of *edgeworthii* with three large white flowers. The Crown Estate Commissioners were second with the rarely seen epiphytic *dendricola* with white flowers and a pale yellow blotch. This was first collected by Kingdon-Ward in North Eastern Burma. In some forms the corolla is tinged with pink on the outside. The same exhibitors won third prize with a good specimen of the double gardenia-like form of *johnstoneanum*. Also noteworthy were a deep yellow 'Chrysomanicum' (*chrysodoron* × *burmanicum*) from Lord Aberconway, the beautiful 'Harry Tagg' with large flowers slightly flushed pink on the outside, from the Crown Estate Commissioners and a pale blush-pink *carneum* from Lord Aberconway.

For Class 20 for a plant of any rhododendron in bloom there were surprisingly no entries.

RHODODENDRON SHOW

May 3 and 4, 1960

By JAMES PLATT

LIKE so many other flowering shrubs, after the hot summer of 1959, most rhododendrons were remarkably well budded and showed great promise for 1960. The Rhododendron Show, however, opened on a chilly day, reminiscent of autumn, on May 3, clearly showing the effects of recent frost. Not only was there heavy frost in some South Coast gardens such as Exbury, banning all entries, but on the same night and perhaps only 20 miles away, some inland gardens were hardly affected at all. The result was a show of 34 competitors and 711 entries, full of variety and colour, but somehow a little disappointing. It is worth recording, not only because of the variety and high quality of the entries, but also as an indication how local frost can be, that Lord Aberconway and the National Trust won 26 first prizes, 23 second prizes and 14 third prizes. There were also welcome entries from mild gardens in Cornwall, Northern Ireland and Scotland.

On entering the hall the eye was instantly held by the splendid colours of the six large nurserymen's exhibits. It was obvious that great trouble had been taken to protect a large number of well-budded plants. If there is any criticism to offer it is that there is a tendency to overcrowd an exhibit with too many varieties placed too close together, to the confusion of the would-be selector and purchaser.

The Knap Hill Nurseries were awarded a Gold Medal for an admirably spaced exhibit with a standard 'Cynthia' at either end and a substantial 'Mrs. Furnival' in the centre. These served as a background for lower plants of hybrids such as 'Idealist', 'Fastuosum Flore Pleno' and a white 'Lady Bessborough' as well as groups of Knap Hill azaleas in which yellow varieties ranging from 'Golden Oriole' to the very rich yellow and orange 'Cockatoo' were prominent. A great drift of the evergreen azalea 'Orange Beauty' made an island of the white yellow-blotched 'Albacore', another Knap Hill azalea. Messrs. W. C. Slocock Ltd., who were also awarded a Gold Medal, had a long exhibit against the wall

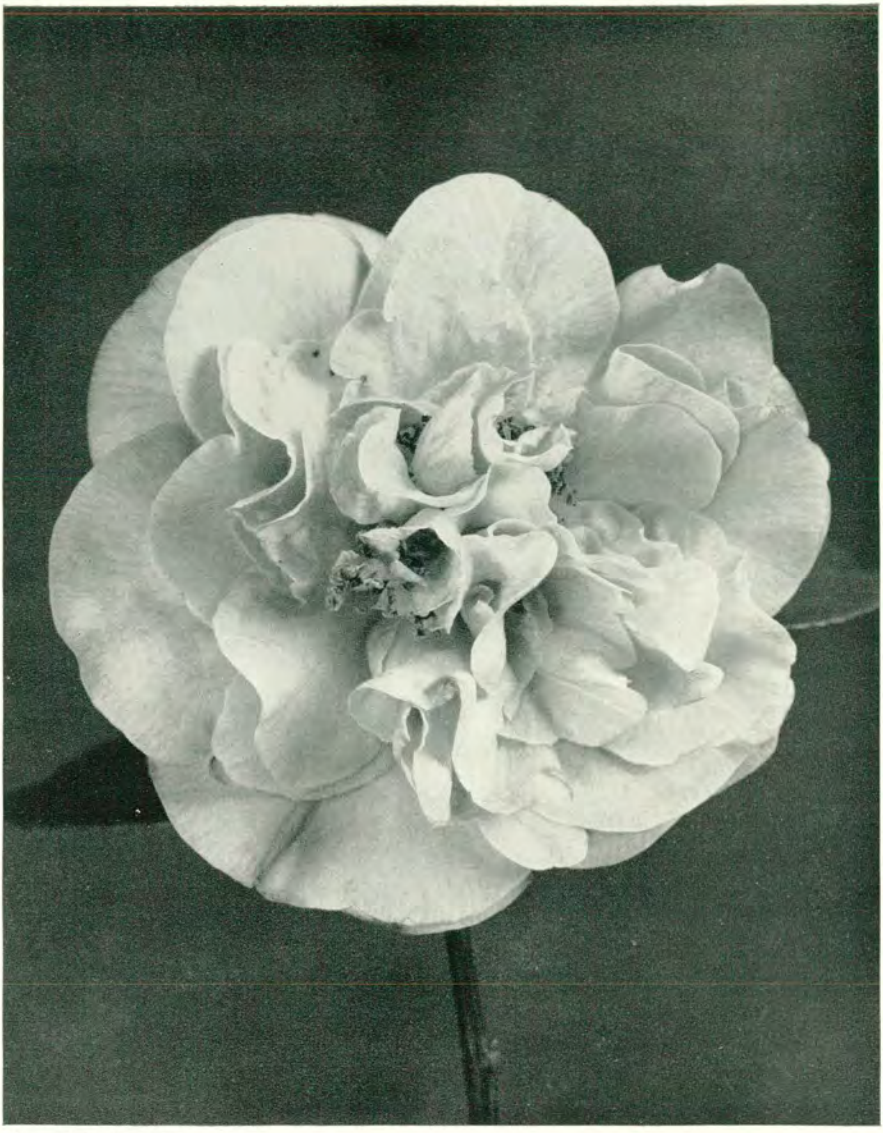


Photo: J. E. Downward

FIG. 27.—*Camellia japonica* 'Pink Champagne', A.M. April 5, 1960. An American variety exhibited by Her Majesty The Queen (see pp. 105 and 125)

Photo: J. E. Downward

FIG. 28.—*Camellia japonica* 'Tomorrow', A.M. April 5, 1960. An American variety exhibited by Her Majesty The Queen (see pp. 106 and 125)

under the clock. The plants in their exhibit were all beautifully bushy and well budded; furthermore the varieties were well staged in groups with here and there a standard. As a result old favourites such as 'Brittania', 'Lavender Girl', 'Lady Grey Egerton' and the richer mauve 'Mrs. Davies Evans' showed up well with the pink of 'Naomi', the almost identical pink of 'May Day' × 'Lady Bessborough' and the white 'Mount Everest'. As a contrast there was the soft ochre of Slocock's own hybrid 'China', a beautiful woodland variety, their unusual and well-named 'Tortoiseshell' and Bodnant's 'Elizabeth'. Reuthe's exhibit, parallel with and in front of Slocock's was a great contrast. At either corner was a standard *R. reticulatum* which, with the light through them, proved how attractive this species can be. A backbone of taller-growing hybrids suited to open woodland and with more open, looser growth, ran down the centre. These included a big plant of Reuthe's own 'Igtham Yellow', the soft carmine-pink 'Vanessa', 'Blitz' a good red, the rich pink 'Jock' and the cream 'Harvest Moon'. Dwarf hybrids such as 'Fittra', 'Pink Drift' and *hanceanum nanum* × *keiskei* formed a suitable edging. Of exceptional interest were a number of young seedling plants of *R. macabeanum* × *R. sinogrande* used as foliage plants.

Mr. F. Street's neighbouring and characteristic low exhibit formed yet another contrast. Here the plants of the exhibit were almost all of uniform height. This is of great advantage to a selector of the hardy varieties Mr. Street advocates so strongly, for the trusses are just below eye level and each individual flower can be seen. On this occasion Mr. Street showed amongst others a selection of the best pinks; these included 'Jan Dekens', 'Mevrouw P. A. Colijn', 'Mrs. C. B. Van Nes' and 'Marinus Koster'.

Messrs. Hillier and Son had a large exhibit with a profusion of varieties which well showed the great range of plants this firm grows. A large plant of the blood red 'David' struck a dominant note. As an exception to the general poor quality of Loderi's in the Show, their 'Loderi Helen' and 'Loderi Patience' were in excellent condition though the trusses were not as large as usual. Other good pinks were 'Pink Bride' 'Leonardslee Giles' and the Bodnant 'Anita' with attractive crimson-red buds. Two admirable soft yellows were 'Chaste' and 'Chaste' × *litiense*. One is tempted to ponder why it is almost only amongst rhododendrons and seldom in other genera that the gardener who shuns the hard, eye-catching yellows of so many flowers, finds the ideal, soft tones. The russet young growths and underleaves of *R. mallotum* were more lovely

than ever, so placed as to have a background of such a soft yellow.

Messrs. Waterer, Sons & Crisp had a handsome exhibit, full of good plants which demonstrated that the interest in hardy hybrids still continues but also that there is an increasing demand for such hybrids as may require more careful placing and shelter. They had a splendid plant of 'Dawn' which, although of Edwardian origin, still retains all its attraction. Their 'Earl of Athlone' showed that this is still one of the most brilliant red varieties. Amongst hybrids of softer colours their Gladys G. 'Rose', Lady Bessborough G. 'Roberte', 'Letty Edwards', 'Naomi' (a greeny-white clone) and Gladys G. 'Mary Swathling' were particularly attractive. Like other trade exhibitors they made good use of dwarf rhododendrons and azaleas.

In Class 1 for eight species Lord Aberconway and the National Trust were first with an attractively speckled *fictolacteum*, *argyrophyllum*, which can try one's patience before it reaches a flowering size, *vernicosum*, *fortunei*, *eximium*, *cinnamomeum*, and *rex* with its unusually long leaves, attractive because of the indumentum on the underleaf. The only other entrant was Sir Henry Price with an equally interesting selection composed of *delavayi*, *argyrophyllum*, *fictolacteum*, *thomsonii*, *habrotrichum*, *falconeri*, *orbiculare* and *campylocarpum*. Class 2 for three species included entries from some of the mild Scottish and Irish gardens. The Earl of Stair was first with *thomsonii*, *habrotrichum* and an attractive *maddenii* which was more open-flowered than usual. Lady Margaret Bury and the National Trust (Mount Stewart) were second with *hodgsonii*, *fictolacteum* and *bullatum*. W/Cmdr. T. L. Ingall from the West of Scotland was third with *fictolacteum*, *phaeochrysum* and *lacteum*, not the best yellow but still a welcome example of this temperamental species. Sir Edward Bolitho was first out of 15 entries in Class 4 for one species with *taggianum*, at the same time one of the most difficult and attractive of tender species. Lady Margaret Bury was second with a good yellow *macabeanum* and Lord Stair third with *maddenii*. In Class 5 for a spray or branch of a species with one or more trusses not exceeding 30 inches Lord Aberconway was first with a form of *schlippenbachii* so beautiful in colour and its perfect form, that the Countess of Rosse and the National Trust's fine *neriiflorum* (2nd) from Nymans and Sir Henry Price's *argyrophyllum* (3rd) were quite outshone. In Class 6 for *arboreum* or its sub-species, Lord Stair was first with a fine quality *arboreum*. Perhaps it is that Parma Violet is not a colour in vogue as a fine

niveum was unplaced. One usually associated the Barbatum Series with red but in Class 8 for that species the Crown Estate Commissioners were first with the pink *crinigerum*. Furthermore they were second with another pink, *habrotrichum*, and Lady Rosse was third with another *crinigerum*, altogether an attractive plant with its bullate leaves.

In Class 9 for a member of the Boothii Series Lord Aberconway was first with a rich yellow *megeratum*. The flowers were of good shape and stood out in a class of 9 entries including several *tephropeplum*. In Class 10 for a truss of the Campanulatum Series Messrs. Slocock were first with the less known and in this instance bright lilac *wallichii*. Mr. R. O. Hambro won a third prize with his *campanulatum* which was white flushed violet. Class 11 was for a rhododendron of the Cinnabarinum Series. There were only five entries but these were of a very high and provoking order. The Crown Estate Commissioners *concatenans* which took a first to Lord Aberconway's second for the same species seemed to have all the virtues but then so had Lord Aberconway's. The Crown Estate Commissioners were third with a *xanthocodon* which was almost equally attractive. Class 12 for the Falconeri Series brought one to the large tree-like species. Lord Stair was first with *falconeri* though the colour was poor. Class 13 for *fictolacteum* was won by W/Cmdr. T. L. Ingall with a truss of mauve-pink flowers which it was suggested was *R. rex*, all other entries being the more usual white of *fictolacteum*.

In Class 14 for any member of the Falconeri Series other than *falconeri* and *fictolacteum*, Lady Margaret Bury was first with a superb truss of *hodgsonii*. Class 15 brought one to *R. griffithianum*. There were only two entries and they showed the effects of adverse weather conditions. Class 16 was for any member of the Fortunei Series and Mr. Hambro was first with *calophytum*. Second prize went to Mr. E. H. M. Cox from the East of Scotland with a truss of *vernicosum* which was not only fresh and of good substance but the colour, a bright rose, was enhanced by the dark crimson stamens. In Class 18 for any rhododendron of the Grande Series, Mr. Hambro's *sino-grande* was easily first (admittedly the entries were few) with flowers of a good colour and handsome foliage.

Class 19 brought one to the Irroratum Series with neat foliage and small but perfectly formed flowers. The Crown Estate Commissioners' *aberconwayi* was first to Lord Aberconway's two entries, *aberconwayi* and *irroratum*, respectively second and third. Class 20, a great contrast, was for any member of the

Lacteum Series. W/Cmdr. Ingall was first with a good *lacteum* and it was a pleasure to see this difficult and elusive species. Both Sir Henry Price (2nd) and the Crown Estate Commissioners (3rd) showed the more amenable straw yellow *wightii*.

In Class 21 for any rhododendron of the Megacalyx Sub-series the Crown Estate Commissioners' *sino-nuttallii* was a magnificent first. The individual flowers were 4½ inches long and 5 inches across (Fig. 24). The Crown Estate Commissioners were again first in Class 22 for any rhododendron of the Maddenii Series other than the Megacalyx Sub-series with *polyandrum*, a species which should be tried more frequently in less warm gardens. There were ten entries in Class 24 for any member of the Neriiflorum Sub-series. Entries were good without being outstanding. Mrs. David was first with a nice *euchaites*. In Class 25 for *R. aperantum*, Lord Aberconway was first, though this species has never lived up to descriptions of it in the wild. W/Cmdr. Ingall was first in Class 27 for a member of the Taliense Series with a nice white *phaeochrysum*. Species in this series are slow to grow and flower but generally they are well worth waiting for, being neat in foliage and truss. Entries in the Thomsonii Series and its Sub-series were few and these species had obviously not appreciated the recent weather. In Class 34 for *schlippenbachii* Lord Aberconway's exceptional form was first contrasting with the only other entry, Lady Rosse's more apple-blossom-like form. For any deciduous rhododendron of the Azalea Series in Class 35 the Crown Estate Commissioners' *vaseyi* was first. This was of a lighter pink than Mrs. R. M. Stevenson's form which was second and of a very even colour. In Class 36 for three deciduous species of the Azalea Series Lord Aberconway was first with his *schlippenbachii*, a bright crimson-lake *albrechtii* and a light coloured *reticulatum*.

Entries for dwarf rhododendrons were meagre and it was only in Class 40 for the Glaucophyllum Series that there were as many as eight entries. Here Lord Aberconway was first with a delightful *charitopes*. Species of the Heliolepis Series in cultivation are generally considered pleasing early-flowering plants, welcome as such but without any great distinction. Such was not the case with Sir Henry Price's *rubiginosum* which won a first in Class 41 and was also given, when submitted to the Committee, an A.M. with the clone name 'Wakehurst' (Fig. 25). Whereas in the typical plant the growth is apt to be twiggy, here it was long and slender and the head of flowers were fuller and deeper, the colour being richer and nearer pink. It had all the appearance of being a distinguished

plant and was outstanding in a class of 11 admirable entries. Mr. E. H. M. Cox showed in Class 48 for any member of the Trichocladum Series, the interesting *R. cowanianum* which was named after Dr. J. M. Cowan and which gained a third prize. There were few large entries in any of the classes for the Triflorum Series and sub-series but amongst the slender number of entries, there were some interesting plants. The prizes in Class 49 for *R. augustinii* were interesting for the first went to the Crown Estate Commissioners with a light 'blue' form with a green eye, and as the prizes descended the scale, so the colour deepened. In Class 51 for any member of the Oreotrephes Sub-series the first prize went to Mrs. R. M. Stevenson's *oreotrephes* which was the colour of a cattleya orchid. The Crown Estate Commissioners were first in Class 52 for the Polylepis Sub-series with an almost ruby red *pseudoyanthinum.*

In Class 54 for the Yunnanense Sub-series Lord Aberconway gained a first with an attractive *yunnanense* and a third with the uncommon and pleasing *caeruleum album.* The Carolinianum Series is neither frequently grown nor well known, but in Class 55 for any species not included in the foregoing classes *R. minus* of that series deserved the first prize it gained for the Crown Estate Commissioners. It is absolutely hardy and with its old rose-pink flowers and neat small leaves might well take the place of *R. ferrugineum* where something taller and sturdier is required.

In Class 61 for eight hybrids Lord Aberconway won both a first and third prize. His Bodnant-raised 'Fair Maiden', 'Red Queen', 'Gretia' and his blue-tinged 'Coreta' were outstanding. General E. G. W. Harrison was second. His entries included a lovely lime-yellow 'Hawk'. There were 13 entries in Class 62 for three hybrids. The Crown Estate Commissioners were first with the aptly named 'Loderi Fairyland', a beautiful 'Gladys Rose' and with plum coloured stamens, and 'Grenadine'. Mrs. Stevenson was second with a well-shaped full truss of the waxy-red, wavy-edged 'David', 'Mariloo' of the colour of a very pale lemon drop and 'Loderi Patience'. The Misses Godman were third with 'Loderi King George', 'Cornish Cross' and 'China' all in admirably fresh condition. In Class 64 for three hybrids Lord Aberconway was both first and second. He had a particularly lovely apple-blossom pink 'Penjerrick, and 'Penjerrick × *houlstonii* with large frilly-edged white bells with a green flush.

Class 65 was for one hybrid and there were 25 entries. The Crown Estate Commissioners won the first prize with 'Hawk' ×

(*griffithianum* × *campylocarpum*), an attractive hybrid with cream petals, edged and flushed pale plum pink and with darker purple stamens. In Class 66 for six hybrids raised in the garden of the exhibitor Lord Aberconway was both first and second. His trusses included one of the bright scarlet, hose-in-hose 'Kenneth'. Sir Giles Loder was second. Amongst his trusses was 'Sunkist' which is the palest of pinks: and the pink-flushed *irroratum* × Loderi which has very nicely shaped flowers. In Class 67 for three hybrids raised in the exhibitor's garden Lord Aberconway was again first and second. His 'Peace' × 'Lady Chamberlain' has neat flowers of the unusual combination of yellow and cattleya purple.

Class 68 was for six hardy hybrids, classified as A or B for hardiness and went to Messrs. Slocock with 'R. A. Bedford', 'Corry Koster', 'Purple Splendour', 'David', 'Mrs. Davies Evans' and their yellow pink suffused 'Goldfort'. Mr. G. L. Pilkington was second with 'Chancellor', 'Boddaertianum', 'J. G. Millais', 'Schiller', 'David' and 'Unique'. The Misses Godman were third with 'C. B. van Nes', 'Unique', 'Susan', 'Mary Ashley', 'Mrs. G. W. Leak' and 'Goldsworth Crimson'. In Class 69 for any hybrid of the Arboreum Series Mr. Haworth-Booth was first with a good quality truss of 'Ivery's Scarlet'. Class 70 was for a truss of Loderi and disappointing. The trusses were smaller than usual and did not stand up well to picking. Brigadier Nicholson's 'Loderi King George' was first and an exception. There were 11 entries in Class 71 for any hybrid between *griffithianum* and any species other than *fortunei* or *campylocarpum*. General Harrison was first with a very beautiful pure, dead white which was *decorum* × *griffithianum*. Lord Aberconway was second with 'Cornish Cross' and third with *arboreum* × *griffithianum* which was of an exceptionally pure white. General Harrison was again first with 'Fusilier' × *griffithianum* in Class 72 which was for any hybrid between *griffithianum* and a hybrid. Lord Aberconway was second with 'Rose Perfection' × *griffithianum*. The Misses Godman were third with 'Sunkist'. In Class 73 for 'Penjerrick' or 'Mrs. Randall Davidson' Lord Stair was first with 'Penjerrick'. Class 74 was for any hybrid of the Campylocarpum or Souliei sub-series other than 'Penjerrick' or 'Mrs. Randall Davidson', and Mr. L. S. Fortescue was first with a 'Letty Edwards' which was in excellent condition. The Crown Estate Commissioners were second with ('Hawk' × *griffithianum*) × *campylocarpum* while Mr. Fortescue was third with 'Cremorne', both hybrids being rather similar in appearance. There were many other excellent entries such as 'Carita', 'Damaris',

'Buttercup', 'Gladys' and 'Idealist'. Lord Aberconway was first in Class 75 for any hybrid of the Neriiflorum Series with 'Phoebus' in which the flowers are of a very good shape, the truss flat and the colour a light red. Mrs. Stevenson was second and Mr. M. Cripps third both with 'David'. Class 76 was for any hybrid of *thomsonii*. Sir Henry Price was first with a fine truss of 'Aurora'. Mrs. E. M. David was second with 'Luscombei' and Lord Aberconway third with 'Hecla', one of Bodnant's celebrated "bloody" reds and interesting as its other parent is *griersonianum*. Another one, 'F. C. Puddle' × *hookeri* was first in Class 77 for any hybrid of the Thomsonii Sub-series other than *thomsonii*. Mrs. David was second with 'Dormouse' which made a great contrast.

Mr. Fortescue was first in Class 78 for any hybrid of *griersonianum* with a fine truss of 'Laura Aberconway', Lord Aberconway second with 'Gretia' and the Crown Estate Commissioners third with 'Grenadine'. There were 18 entries in this class which was predominantly red but one of them, 'Jock' (*williamsianum* × *griersonianum*) was a clear pink. There were only three entries in Class 79 for any azaleodendron. Messrs. Slocock were first with 'Dr. Masters' which is an attractive old rose-pink.

Lord Aberconway gained a first and a second in Class 80 for any hybrid in the Cinnabarinum Series, 'Conroy' was judged to be first, but the exquisite pale apricot of 'Bodnant Yellow' which was second, had great attraction. The Crown Estate Commissioners were third with 'Lady Chamberlain' × *xanthocodon*.

Class 81 was for any hybrid of which one of the parents was a species of the Maddenii or Edgeworthii Series, grown in the open or otherwise. Lord Aberconway was first with a most attractive pure white 'Tyermannii', green in the bud. Lord Stair was second with 'Princess Alice' and Lady Margaret Bury third with a very pink 'Countess of Haddington'. Perhaps the colour was more tense as a result of its being grown in the open. General Harrison's very blue hybrid 'Saint Tudy' was first in Class 82 for any hybrid between species of the Triflorum and Lapponicum Series. Equally blue was the Crown Estate Commissioners 'Electra' which was first in Class 83 for any hybrid between a species of the Triflorum Series, and a species of any Series including Triflorum. General Harrison was second with 'Alison Johnstone' which is one of the most beautiful of medium-sized hybrids. In Class 85 for any Lepidote hybrid of which one parent belongs to the Series Anthopogon, Cephalanthum, Campylogynum, Lepidotum or Saluenense, Lord Aberconway was first with 'Peace' × *campylogynum*

in which the latter's blood was easily discernible. Class 86 was for any hybrid between two species other than those provided for in the foregoing class. The Crown Estate Commissioners were first with the pleasant little pink 'Fittra'. They were again first in Class 87 for any hybrid between a species and a hybrid other than those provided for in foregoing classes, with *aberconwayi* × 'Peregrine'. The truss formed a good round head and there was a pleasing and unusual quality to rather wide open cup-shaped flowers on curving stems. This class also included such widely divergent and large-flowered hybrids as 'China' and 'Kewense'.

Entries in the remaining Classes contained much *fortunei* and *griffithianum* blood. The weather had not been kind to hybrids of such breeding and they were somewhat of a disappointment.

As a result of the summer of 1959 the evergreen azaleas in the Miscellaneous Section seemed to be all flower and no leaf. In Class 100 the Crown Estate Commissioners were first with 'Hi No Mayo' with Sir Giles Loder a close second with 'Hi No Degiri'. In Class 102 for three evergreen species or hybrids the order was reversed with Sir Giles first. His 'Orange Beauty' was particularly attractive.

A plant of note in this Section was the white, pink-tinged R. 'Dawn' which gained a first for Messrs. Waterer in Class 104 for any dwarf rhododendron suitable for the rock-garden. The Crown Estate Commissioners were first in Class 105 for any species or hybrid grown under glass with a very fine and beautiful yellow *sinonuttallii*.

Photo: Royal Botanic Garden, Edinburgh

PLATE 3.—Rhododendron 'William Wright Smith' F.C.C. 26 April 1960. A notable hybrid between *R. nuttallii* and *R. veitchianum* named after the late Regius Keeper of the Royal Botanic Garden and Professor of Botany at Edinburgh.

(See pp. 75 and 127).

SCOTTISH RHODODENDRON SHOW

By H. R. FLETCHER, D.Sc., F.R.S.E. V.M.H.

ON 26th and 27th April, 1960, the Scottish Rhododendron Show was held in the Freemason's Hall, 96 George Street, Edinburgh, for the first time under the auspices of the Royal Caledonian Horticultural Society. It can be said, without exaggeration, that the show was the most successful of its kind to have been held in Scotland; successful not from a financial standpoint but from the point of view of the quality and quantity of the exhibits.

As in former years—and the same state of affairs will hold for some considerable time to come—species very greatly outnumbered hybrids. In fact, the great fundamental difference between a Rhododendron Show in Scotland and one in London is that in Scotland comparatively few first class hybrids find a place on the show benches, whereas in London one is more and more impressed by the quality, and sometimes quantity, of the hybrids than by the species. Why so many hybrids have been so much neglected in Scotland I do not quite know. It may be significant, however, that by far the best collection of hybrids is grown on the Isle of Gigha by Lt.-Col. Sir James Horlick who, of course, gardened for many years in the South of England. It would almost appear that Scottish growers have been so much enraptured by the species as to have ignored the many splendid hybrids bred during the last 30–40 years. Possibly the influence of the Royal Botanic Garden, Edinburgh, with its strong bias towards species, has been too great.

Certainly, from an exhibit jointly staged by the Royal Botanic Garden, Edinburgh, and the Younger Botanic Garden, Benmore, the visitor to the show would have been justified in believing that the world of hybrid rhododendrons was an unknown one to these Gardens. In this exhibit over one hundred and twenty species were represented as follows:

adenophorum, albrechtii, alutaceum, amesiae, aperantum, arboreum red,* white and pink* forms, augustinii, balfourianum var. aganniphoides, bullatum,* callimorphum, calostrotum, campanulatum various forms, campylocarpum, campylogynum, canadense, carneum,* cephalanthum, charitopes, chryseum,

ciliatum, cinnabarinum various forms including var. purpurellum, cloiophorum, complexum, concinnum, coriaceum, crinigerum, cuneatum, dalhousiae,* dasycladum, davidsonianum, degronianum, detonsum, dryophyllum, edgarianum, edgeworthii, eudoxum, fictolacteum, fimbriatum, flavorufum, floccigerum, floribundum, formosum,* glaucophyllum, glaucophyllum var. tubiforme, glischrum var. adenosum, glomerulatum, grande, griersonianum,* griffithianum,* gymnocarpum, haemaleum, hemitrichotum, hippophaeoides, hodgsonii, impeditum, imperator, intricatum, irroratum, iteophyllum,* johnstoneanum,* linearifolium var. macrosepalum,* longistylum, lysolepis, macabeanum, megeratum, microleucum, mollicomum,* mollyanum 'Benmore', monosematum, morii, myiagrum, neriiflorum, nigro-punctatum, nuttallii,* oldhamii, orthocladum, pachytrichum, paludosum, parmulatum, parryae,* pemakoense, pendulum, phaedropum, pubescens, racemosum various forms, reticulatum, rex, roxieanum, rubiginosum various forms, russatum, saluenense, sanguineum, scintillans, searsiae, selense, serpyllifolium,* siderophyllum, sperabile, sperabile var. weihsiense, spiciferum, spilanthum, spilotum, stereophyllum, stictophyllum, suberosum,* tapetiforme, tephropeplum, thomsonii, traillianum, trichocladum, triflorum, triflorum var. mahogani, tsangpoense, veitchianum,* vernicosum, wallichii, weyrichii,* williamsianum, xanthocodon, xanthostephanum, yedoense,* yunnanense.

*Grown indoors

The only hybrids present, all grown indoors, were 'Roylmadd' (Magor) and 'Rose Mangles' (Mangles), 'Rapture' (a Bodnant hybrid), 'Harry Tagg' ('Albescens' × *ciliicalyx*), and 'Cream Trumpet' a clone of × Victorianum (*dalhousiae* × *nuttallii*).

In like manner, not a single hybrid was represented in the splendid collection of over forty vases which formed an exhibit from the National Trust of Scotland's garden at Brodick. Every single truss or spray of the following species testified to the excellent rhododendron growing conditions of this garden:

aberconwayi, arboreum (blood red form), arizelum, basilicum, bullatum, burmanicum, campanulatum, campylocarpum, cephalanthum, ciliatum, delavayi, euchaites, falconeri, fictolacteum, fimbriatum, glaucophyllum, glaucophyllum yellow form K.W. 21040,* hemidartum, johnstoneanum, macabeanum, magnificum, mollyanum, oreodoxa, praestans, racemosum, schlip-

penbachii, scintillans, scyphocalyx, sinogrande, sperabile, spiciferum, spinuliferum, stereophyllum, supranubium, sutchuenense, taggianum, telopeum, tephropeplum, thomsonii, trichocladum, triflorum, uvarifolium.

*This has since been described as *R. glaucophyllum* var. *luteiflorum* Davidian.

Both exhibits were given Gold Medals.

The dearth of hybrids was equally in evidence among the plants submitted to the Rhododendron and Camellia Committee under the Chairmanship of the Earl of Stair, K.T., D.S.O., V.M.H. There was an abundance of species: *R. baileyi* (exhibited by Messrs. A. C. and J. F. A. Gibson, Glenarn, Rhu, Dumbartonshire), *R. eudoxum* (exhibited by E. H. M. and P. A. Cox, Glendoick, Glencarse, Perthshire), *R. formosum* (exhibited by the Regius Keeper, Royal Botanic Garden, Edinburgh), *R. glaucophyllum* var. *luteiflorum* (K.W. 21040—exhibited by the National Trust of Scotland's garden at Brodick) all received the Award of Merit; *R. burmanicum* (from E. H. M. and P. A. Cox), a form of *R. degronianum* (exhibited by Mrs. K. L. Kenneth, Tigh-an-Rudha, Ardrishaig), and a white flowered cultivar of the parentage *R. souliei*? × *williamsianum* (from A. C. and J. F. A. Gibson), all received the Preliminary Commendation; whilst other species exhibited were *R. haemaleum*, *hypenanthum*, *phaedropum*, *rude*, *selense* var. *probum*, *sperabile* var. *weihsiense*, *spinuliferum*, *thomsonii* var. *pallidum*. Only two hybrids were put before the Committee: 'Lochinch' ('Elsae' × *eximium*) by the Earl of Stair, Lochinch, Stranraer, and 'William Wright Smith' (raised in the Royal Botanic Garden, Edinburgh, and of the parentage *nuttallii* × *veitchianum*) by the Regius Keeper, Royal Botanic Garden, Edinburgh (Plate 3). This last plant was not only awarded the First Class Certificate as a cool greenhouse plant (which one hopes one day may be grown out of doors at Brodick) but the National Trust for Scotland's Trophy awarded to the best individual truss or spray of a hybrid. I personally have no doubt but that it would have received similar awards in any show for it is a magnificent plant with clusters of four slightly scented flowers, the corollas campanulate, five inches wide and long, with the lobes recurved and prominently and beautifully frilled at the margin, with the white background charmingly shaded with pink on the outside and distinctly stained with orange at the base within.

A further measure of the attitude towards hybrids in Scotland was reflected in the Show Schedule where among fifty classes the

compilers had given only nine classes to hybrids. For these nine classes there were 111 entries. Outstanding amongst these was Sir James Horlick's waxy and red-flowered 'Scarlett O'Hara', raised by him in 1932 from the parentage 'Langley Park' × *thomsonii*; another scarlet flower, the Exbury raised 'Bibiani' (*arboreum* × 'Moser's Maroon'); and the beautiful 'Avalanche', large pure white flowers save for the magenta-rose blotch, one of Rothschild's finest hybrids (*calophytum* × Loderi) and an easy first prize winner for Sir J. Horlick. Likewise, a magnificent spray of 'Spinulosum' (*racemosum* × *spinuliferum*) with deep rose flowers easily took a first prize for A. C.and J. F. A. Gibson. Also much in evidence were 'Brocade' ('Vervaeniana' × *williamsianum*) again an Exbury plant, with large trusses of frilly peach pink flowers; several forms of *R.* 'Cornish Cross' (*griffithianum* × *thomsonii*), some with flowers much paler red than others; and Bodnant's brilliant crimson flowered 'Elizabeth' (*forrestii* var. *repens* × *griersonianum*). By the way, two years ago in a rhododendron garden in Northern Ireland where grow many of Hooker's Sikkim introductions from seeds sent by Hooker in 1849–50, only one hybrid was in evidence—'Elizabeth'. Sir James Horlick was first in seven of the nine classes for hybrids.

The thirty or so classes for species brought forward over three hundred and fifty entries. In the class for six species a fine *R. calophytum* with very long leaves and very big trusses of large flowers, white tinged with pink, as well as a large compact red truss of *R. arboreum*, were outstanding among Mr. Olaf Hambro's exhibits, as was *R. lacteum* among Mr. S. F. Christie's. In fact, Mr. Christie's *R. lacteum* figured in several classes; they showed excellent foliage and very ample flower trusses, though some unfortunately had been slightly bruised on their long journey from Elgin. Likewise much to the fore in several classes was *R. rex*, shown by Mr. A. Kenneth. The trusses were quite magnificent with large white flowers blotched with crimson and of beautiful substance. One judge was anxious to give this plant the Sir John Stirling Maxwell Rhododendron Trophy for the best individual truss or spray of a species. He was over-ruled by the other two judges, however, and after much debate this Trophy was finally awarded to a wonderful spray of *R. niveum* as exhibited by Sir George and Mr. Ilay Campbell in Class 5. There were six entries for *R. niveum* in Class 7, all showing slight difference in shape of truss, degree of compactness of truss and colour and shape of the individual flowers; they were all excellent and showed how good a rhododen-

dron this is when well grown. Easily the best entries in Class 4 (one spray of an elepidote species) were *R. baileyi* from the brothers Gibson—most beautiful with an abundance of largish deep purple-crimson flowers (this spray was given a first prize and the Award of Merit); and Sir James Horlick's very fine form of *R. davidsonianum*, the flowers being a deep pink with crimson spotting. Two sprays were likewise outstanding in Class 9 (one spray, Boothii Series); *R. tephropeplum* with deep red-purple flowers—another first prize for the Gibsons—and Sir George Campbell's *R. auritum*, the pale yellow flowers being delicately stained with pink. Major I. A. Campbell took the first prize in Class 12 (one truss of *R. fictolacteum* or *R. rex*): his truss of *R. rex* was an excellent one, the large white flowers being faintly tinged with pink and having a crimson blotch. Class 14 (one truss of *R. sinogrande*) understandably caught the imagination of the public for though there were but three entries they were all most spectacular—and beautiful—with huge leaves and great trusses of creamy yellow flowers. Mr. Hambro's truss just took the first prize. In Class 16 (one truss of *R. thomsonii*) Miss A. Balfour's truss stole all the thunder; there were twelve entries and all of them good. Miss Balfour's entry, however, was quite remarkable, a marvellously big truss of eleven flowers, several shades darker in colour than those of any other entry. Miss Balfour, I believe, has counted twelve flowers on some trusses. For Class 17 (one truss of a member of the Fortunei Series, excluding *R. griffithianum*; in Class 18, by the way—a truss of *R. griffithianum*—there was only one entry and that not a very good one) Sir George and Mr. Ilay Campbell showed a very fine form of *R. vernicosum*—pink flowered and crimson spotted. *R. vernicosum* appeared to be a variable plant and it is difficult to understand why the very good form has never been given the Award of Merit.

At Gigha, in considerable exposure, Sir James Horlick grows *R. lindleyi* very well indeed. It was not surprising, therefore, that his entry of this species in Class 21 (one truss of the Maddenii Series) should take the first prize for it was a fine truss with large white, yellow blotched, flowers. Probably the best specimens in Scotland of this most lovely species are to be found in the garden of the brothers Gibson at Glenarn, Rhu, Dumbartonshire, but they were not to be in flower until two or three weeks after the Show. Their *R. bullatum* was in flower, however, and a most charming spray—a big one too—with large scented flowers, white, pink blushed, and with reddish green calyx, quite easily earned

them further points in Class 22 (Edgeworthii Series, one spray). It is interesting to note, by the way, that the spray of *R. edgeworthii* in the exhibit from the Royal Botanic Garden was an early flowering one taken from the plant which grows in the Woodland Garden and which never fails to flower in great profusion every year. Edinburgh's is a cold windy Garden and *R. edgeworthii* is listed as "F" in the 1956 Edition of the *Rhododendron Handbook*! The spray of *R. eudoxum* which received the Award of Merit also gained the first prize for Mr. E. H. M. and Mr. P. A. Cox in Class 27 (one spray of Sanguineum or Forrestii Sub-series). A pan of *R. microleucum* gained more points for the Messrs. Cox in Class 37 (one pan of dwarf rhododendron suitable for the Rock Garden) although it has to be said that the plant in flower out-of-doors, at the same time in the Royal Botanic Garden, was a much finer thing.

There were only two classes for azaleas—there must be more next year—and both were disappointing, Sir James Horlick's beautiful spray of *R. schlippenbachii* easily surpassing all else.

As a result of the judging of Mrs. R. M. Stevenson, Major G. Sherriff and Dr. H. R. Fletcher, the Gibson brothers were awarded the Rhododendron Challenge Trophy presented to the Royal Caledonian Horticultural Society by the Countess of Haddington, for the most points in the Show, with Sir James Horlick a close second. Maybe with other judges the result would have been different.

12th ANNUAL TACOMA RHODODENDRON SHOW

By LEONARD F. FRISBIE

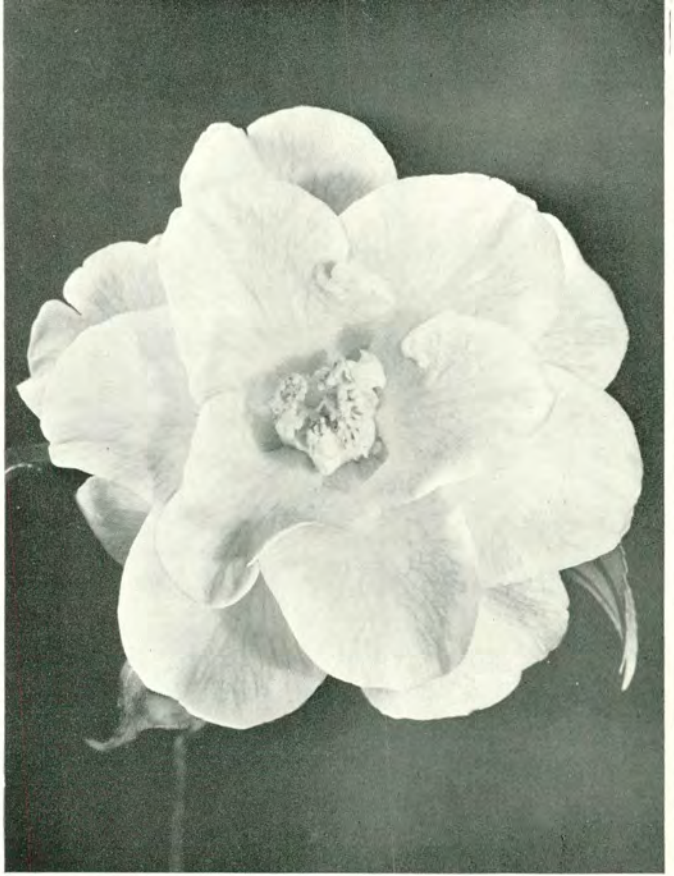
THE Washington Rhododendron Society, Inc., staged the 12th Annual Tacoma Rhododendron Show on May 14th–15th at the Oakland Community Centre. The year 1960 did not provide an ideal rhododendron season. Spring weather was erratic, and budding the previous summer had been sparse on some types. But rhododendron enthusiasts love to overcome difficulties, and this year's show excelled all others ever held by the Washington State group.

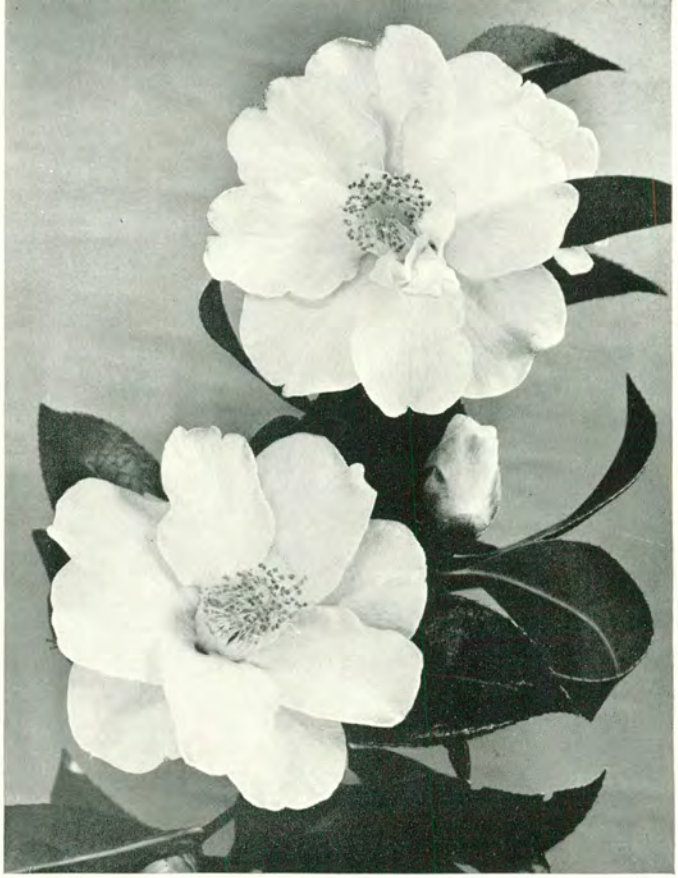
Roy and Honore Hacanson of Puyallup won the President's Cup for the highest total of award points. They also captured the Sweepstakes Award for the most impressive plant in the show, a huge, well-flowered plant of 'Countess of Derby'. The display was especially well arranged and won the Landscape Award. Plants of the Florida native, *R. austrinum*, in good flower attracted attention. These plants were from cuttings rooted in the plastic tent some four years previously. Plants of 'Lady Primrose' and 'Broughtoni Aureum' along with the species, *R. luteum*, added pleasing shades of cream and yellow. 'J. H. Van Nes' proved to be a favourite with many. A charming little plant, a cross between *R. apodectum* and the hybrid, 'Little Joe', was excellent. A nice plant of blue spruce and dwarf conifers added materially to this display.

Irving S. Broxson of Tacoma brought a beautiful group of good hybrids. The red-flowered hybrid, 'David', in large size, drew enthusiastic comment from all visitors. The biscuit-coloured flowers of 'Day Dream' were pleasing. Plants of 'Mars', 'Vulcan' and 'Hon. Jean Marie de Montague' displayed in fine fashion the red flowers that are so popular in this area. 'Jock', 'Mrs. Betty Robertson' and 'Mrs. G. W. Leak' added to this highly colourful exhibit, which won blue ribbons for hybrids and commercial display.

The Spring Dawn Nursery of Gig Harbour combined pink and white azaleas along with the brilliant red flowers of 'May Day', 'David' and 'Hon. Jean Marie de Montague', and a block of plants of 'Alice' with a multitude of pink flowers to present one of the most attractive exhibits in the show. Small plants of the

FIG. 30.—One of the glasshouses constructed at Laeken by King Leopold II of Belgium and planted with camellias (see p. 91)

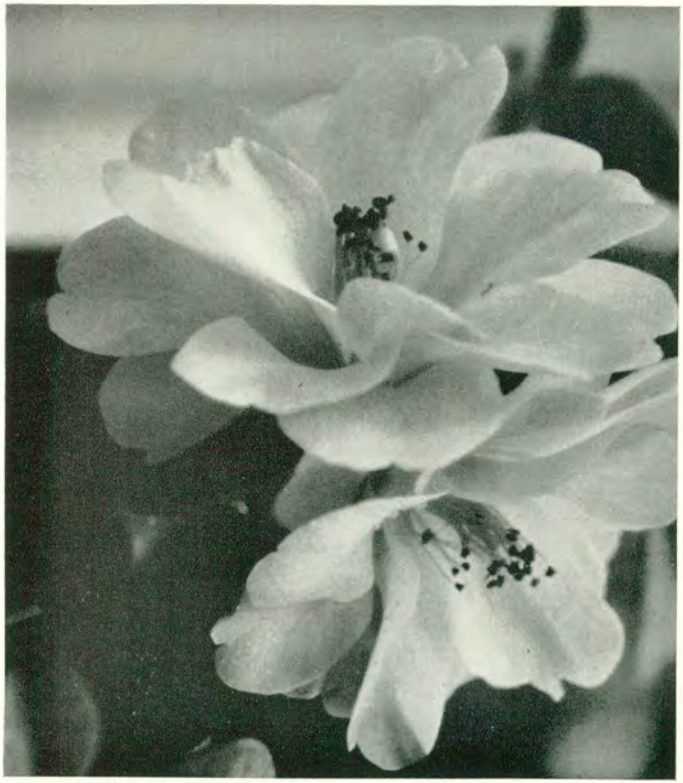




Photos: J. E. Downward

FIG. 31.—*Camellia japonica* 'Yours Truly', A.M. February 23, 1960. Shown by the Director R.H.S. Gardens, Wisley (see p. 125)

FIG. 32.—*Camellia* × *williamsii* 'Citation', A.M. March 8, 1960. Shown by Lord Aberconway and The National Trust, Bodnant, Tal-y-Cafn, Denbighshire (see p. 125)



Photos: David Feathers

FIG. 33.—*Camellia williamsii* 'Margaret Waterhouse' (see p. 85)

FIG. 34.—*Camellia* 'White Orchid' (see p. 88)

colours arranged in beautiful design, which has come to be a Harmon Trade-Mark in various Tacoma flower shows.

Dr. Charles S. Berry and Leonard F. Frisbie set up a non-competitive exhibit from Lemons Beach consisting of varied material. Centred in the display was a large plant of 'Lady Bessborough', the F.C.C. Form, with plants of 'Blue Peter' banked in front. 'Mars', 'Britannia' and 'May Day' provided a mass of red flowers. *R. vernicosum*, *R. luteum* and *R. campylogynum* var. *cremastum* were the species displayed. 'J. H. Van Nes' and 'Madame Fr. J. Chauvin' were also featured. A large block of plants of the Knap Hill azalea 'Flamingo' along with 'Melford Dawn', a new Dr. Yeates cross from New Zealand provided a pleasant blend of yellow, pink and white colouring. The Exbury azaleas 'Brazil' and 'Ginger', well flowered and in plants of good size, were the centre of a great deal of attention. Cut flowers of 'Melford Glory', orange flowered, and 'Melford Chief', red flowered, both Yeates New Zealand crosses created a mild sensation. Many visitors from a distance came to the Tacoma Show especially to see these New Zealand azaleas. Cameras were busy, and rulers came out to be photographed along with the flowers to prove to home folks that glowing descriptions were not just "fish stories". Cut flowers of *R. occidentale* Tacoma No. 158, showing double flowers and red foliage pleased everyone.

An interesting exhibit of the Tacoma Show was composed of Donation Plants for the Washington Rhododendron Walk at the University of Puget Sound in Tacoma. This is a project of The Washington Rhododendron Society, and many fine plants have been planted on the campus.

An important companion feature of the 1960 Tacoma Show was the public exhibit of the Lucia Porcher Johnson paintings of eastern U.S.A. Native azaleas made at the famous Biltmore Gardens, Asheville, North Carolina. The paintings were loaned by Smithsonian Institution, Washington, D.C.

The Gardener Assistance Division was of keenest interest to all visitors to the show. In this section the home gardener showed the results of his efforts in response to instructions in propagation and seed growing. Seedlings in all stages of development were shown, some in flower, grown from seeds distributed by the Washington Rhododendron Society, Inc. Plants from rooted cuttings from the flat stage to flowering size were also displayed. Model plastic tents fascinated visitors. George Betts of Rochester won the Royal Horticultural Society's Silver-Gilt Affiliated Societies Medal,

awarded for the best propagation display. Mrs. Helen Nyman won the Silver medal for an attractive decorative flat, featuring tiny plants of seedlings and rooted cuttings. W. H. Kvam won the Bronze Medal for seedlings.

Two new and interesting hybrid deciduous azaleas turned up at the 1960 Tacoma Show. One was a New Zealander, grown from seeds sent by Dr. J. S. Yeates of Palmerston North. This one has been named 'Melford Chief', and it has 'Darkie' × 'Red Letter' for parentage. Flowers are 3 inches across, wide open and flat, slightly ruffled. The truss is 9-flowered. Flowers have 6 lobes. The colour is Current Red, HCC 821. This cultivar has flowers of exceptional durability, and it will take its place among the genuinely fine red-flowered hybrid azaleas. 'Lemons Beach' is a seedling of Exbury azalea parentage. The 4 inch flowers are Empire Yellow, HCC 603/1. The wing lobes are Azalea Pink, HCC 618/2, and a prominent blotch is Saffron Yellow, HCC 7/1. The colour combination is very pleasing.

HYBRID CAMELLIAS

By DAVID L. FEATHERS
(Lafayette, California)

THE introduction into the United States of America about a decade ago of the outstanding *C. williamsii* hybrids from England ('Donation', 'J. C. Williams' and others) followed shortly thereafter by the Waterhouse group from Australia ('E. G. Waterhouse', 'Margaret Waterhouse' and 'Lady Gowrie') having the same specific background, had the effect of directing the attention of American camellia breeders, amateur and professional, to the potentialities of the hybrid camellia for the first time. It was at about this same period that such accomplished amateurs as the late Messrs. Dr. Walker M. Wells and Ralph S. Peer, and the eminent California geneticist, Dr. Walter E. Lammerts, among others, began to bring into this country the raw material (species and their cultivars) for experimental breeding along the lines which the work of such pioneers as J. C. Williams and Col. Stephenson Clarke (both now deceased) and Francis Hanger had suggested.

The demonstrated success of these pioneer hybridists and the tremendous stimulus to interest in camellias generally and hybrids particularly which arose from the first flowering of the sensational *reticulata* hybrids from China, which occurred in California in 1949, encouraged a number of persons to undertake purposeful and wide experimentation in the then almost completely uncharted field of camellia hybridization. In this effort, the time factor necessarily played an important role. The years devoted to the preliminary work of acquiring and growing to seed-bearing size the parent material, plus the usual requirement of three blooming seasons to establish permanence of form in flowers of the first generation offspring, explains why the real potentialities of the camellia hybrid are only now beginning to be fully appreciated.

The writer's long-standing interest in growing camellias from seed, coincident with his capacity as editor of an amateur camellia society's publication[1] influenced the production in October 1954,

[1] *The Camellia Bulletin*, published by Northern California Camellia Society.

of a special issue devoted exclusively to *The Yunnan Reticulatas*, which were then new, and, in October 1958, of another special issue entitled *The Hybrid Camellia*[1], constituting a comprehensive discussion, description and illustration of world wide developments in that field. It is from this background that the attempt will be made herein to bring the story up to date, including such commentary as personal observation would appear to justify.

The known successful inter-specific camellia hybrids to date may be roughly grouped, for purposes of convenience, as follows:

Williamsii Type: (*C. saluenensis* × *C. japonica*)
'J. C. Williams', 'Donation', the Waterhouse hybrids and many others.

Clarke Type: (*C. saluenensis* × *C. reticulata* (wild form)
'Salutation', 'Inamorata'.

'*Cornish Snow*' *Type:* (*C. saluenensis* × *C. cuspidata*)
'Cornish Snow', 'California Snow', 'Charles Michael', 'Winton' and others.

'*Sylvia May*' *Seedlings:* (exact origin of parent unknown, probable *C. saluenensis* × *C. cuspidata* hybrid)
'Bonnie Lassie', 'Robbie', 'Bonnie Marie', 'First Formal', 'Monticello' and others.

C. lammertsii: (*C. cuspidata* × *C. japonica*)
'Hybrid L'.

Doak Type: (*C. japonica* × *C. reticulata* 'Capt. Rawes')
'Phyl Doak', 'Barbara Clark', 'Otara Rose' and others.

Pitardii Hybrids: (*C. pitardii* × *C. reticulata*)
'Buddha', 'Confucius' and 'Carl Tourje' (the latter from variants)

'*Crimson Robe*' *Type 1:* (*C. japonica* × *C. reticulata* 'Crimson Robe')
'Royal Robe' and many other un-named seedlings'.

'*Crimson Robe*' *Type 2:* (*C. saluenensis* × *C. reticulata* 'Crimson Robe')
'Fluted Orchid', 'White Orchid'.

The foregoing are largely first generation (F-1) hybrids. Of more recent development are a number of F-2 hybrids of several kinds, including the promising 'Leonard Messel' (Plate 4) resulting from a cross of *C. reticulata* × *C. williamsii* 'Mary Christian', which won an Award of Merit upon being shown in London in 1958, and several of American origin now in commercial propagation. It is

[1] Obtainable from Editor, Northern California Cam. Soc., Lafayette, Calif., price $1.

also to be noted that an F-3 hybrid, from a cross of the *C. williamsii* seedling 'Williams Lavender' × *C. reticulata* 'Crimson Robe', and which has a flower quite comparable with that of the Chinese reticulata hybrids, is being propagated here.

Williamsii Type: The virtues of the *saluenensis* × *japonica* hybrids are well known, the English group being characterized by rather small foliage, a bushy habit, good vigour, single to semi-double flowers of medium to fairly large size, splendid florescence and relative hardiness. The Australian group vary more, ranging from the simpler forms of the early semi-double pale pink 'Margaret Waterhouse' (Fig. 33), to the magnificent late, long-lasting formal double 'E. G. Waterhouse' (Fig. 38), of good size and tending to reveal more of the tell-tale lavender inherited from the seed parent but less so than the large, almost bell-shaped 'Lady Gowrie' (Fig. 37). The latter bears much closer resemblance to the original *williamsii*, including its growth habit. The foliage, however, has the undulations reminiscent of the *pitardii* group, whereas the leaves of the first two are japonica-like. The first-named Waterhouse seedlings also have a distinctly different growth habit as they are quite fastigiate and make remarkable vertical growth—an evidence of "hybrid vigour", no doubt.

Clarke Type: Although having the same specific origin, the two established hybrids of this type, which emanated from a different source, seem to have little else in common. The leggy habit, wide leaf spacing and even the foliage of 'Salutation' strongly suggest the *reticulata* (although some contend this is a *williamsii*) and the large, graceful, semi-double pale-pink bloom would seem the logical result of a blend of that species with *saluenensis*. 'Inamorata', on the other hand, has a much smaller, lavender-tinted bloom vaguely suggestive of the *williamsii*. However, its improvement, rather than being in the flower, is in the plant and foliage, the neat growth habit and splendid leaf being far better than that of the *reticulata* (wild form) pollen parent.

'*Cornish Snow*' *Type:* This group bears strong evidence of the dominance of the *cuspidata* species over *saluenensis*. The small, sharply-pointed leaf, single white (usually) miniature flower borne in great profusion (almost axillary blooming) and the extreme bushiness with a tendency toward lateral growth giving it a weeping habit, characterize the group noted for its bronze-coloured new shoots. This type is of value primarily for its mass blooming effect and daintiness of the flower.

'*Sylvia May*' *Type:* All these are selfed California seedlings from

grafts of this reputed *saluenensis* × *cuspidata* hybrid parent of English origin. Thus they would be second-generation (F-2) hybrids. They vary considerably, now embracing practically all the common camellia forms, from the simplest single to the compound, high-centred loose paeony form ('Monticello') and formal double ('First Formal') types. Colours range from the palest pink to blooms having the strongest lavender tints we have seen. In size, some will approach 5 inches—as large as 'Donation' but with a more complex form and higher centred. The foliage is uniformly good, ranging from small to fairly large leaves, usually of deep, almost bluish green. Growth habit is generally rather bushy, the tendency being toward lateral, weeping growth although there are several quite upright in structure. This group is more willowy than the *williamsii*, which would logically follow because of the *cuspidata* influence. As a class they constitute one of the more important innovations among the hybrids. This is probably due to their being one generation further advanced than most. 'Robbie' and 'Bonnie Lassie' have received fairly wide distribution and have proven to be cold-hardy and popular. 'Monticello' (Plate 6) and some of the others, while very well received, are still comparatively new and untested for cold hardiness.

Doak Type: This group bears unmistakable evidence of the *reticulata* parentage, particularly in the foliage and growth habit. The finest appears to be 'Phyl Doak', which yielded lavender-tinted pink blooms approaching 5½ inches on its first flowering here this past season, borne on a well-branched, upright, very vigorous plant. The large, showy semi-double flower, having a petalet centre occasionally, is a rather even blend of the two widely divergent parents, *saluenensis* and 'Capt. Rawes'. 'Barbara Clark' is a much smaller flower, of true semi-double form and has a considerably deeper tone on the lavender side. There are several more of this group which the writer has not yet bloomed here in California, including 'Otara Rose' and 'Brian'.

Pitardii Type: 'Buddha' and 'Confucius' are generally classified as reticulatas but their parentage has been sufficiently established to warrant our listing them as hybrids. The foliage and growth habit bear strong resemblance to that of the presumed seed parent, *C. pitardli*, which is notable for its extreme vigour and distinctive, long, narrow, wavy leaves. The flowers, however, are reticulata-like although perhaps more open than most, less high and slightly smaller. Their colour, while rather unique, fairly closely resembles that of the reticulata hybrids 'Willow Wand' and 'Takeiyeh',

although somewhat paler. The new hybrid 'Carl Tourje' (Fig. 39), a cross of *C. pitardii* × *C. reticulata* 'Chang's Temple', is a very graceful, wavy-petalled flower of soft pink shading into deeper tones, of semi-double form and fairly large. Very little is known of its performance as it is still quite new and untested but the bloom appears to be outstanding. The plant seems to be very vigorous and the leaves are a beautiful dark green.

'*Crimson Robe*' *Type 1:* The writer's first efforts at crossing the species *japonica* × *reticulata* had a twofold purpose: (1) to produce a hybrid that would be sufficiently cold-hardy to grow successfully in areas where the existing reticulata hybrids fail, such as the southern Atlantic seaboard of the United States, a large and very important camellia-growing area, and (2) to endeavour to improve the plant as to growth habit and foliage and thus overcome the other two of the reticulata's most serious faults. With these objectives in mind, two japonica seed parents were selected, one being the well known cultivar variant 'Lady Vansittart Red', which has most of the desired attributes, viz.: (*a*) it is an extremely prolific seed bearer (it was not then known that the *japonica* × *reticulata* cross could be made), (*b*) it is fairly cold-hardy, (*c*) it has one of the most compact growth habits of any camellia, and (*d*) it possesses a distinctive leaf that undulates and twists at the apices—an earmark of all its offspring and thus a "tracer" element. The other seed parent selected was an un-named seedling, the offspring of a cross of the japonicas 'Waterloo' × 'Debutante'. This particular seedling was chosen because it was remarkably sturdy and compact, almost round in form and slow-growing—a prolific seeder as well but the single white flower was quite commonplace. The results were rather interesting.

Of the Vansittart Series only one seedling has so far shown in the flower itself fairly definite evidence of hybridity, it bearing a medium-large, chrysanthemum-like red bloom. However, upon close examination of several others having definitely retrograde single red blooms, it was noted they possessed extremely thick, iridescent petals and generally had a stamen formation strongly suggestive of the reticulata pollen parent. Furthermore, most of the plants show an unusual growth habit. While the frame is similar to that of the *reticulata*, with leggy, long growth, unlike it, near the terminals the branches bear a mass of twigs thick with foliage that is japonica-like and has the unmistakable twist of the Vansittart leaf. Although none of these may have commercial value, seedlings from several are now in their second year and this generation

appears to be far more interesting, if one may judge from foliage alone. (Parenthetically, it may be pertinent to observe at this point that the laws of genetics tell us that, as a rule, the wider the cross the less likelihood of obtaining an outstanding hybrid in the first generation. The F-2 and subsequent generations offer far greater prospects).

Another set of crosses, involving the single white unnamed *japonica* seedling, yielded even more interesting results. One hybrid having a large, dull red, semi-double to open-paeony form flower was deemed worthy of propagation and has been named 'Royal Robe'. The plant is among the most vigorous we have ever grown and it bears extremely large, glossy, leathery foliage, of bright, rich green. All of the rest were white or blush in colour, either semi-double or paeony form and absolutely poplar-like in growth habit, the strongest grower of the lot now being some 10 feet tall although not more than 30 inches wide. All bear japonica-like foliage of good quality. These hybrids are almost uniformly early bloomers, two or three coming out concurrently with 'Daikagura'. Unquestionably, the blush pink colour is inherited from the paternal grand-parent 'Debutante'. The whites have that great burst of stamens so characteristic of 'Crimson Robe' (although sometimes converted into petalets) which begin at a narrow base and funnel out rapidly in a broad cone. Walking through the seedling garden one can pick out this group at a glance as they are so tall and slender, head and shoulders above their fellows. Here again, this would be the logical expectation due to the influence of the reticulata and to "hybrid vigour".

'*Crimson Robe*' *Type 2:* Without doubt, the two hybrids from this cross of *C. saluenensis* × *C. reticulata* are among the most unusual developed to date. The flowers have a completely different form from those of any other camellia and the common expression among persons who have viewed the bloom for the first time is "it looks like an orchid", hence the names 'Fluted Orchid' and 'White Orchid' (Fig. 34). Indeed, if the perfect cylinder of stamens which the former often shows were a trumpet instead, the flower might easily be mistaken for an orchid because the colour and overall form so closely resemble the latter. Both have blooms unique for their grace and ethereal quality, retaining in enlarged form the lovely delicacy of the *saluenensis* species. 'Fluted Orchid' blooms fairly early and again late in the season, setting a great many buds on a bushy plant having excellent foliage of dark green, the leaf being long and tapering, with a sharp apex and conspicuous vena-

Photo: J. E. Downward

PLATE 4.—*Camellia* 'Leonard Messel' (see p. 84)

Photo: David Feathers

PLATE 5.—*Camellia* 'Hy-Ball', a new hybrid recently raised in U.S.A.

Photo: Harold L. Paige

PLATE 6.—*Camellia* 'Monticello' (see p. 86)

tion. 'White Orchid' grows much more like the reticulata—leggy, leaves that are widely spaced but similar in appearance to those of 'Fluted Orchid' and, again like its pollen parent, it seems to enjoy the sunny situations. The flower is somewhat larger than that of its counterpart (although 'Fluted Orchid' has yielded blooms over 5 inches in the greenhouse) while the colour is so delicate as to appear almost white. It is a fairly late bloomer and gives promise of yielding viable seed.

In addition to the foregoing types, more recently successful crosses of the *pitardii* × *reticulata* hybrid 'Buddha' with *C. fraterna* and of *C. fraterna* × *C. reticulata* 'Crimson Robe' have been accomplished, the offspring having both large and tiny foliage. The hardy species *C. saluenensis* has now been crossed with the most cold-hardy of all japonicas, 'Berenice Boddy', in the endeavour to develop a truly cold-resistant strain. Evidence is strong that *C. saluenensis* has also been crossed with *C. hongkongensis* and it is fairly certain that both *C. japonica* and *C. saluenensis* have recently been crossed with the promising new species *C. granthamiana* by a number of different persons.

Mr. Howard Asper of San Marino, California, has produced some very fine new reticulatas from chance seedlings, both from the large-flowered cultivars of fairly recent introduction as well as from the single-flowered, wild form species. Some of these have vastly improved growth habit and foliage. While not yet determined to be hybrids they very well may be because of the close intermingling of reticulatas and japonicas in Mr. Asper's garden. The foliage and improved bushiness strongly suggest the japonica influence.

Recent successes in camellia hybridization have persuaded the writer to the belief that no one seriously inclined in that direction should permit himself to be deterred from trying even the most unpromising or unlikely combinations. In fact, it is his considered opinion that the camellia as we know it may already be the result of many generations of naturally occurring hybrids, which would, perhaps, account to some extent for its tendency to mutate and seldom to breed true from seed. Thus there may be far more compatibility inherent between given species than we imagine. Certainly, one should not let the fact of a difference in chromosomes dissuade him, for it has been pretty well established that this is not an insurmountable obstacle.

Only time will tell whether our ultimate objectives will be attained. Unfortunately, in the case of camellia breeding, the time

element happens to be a very formidable factor. One of the few recorded efforts at deliberate improvement of the *japonica* dates back almost exactly 100 years, when the Massachusetts horticulturist and journalist, C. M. Hovey, devoted some 14 years to developing, after one unsuccessful attempt, the fine double red variety to which he gave his name. Modern techniques, such as continuous light and high nutrient culture, with protracted confinement of the root system, generally will produce blooms in an average of not more than three years, compared with Hovey's seven years. However, it is still a long, slow process, particularly where hybridizing is involved, simply because so much experimentation must be done. Thus we are forced to learn through the traditional trial-and-error method in the absence of adequate recorded experience.

However, sufficient knowledge has now been gained to justify some projections if not predictions. There is little doubt in the writer's mind that the next decade or so will witness more innovation in the development of the camellia than has occurred in all its preceding history, both in flower form and colour, as well as plant habit and foliage. This will result in wider usage, not only geographically speaking, but also in the application of the genus to such new purposes as in ground cover, hanging basket and other pendant forms, from which will develop a greater consciousness of the desirability of this superb plant over and above its function as one of the handsomest of all broad-leaved evergreens—in particular because it fills that barren void in the garden—winter and early spring—and thus brightens our darkest days.

A SHORT VISIT TO BELGIUM

By SIR GILES LODER, Bt.

IT is only in recent years that the camellia has been found to be hardy out-of-doors in most parts of this country. However, in Belgium with its severe winter climate, the camellia is still a greenhouse plant, and it is in that country that one of the largest camellia collections under glass can be found.

About 80 years ago, a magnificent range of glasshouses was constructed by King Leopold II of Belgium, adjoining the Royal Palace at Laeken, on the outskirts of Brussels. To describe the varied contents of these glasshouses would require many pages, the highlights being a tall central house, housing palm trees 15 metres high amid wonderful tree ferns. The adjoining Orangerie contains many lemon, orange and nectarine trees in tubs: whilst long connecting corridors of glass are lined with standard geraniums on both sides with fuchsias hanging at intervals from the roof.

However, one very large glasshouse adjoining is devoted entirely to camellias which have been growing there for 80 years. Over 100 of these large camellias are planted in the ground; the remainder, several hundred more, are in large tubs.

We were privileged to obtain permission to visit this unique collection, and were conducted round by M. George Bertrand, the Régisseur of the Royal Domain of Laeken who is responsible for this large area of greenhouses, covering 2 hectares, with their varied contents. Like the remainder of the plants, the health of these 400 camellias was striking, and from the entrance steps, themselves lined with camellias in tubs, overlooking the house, one had an impressive view of the big collection. Few of the varieties were named, but many are similar to those grown here. Here and there, some outstanding varieties, not generally known, were noted: but unfortunately without names. The majority of the plants were of the formal double type, popular both on the continent as well as in this country a century or so ago. It is pleasing to note that so many of these old varieties are still in existence and being tended so carefully at Laeken (Figs. 29, 30).

A complete contrast, the Nursery of de Bisschop at Tronchiennes, near Ghent, would again interest any camellia enthusiast. This

nursery, devoted entirely to camellias, raises about 25,000 plants every year, which are shipped to such far-away places as Finland, Poland, Sweden and Norway, as well as Germany, France, Holland and England. It is interesting to hear how national tastes vary as in Germany 'Elegans' is almost synonymous with camellias whilst Italy prefers only strong colours, deep reds or whites. In all, about two dozen varieties cover the range required. The large houses, with blocks of many hundreds of each of these varieties are an impressive sight, whilst the subtle difference of their growth can easily be seen, even at this young stage. The majority of the plants are on grafted stock; this is personally done by Roger de Bisschop, who enthusiastically looks after this unique nursery.

CAMELLIAS IN CONTAINERS

By C. H. J. WILLIAMS

(*Head Propagator—John Waterer, Sons & Crisp Ltd., Bagshot*)

GROWING camellias in containers is undoubtedly the answer for the many people who have a chalky, wet heavy clay, or any other unfavourable soil, and who complain that they are unable to grow these fine flowering evergreens.

Quite often, in the case of a wet heavy clay soil, a basin-like hole is excavated and filled with peat, which eventually becomes saturated through inadequate drainage. A camellia planted in these conditions, will certainly not flourish, and after a time, will deteriorate and die. The same plant, had it been put into a container in a suitable compost and plunged into the soil to ground level, would have thrived and grown into a fine specimen.

There are several advantages to container culture in addition to bad soil conditions. For example, they can be moved anywhere at any time, and when in flower may be used for indoor decoration, or for exhibiting. In severe weather they can be moved to a more sheltered position for a day or two, until milder conditions return. Many of the strong-growing, shy-flowering varieties may be induced to flower earlier, by restricting the rooting area.

For container grown plants, the siting is the same as for plants permanently planted, i.e. shaded courtyards, terraces, near north and west walls and amongst trees, especially small standard trees such as ornamental cherry, crabs, etc. Dense shade should be avoided, as some afternoon and evening sun is essential. Morning sun is harmful in so far as this will almost certainly spoil the blooms at flowering time, by causing them to thaw out too quickly after night frost. Cold draughty spots should be avoided. Fig. 35 shows a nine-year-old plant displayed to good advantage on a terrace.

Practically any type of suitably drained container will do such as wooden tubs, metal drums or cans, clay pots, ornamental vases, etc. If the plants are to be grown upon the surface of the ground, such as terraces, paved courtyards, each side of a doorway, etc., oak or teak tubs or ornamental stone vases will of course look best. Clay pots are not very suitable for this purpose, as they are too porous, and would continually dry out in hot summer weather,

and being light, would create a nuisance, by always blowing over in windy weather.

It should be pointed out, that a container standing on the surface of the ground would, in winter, freeze through the sides as well as from the top downwards, and if severe weather is expected, some insulating material should be placed or tied around it.

For plunging into the ground to soil level, metal containers of some kind are best and last longest. Many proprietary liquids and powders, oil, etc., are now sold in metal drums and these are ideal when empty. Ordinary household buckets of different sizes will also be found to be excellent. Care should be taken to burn or clean out such containers before use.

Where the soil is chalky, the top of the container should protrude 1 inch to 1½ inches above the soil level, to prevent seepage into it from the adjoining areas. The top, thus exposed, can be covered with a mulch of peat to form a mound.

Clay pots may also be used for plunging into the ground, and any container, whether pot, metal drum or wooden tub should have at least 2–3 inches of coarse gravel placed beneath it, to assist drainage and to prevent padding down of the soil below.

Any repotting of camellias should be done immediately after flowering and before growth commences. It is a mistake to put a small plant into a large container, as, being slow rooting, the mass of soil would soon turn sour, especially if allowed to become too wet, and would then be repellent to the formation of roots, encouraging root-rot and eventually death of the plant.

If a plant 18 inches in height is purchased in a 6–7 inch pot, and is required to be planted into a large container, it should be left in the pot, and plunged into the larger container, which should be well drained and filled with acid soil, and the plant repotted every 2–3 years into a slightly larger pot and again replunged into the centre of the larger container each time, until the plant is large enough for the container itself to be used. Fig. 36 shows the stepping up in sizes when pots or any kind of container are used.

It will be found that tin or metal containers are of a different shape to a clay pot, which is tapered towards the base, and some difficulty may be experienced in removing the plant. If each side is cut down with a pair of tin cutters, and bent outwards, the plant is then easily removed.

With container grown plants, good drainage is essential. Clay pots are purchased with the drainage holes already provided. These are a good guide to the number of holes which should be

made in the base, if other containers such as cans, drums, tubs, are used. For example, a 5-gallon drum would require about five holes in the base the size of a florin. These holes are covered with a curved piece of broken clay pot or something similar, and on these place coarse gravel, stones, or broken brick up to one-sixth of the total height of the container. Cover this with some rough peat or turf, add a handful or two of mixed potting soil and ram the whole well down with a thick piece of stick.

The plant to be repotted is then removed from its present container, and any drainage material at the base removed. It is then placed into the container already prepared, first adding sufficient soil, so that the top of root ball is 2 inches from the top of the container, and prepared soil is rammed around the sides, and finally filled to within 1½ inches of the top of the container.

The 1½ inch gap left at the top is filled with water which is enough to soak right through. No more should be given until the plant shows signs of drying out. Watering in general can hardly be overdone in well-drained soil during the hot summer months, and one or two weekly soakings are far better than a daily sprinkle. Containers plunged into the ground will require less water than those standing on the surface. Watering during the winter months should be carried out with great care, and is required only occasionally, depending on weather conditions. Spraying the foliage in the evening with a fine spray of clear water is very beneficial during the growing season.

A good camellia soil mixture is 7 parts of lime-free loam, 1½ parts peat, 1½ parts leaf mould, 1 part well-rotted cow manure and 2 parts coarse sand or grit. This should be thoroughly mixed together. If difficulty is experienced in obtaining lime-free loam, ready mixed camellia soil can be procured from a nurseryman, whose nurseries are situated in a lime-free area.

After repotting, artificial feeding should not be necessary the first year. For the second and third years the plants may be fed fortnightly with a weak solution of liquid fertilizer starting soon after growth commences. This feeding should cease towards the end of July in order to allow the new growth to ripen and form flower buds. Failure to do this will only result in further growth which will not ripen in time for flower buds to form. For container-grown plants plunged into the ground a mulch of cow manure and peat is best.

Diseases and pests of camellias are few, but green and black aphis can be expected to attack the new growth. This can be

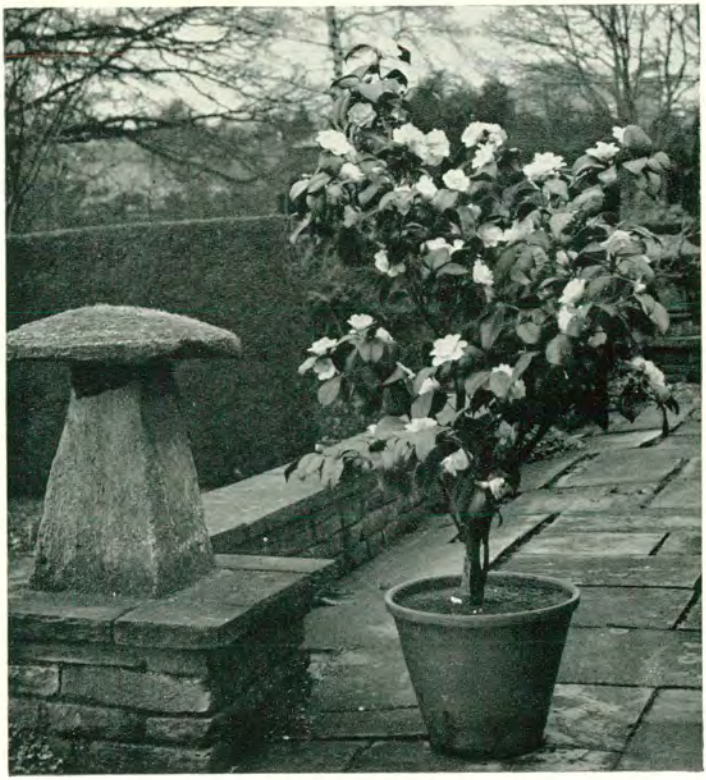
effectively controlled by spraying with a nicotine spray. D.D.T. and Derris sprays should not be used as they can be harmful to many varieties of camellias. White scale may also be encountered, especially on plants that are grown in containers, and a thorough spraying of stems and under the foliage with a 2 per cent oil emulsion will clear it. Atmospheric pollution often leaves a dirty sooty deposit on the foliage especially if the plants are grown in or near large towns, and makes them appear unsightly. Two or three thorough sprayings during the year, again with a 2 per cent oil emulsion will not only clean the foliage, but gives it a brilliant shine, and makes the tedious process of sponging each individual leaf, which many people do, unnecessary.

Sometimes a perfectly green plant will develop yellow mottling virus, and many a plant will eventually become completely variegated. There is no known cure, but it does not generally affect the vigour of the plant, and in fact, can be quite attractive to look at, like any other variegated plant.

When camellias have been grown to a size suitable to replant permanently into a final and fairly large container, some doubt is expressed as to how long such a plant would thrive. If the plants are kept clean by spraying, and fed and mulched annually, and good drainage has been provided they will live for many years. European growers have kept camellias in containers for as long as 50 years, the plants being 8 to 10 feet high and with a spread of 6 to 8 feet.

A well-budded plant of camellia will flower for up to two months or more. All the buds do not open together, but those which do are spaced fairly evenly over the whole tree or bush. Camellia blooms tend to tarnish with age, and whilst single and semi-double flowers will generally fall when spent, many of the informal doubles and most formal doubles remain on the tree when dead and will need to be picked off, when past their best, in order to give the tree its best appearance.

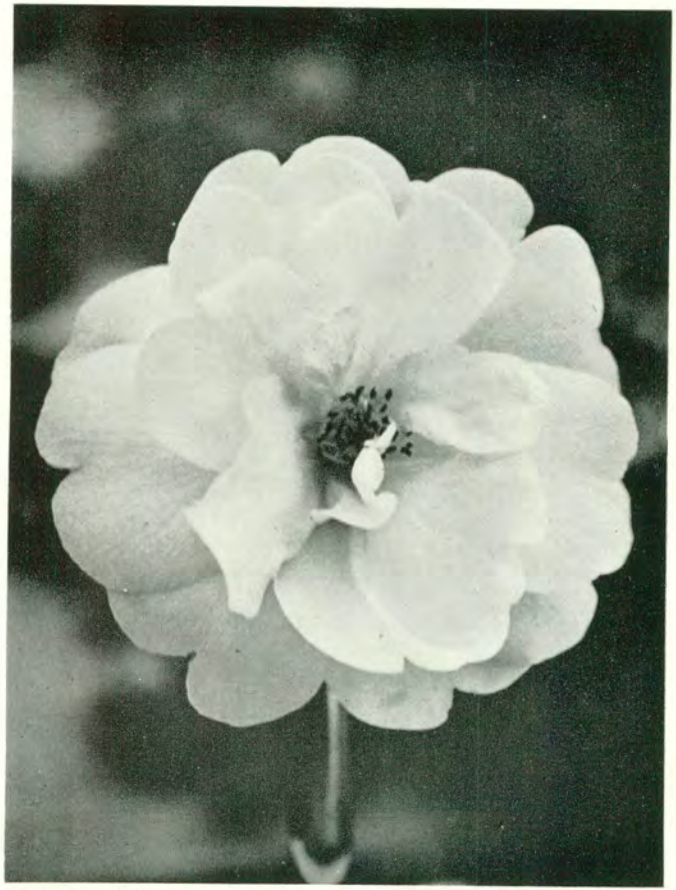
The choice of varieties for container growing is of course a matter of individual taste, and much depends upon the positions they are to occupy. Some varieties are of a lax open habit, and in high wind the branches tend to lash against each other, so when in flower the blooms would be bruised and spoilt. The majority of varieties, however are of stiff upright, or compact habit and are ideal for container growing. There are now on the market many choice varieties of American raising, which are outstanding in form and vigour. Most of these are ideal for growing in containers

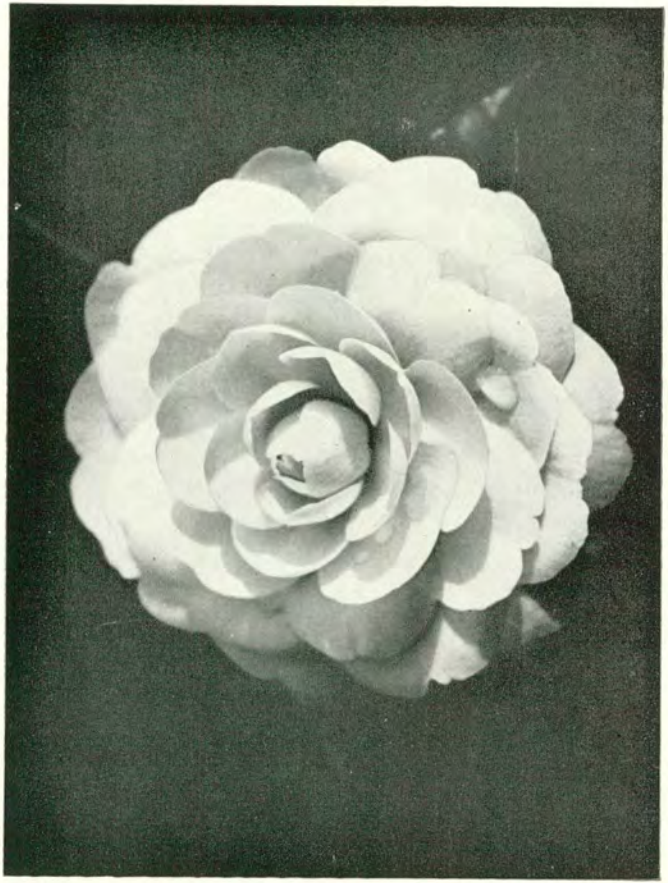


CAMELLIAS IN CONTAINERS

FIG. 35.—A nine-year-old camellia plant displayed to good advantage on a terrace (see p. 93)

FIG. 36.—The stepping up in sizes when pots are used for camellias (see p. 94)





Photos: John Reid

FIG. 37.—*Camellia* × *williamsii* 'Lady Gowrie' (see p. 85)

FIG. 38.—*Camellia* × *williamsii* 'E. G. Waterhouse' (see p. 85)

Photo: David Feathers

FIG. 39.—Camellia 'Carl Tourjé' (see p. 87)

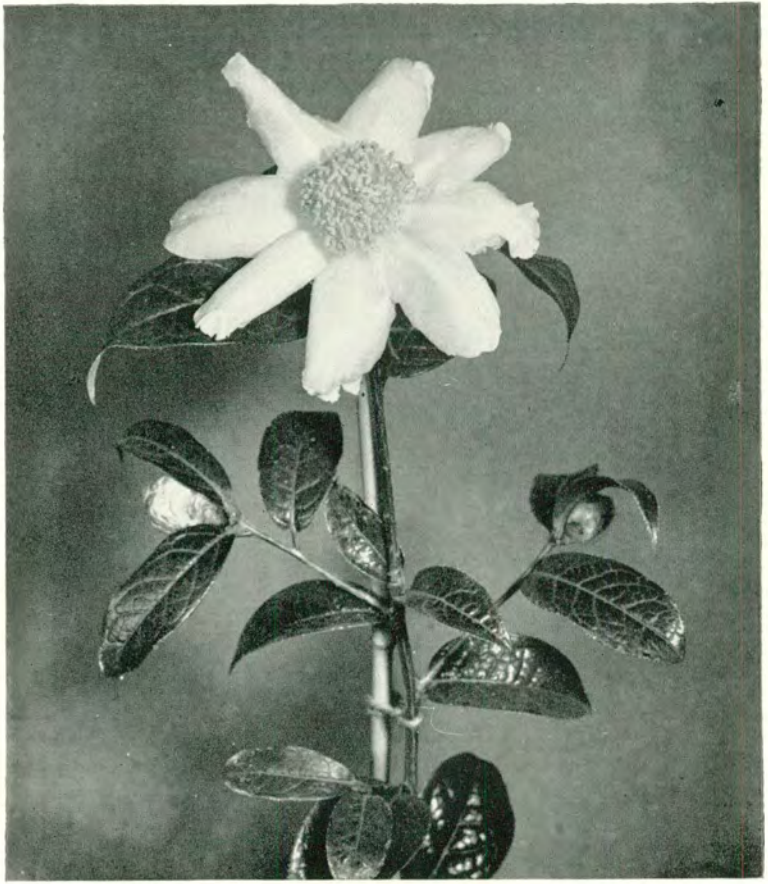


Photo: R. P. Scase

FIG. 40.—*Camellia granthamiana* (see p. 123)

Photo: Paul A. Hesse Studios

FIG. 41.—Ralph Peer (see p. 98)

and there are probably more grown in this way in America, than planted direct into the ground.

Camellias, whether grown in containers or planted into the open ground, do not require a great deal of pruning. The plants, however, should be kept in good shape by shortening a branch here and there which may be growing out of proportion to the rest of the plant. Some people prefer to cut blooms, and this is also a method of pruning, but should be done carefully so as not to leave irregular growth. To preserve the shape of a plant more can be done by a few pieces of green string than by a knife. Branches can often be pulled in to fill a hole, and they will set in this position when they have ripened. Some camellias, especially those of a lax open habit, can be trained direct to a wall, and if the soil is unkind, this is another occasion when container growing comes into its own.

Camellias are easy to grow, and it is hoped that the foregoing will help the many people who would like to grow them, but have been advised that their soil conditions are unsuitable. There is no reason why, in the future, good camellia gardens should not be found all over England, instead of being confined to the acid soil areas, as is the case at present.

RALPH PEER

EARLY in the past year camellia lovers all over the world were shocked to learn of the death of Mr. Ralph Sylvester Peer, one of the world's leading authorities on camellias. He died at his home, Park Hill, Los Angeles, California, rather suddenly on January 16, 1960.

Born in Kansas City, Missouri, in 1892, he graduated from the Central High School of his native town and began working for the Columbia Phonograph Company in 1917. Later, in 1927, he founded a successful business of his own, establishing a chain of music publishing houses covering the principal countries of the world. Ralph Peer loved travelling and when he died his thirty-two different offices operated successfully in twenty-six countries.

His horticultural activities commenced at the early age of nine years when he won a prize of ten dollars in Kansas City for the best designed garden by a junior. Later he became interested in camellias, both species and hybrids. This interest grew and at the time of his death he possessed the largest collection of camellia hybrids in the world. His successful business necessitated Ralph's travelling to all parts of the world which gave him the opportunity readily accepted, of collecting the best known varieties from many different countries. No trouble was too great for him to obtain any worthwhile variety, and it was mainly through his generosity and good offices that the nineteen Kunming reticulatas were introduced into cultivation from western China.

Ralph Peer and his wife Monique purchased their home, Park Hill, Los Angeles, mainly because of their love of camellias. There are over 3,000 camellia plants growing there, the most recent addition being what is supposed to be the mother tree of the variety 'California' (the largest camellia tree in southern California). This was successfully transferred during the night hours by truck some twenty-two miles from Pico to Park Hill.

In more recent years Ralph and Monique Peer bought a country home (White Firs) on the shores of Lake Tahoe, where they successfully began establishing a second collection, amongst which is a batch of *Camellia rusticana* a sub-species brought from the mountains of western Japan. Here at White Firs this particular

camellia successfully survived the winter snows which cover the area from December to April.

Ralph Peer's wide knowledge of camellias fully fitted him for the various offices he held in the camellia world. Amongst these he was elected president of the newly formed Los Angeles Camellia Society in 1951. During 1952 he served as vice-president of the South California Camellia Society and in 1957 he was elected president of the American Camellia Society. The Royal Horticultural Society awarded him the Veitch Memorial Medal in Gold in 1955 for his services in connection with camellias.

To his memory stand many writings in various American camellia books and also in The Royal Horticultural Society's Rhododendron and Camellia Yearbooks.

I am sure I am voicing the thoughts of all camellia lovers who were fortunate enough to have met the late Ralph Sylvester Peer by expressing our deep sorrow to his widow and son.

FRANCIS HANGER

CAMELLIA PROBLEMS ANSWERED

A beginner's Guide

By FRANCIS HANGER, V.M.H.

Q. I have about 200 camellia plants to look after growing in the open ground with the exception of a few in 12 inch pots. The majority of them have been full of bud but I have had a very large bud drop and I am wondering what is causing it.

A. For most camellia growers bud drop is perhaps the most troublesome problem. Extreme weather conditions, poor cultivation and natural thinning are believed to be responsible for most cases.

Some free-flowering plants set more flower buds than they can develop and natural thinning takes place. Mass dropping is most alarming and once it has begun very little can be done other than to give your plants the best possible care so that the coming year will enable them to produce good strong growths which should prevent a re-occurrence of the trouble.

In 1956 Wisley experienced quite a lot of bud dropping and in our case it could not have been attributed to lack of water and it was thought that the very sharp frost in the early part of November, when we experienced 17° of frost on the ground, was a little too severe so early in the season before the buds had become set.

Camellias in the open, especially large plants, benefit from a good top dressing of farmyard manure, and plants in containers respond very well to a little dried blood or a top dressing of 7 lb. bone meal to a bushel of horticultural granulated peat.

To be really successful with camellias the plants should be kept moist and well drained and should not be allowed to suffer at the time when the young flower buds are swelling and forming during the autumn and early winter months. This need of attention to watering is especially necessary when plants are grown against the walls of houses with overhanging eaves.

Q. I have the following three camellias: 'Adolphe Audusson', 'Lady Clare' and 'Donckelarii'. They are about five years old

and grow in wooden tubs in an unheated conservatory. I have found them of great interest and would like to purchase three further varieties, all hardy, which can be safely planted in the open when they are too big to remain in tubs. Would you please give me a choice of three more varieties?

A. I note that the three varieties of *Camellia japonica* which you already own are all semi-double varieties and are either red or rose pink. I think the best advice I can give you is for you to obtain variety of form and colour in your collection and to choose the following three: 'Alba Plena'—white formal double, 'Elegans'—pink anemone form, and 'Altheaeflora'—dark red paeony form, or you may favour the brilliant red single 'Kimberley'. Why not try one of the single *Camellia williamsii* varieties, either 'J. C. Williams' or 'Mary Christian', The latter two will commence flowering in your tubs about Christmas time and will continue right up until early April. They grow much quicker than *C. japonica* varieties and are also lovely for cutting.

Q. Some while ago I took several leaf cuttings of camellias, four of which are now about 18 inches tall. I would like to know if I ought to take out the centre of the plants to make them break, they already have several breaks or "branches". I have been advised to prune them but I am very reluctant to do this as I never like to use the knife on any of my plants. When can I expect them to flower?

A. I am very pleased to think that you have been successful in propagating camellias by the leaf-cutting method.

Should you require good bushy plants it is essential to take out the centre of the young plants. Nurserymen use this portion either for grafting in the spring or for cuttings in the summer. On the other hand, here at Wisley we only cut out the centre if the plant fails to break freely itself.

True cuttings of mature plants will bloom within a year when very tiny indeed, but seedlings are new lives and will take anything up to seven to ten years to flower.

Q. I have recently had a small plant in a pot given to me, which is about 9 inches high at present, in excellent condition and named 'Magnoliaeflora'. As I am exceedingly fond of these blooms I wish very much to know about the watering, when to

put it in the garden, position, depth, type of soil, etc. Our garden faces west.

A. Camellia 'Magnoliaeflora' is indeed one of the best of the *C. japonica* varieties, being semi-double and shell pink in colour.

I do not consider it quite as hardy as some other varieties of *C. japonica*, the plant itself is hardy, but the flowers are easily damaged by early spring frosts, therefore, I think it most advisable that you should plant your camellia outside against a north or north-west or north-east sheltered wall.

At the time of planting incorporate plenty of horticultural granulated peat in your soil and add a handful or so of bone meal at the same time. When planting do not plant too deeply, just bury the ball about one inch deeper than when it was in the pot. Should there be any lime in your soil you would be best advised to grow your plant in a container potting on progressively when necessary in lime-free soil, eventually giving it a large wooden tub to give you pleasure for many years to come.

Q. I should be very grateful if you would say whether the disbudding of camellias is advised. Some of mine have clusters of up to eight buds.

A. The disbudding of camellias is most desirable, especially so should you require extra special flowers for exhibition purposes.

Different varieties of camellia need different treatment. Single varieties, such as those of *C. williamsii*, need no disbudding whatsoever as they begin flowering in early February and continue to the end of April (out of doors). Should they be disbudded you will destroy the plant's perpetual flowering over four months. This also applies to certain varieties of *C. japonica* with small flowers noted for their long period of display over the spring months and here only the smallest flower buds, if any, should be removed. For the larger types leave the larger buds at the apex of the growth and not more than three others of different sizes on each flowering growth. This will give you a prolonged flowering period and well developed flowers. Plants growing well in the open only seldom benefit from disbudding.

Q. I have been offered three camellias growing in a derelict greenhouse which must be transplanted as soon as possible as

the ground is being used for building. It is now August, do you think they might grow?

A. Camellias will transplant quite well, especially so at the end of September. Take great pains to have the plants well watered before lifting. The plants should, of a necessity be carefully lifted with a ball of soil attached to the roots. The size of the ball must be governed by the amount of root and the size of the plant. At the time of lifting carefully enclose the ball tightly in hessian or some other suitable material to enable safe transport.

After planting the plants will need a really good watering, and should be sprayed overhead if possible twice daily until really established.

Q. For several years we have had great disappointment over our camellias. They stand 4 feet high in pots and their name is 'Sacco Vera'. They once bloomed so profusely and were so beautiful. They make growth each year which is rather thin and sparse and each plant produces flowering buds early in the autumn which drop off long before Christmas-time. Some while ago we were advised to re-pot them, which we did, in pure peat and leaf mould, but the plants continue to be disappointing.

A. It appears to me that you have re-potted your camellias in just pure leaf mould with peat added. Although free from lime I do not think that such a compost would be of sufficient strength to produce good strong healthy yearly growths which will produce good strong flower buds.

From my experience, such a compost would be well and truly acid and have a low pH value. I find that when plants become really established in these conditions they need help, and benefit considerably from an occasional feeding. A John Innes potting compost of a higher pH value—about 5.0–5.3 with plenty of peat added, minus ground limestone or chalk and containing lime-free loam, would be found more suitable for the cultivation of camellias in tubs or pots.

I think your best plan is to take your plants out of their pots at the end of March, shake out all the loose soil and replace with potting compost as advised above. Should your plants be very straggly they should be pruned back to be made to appear bushy. On no account should you over pot.

After re-potting the plants will need frequent syringing overhead and kept in a cool greenhouse until well established.

Q. I should be grateful if you would give me any information regarding the raising of camellias from seed.

A. It is most important to remember when trying to grow camellias from seed to sow the seed as soon as possible after the calyx has split. If stored in a very dry place if only for a week the seeds are apt to get truly dry, lose their vitality and will not germinate. If camellias must be kept then a good plan is to store them amongst sphagnum moss in polythene bags where they will speedily germinate and at a later date they can be potted off singly.

I have noticed that camellia seeds germinate really well in pure, moist, lime-free granulated peat which retains sufficient moisture for the process of germination. A temperature of about 55° F. is advised for germinating purposes.

Photo: J. E. Downward

PLATE 7.—*Camellia japonica* 'Kelvingtoniana', F.C.C. 1869 (see p. 108)

CAMELLIA COMPETITION

April 5th and 6th, 1960

By JAMES PLATT

THE length of the hot, dry summer of 1959 caused considerable apprehension to growers of camellias on many soils. When eventually the drought broke camellias, like so many other plants, showed their great powers of adaption and recuperation by setting such a quantity of buds, they appeared almost excessive. However, there was still the English winter to be faced with its sudden changes of temperature and unexpected sharp frosts. This year the weather was considerate, though torrential rain in some places and frost in others the weekend before the competition must have caused much misgiving, but the competition opened on April 5th with more competitors and entries than ever before. There were in fact 30 competitors and 845 entries. It was not only the quantity but the quality of the entries that incited so much comment. There can seldom have been a camellia competition in this country in which every entry was of such high quality. It was noticeable this year that many varieties which are normally a self red, came freckled, striped or even blotched with white. To some growers this was an added attraction while to others it was highly disconcerting. Perhaps this is merely another manifestation of a certain lack of stability in varieties of *Camellia japonica* many of which have a tendency to sport. It was pleasing to note this year less confusion in nomenclature. There still remain varieties with but the slightest differences between them when viewed in the Show Hall. However, such plants do frequently show different habits of growth and differences in leaf when seen growing and justify different varietal names.

Her Majesty the Queen graciously sent from Windsor Castle some outstanding and recently raised varieties of *Camellia japonica*, presented to her by the Men's Camellia Society of Birmingham, Alabama. Amongst them three varieties received Awards of Merit. They were C. 'Mrs. D. W. Davis' with single flowers, some 5½ inches across, of a soft shell-pink and exquisite texture; C. 'Pink Champagne' with very double dome-shaped

flowers and wavy-edged petals of soft salmon-pink; C. 'Tomorrow' which might be said to be sister to the latter though of a darker tone. All three varieties created great interest and were much admired (Frontispiece, Figs. 27, 28).

In Class 1 the first prize went to Sir Giles Loder with 'Alba Simplex', second prize to Messrs. John Waterer, Sons and Crisp with 'Devonia' and third prize to Sir Ralph Clarke also with 'Alba Simplex'. The entries in this class were exceptionally fine, as were those in Class 2 where 'Jupiter' won all three prizes, for Sir Henry Price, Mr. L. S. Fortescue and Maj.-Gen. Harrison respectively. In Class 3 for 'Kimberley' Mr. de Rothschild took first prize, with an admirable flower. The variety which now seems to be accepted under this name, has petals of exceptionally good substance set off by particularly attractive stamens. In Class 4 for any single red-flowered variety not specified in Classes 2 and 3, Messrs. John Waterer, Sons and Crisp were first with an unknown variety; Mr. Reginald Try, second with a seedling and Mr. E. G. Kleinwart, third with an unnamed variety. This class contained some interesting seedlings of an almost pinkish-red. Sir Henry Price was first in Class 5 with 'White Swan', Mr. Try second with an unknown seedling and Mr. de Rothschild third with another 'White Swan'. It speaks highly for Mr. Try's excellent pink seedling that it was first in Class 6, while 'Hatsu-Zakura', an easy winner in a previous year, was second for the Crown Estate Commissioners.

There were 12 splendid entries in Class 8 for three single-flowered varieties. Mr. Try was first with 'Kimberley', a new seedling, and the very good white 'Rogetsu'. Lord Aberconway and the National Trust were second with 'Jupiter', 'Yukimi-Guruma' and 'Hatsu-Zakura', while the Crown Estate Commissioners were third with an unnamed variety from Wada, 'Furoan' and 'Hatsu-Zakura'. In Class 9 for 'Adolphe Audusson' the Misses Godman were first with a very fine flower 5½ inches across. Sir Henry Price was first in Class 10 for 'Donckelarii' with Mr. Cutts second and Mr. Kleinwart third. Class 11 for 'Gloire de Nantes' brought more flowers of outstanding quality. Lord Aberconway and the National Trust were first; the Crown Estate Commissioners were second and Mr. Cutts, third. In Class 12 for 'Latifolia' the Duke of Devonshire was first with a fine flower; Mr. Riggal second; and Mr. de Rothschild third. Though widely planted both 'Gloire de Nantes' and 'Latifolia' remain two of the most satisfying and satisfactory of varieties.

Class 13 for 'Lady Clare' had many entries of quality. Sir Giles Loder was first; the Misses E. and E. Godman second; and Mr. Haworth-Booth third. It is interesting to think that this popular and favourite variety is considered delicate in England while it appears quite satisfactory in the more rigorous climate of the State of New Jersey. The entries in Class 14 for 'Magnoliaeflora' were of a high standard this year with Sir Henry Price first; the Misses Godman second; and Crown Estate Commissioners third. It is a pleasure to see this variety, so restrained in colour and delicate in texture, in such condition, for its flowers are too easily spoilt by frost or rain.

Class 15 for any semi-double red variety, not specified in the previous classes, produced some of the most magnificent entries in the Competition. Messrs. John Waterer, Sons and Crisp were first with a flower of 'H. A. Downing' which can only be described as sumptuous. This firm is to be commended for introducing yet another recent and desirable variety from America. The flower itself measured 5½ inches across. The Misses Godman were second with 'Marguerite Bellomine', an attractive variety not frequently seen and in this instance with a flower 5 inches across; Mr. de Rothschild was third with a fine flower of 'Mercury'. In Class 16 for a white variety Mr. Cutts was first with 'Haku-Rakuten' in perfect condition. Sir Henry Price was second with a very good 'Madame Victor de Bischopp'. Lord Aberconway and the National Trust were third with 'Gauntletti' which can so frequently be a disappointment. Messrs. John Waterer, Sons and Crisp were first in Class 17 with the lovely pink 'Faith'. This has a flower 5 inches across. Mr. Cutts was second with the equally lovely 'Hana-Fuki'; The Crown Estate Commissioners were third with 'Nassai' from Japan. This is also a lovely variety, and if all three varieties are of equal merit, certainly on this occasion 'Faith' deserved to win.

Sir Henry Price's attractive and formal 'Augusto L. Gouveia Pinto' with almost purple-carmine, white-edged flowers was first in Class 18 for any semi-double variety not provided for above. Messrs. John Waterer, Sons and Crisp were second with the rose-red 'H. A. Downing', yet another recent variety from America. Major C. Hill was third with 'Effendi'. Class 19 for any three semi-double varieties had 18 entries of high quality. Sir Henry Price was first with a trio of great merit, composed of a perfect 'Mercury' 5½ inches across, 'Madame Victor de Bischopp' and an unnamed seedling. Messrs. John Waterer, Sons and Crisp were

second, following very closely behind with an American trio composed of 'H. A. Downing', 'Flowerwood' and the pale pink 'Dr. Tinsley'.

The Anemone and Paeony-formed varieties of *C. japonica* have a justifiably high reputation as outdoor plants and this year they well showed their good qualities, with large entries of which in Class 20 for 'Elegans' there are 20. Mrs. M. E. Bainbridge was first with a perfect flower 5 inches across. In Class 21 for 'Nobilissima' Mr. de Rothschild was first with an unusually large flower in perfect condition of what is certainly one of the most beautiful of white varieties. Class 22 for 'Preston Rose' was closely contested with Miss M. Edwards first, Mr. de Rothschild second and Messrs. John Waterer, Sons and Crisp third. In Class 23 Mr. de Rothschild was deservedly first with the fine red 'Childsii'; the Crown Estate Commissioners were second with a particularly good dark red seedling. Very attractive pink varieties appeared in Class 25, of these 'C. M. Wilson' was first for Messrs. John Waterer, Sons and Crisp, and 'Martha Brice' second for Mr. de Rothschild, and 'C. M. Loder' third for Sir Giles Loder. Sir Henry Price's 'Kelvingtoniana' was easily first in Class 26. His flower which measured 6 inches across, was of good stout texture and was without doubt the best bloom in the Competition (Plate 7). Class 27 was of interest, in that Messrs. John Waterer, Sons and Crisp were first with another American trio, 'R. L. Wheeler' which received an Award of Merit in 1959, 'Joseph Pfingstl' which has had much publicity in its native land and 'C. M. Wilson' which is now becoming known in this country.

Class 30 for the red 'Mathotiana' was very close. The Misses Godman were first, though the Duke of Devonshire, who was second, showed a flower of a singularly deep red. In Class 35 for 'Souvenir de Bahuaud-Litou' Mrs. Bainbridge was deservedly first with a flower which had just that touch of quality which made it stand out from other entries. Class 38 brought yet another outstanding first in Major C. Hill's 'Rubescens Major'. In Class 39 the delicate pink of 'Maiden's Blush' which won a third prize for Mr. de Rothschild was outshown by Sir Henry Price's fine large 'Mary Thomas' and the richer colouring of the Misses Godman's 'Augusto L. Gouveia Pinto'.

Class 41 for any six varieties of *C. japonica* usually taxes any competitor. For the second year running Sir Giles Loder took the first prize, in spite of keen competition. Of his six splendid varieties, 'Saudade de Martins Branco' and 'Mrs. D. W. Davis' were out-

standing. Sir Giles is to be congratulated not only for his first prize but also for receiving the Peer Trophy for the most meritorious exhibit in the Camellia Competition for 1960 for his entry.

There is quite a wide gulf between varieties of *C. japonica* and the wild *C. reticulata*, *C. saluenensis* and their hybrids perhaps because of the dominating blue in the pinks of these two species and their hybrids. Certainly the latter do not show up well in the competition hall. On the other hand the double, garden forms of *C. reticulata*, excluding the Kunming Reticulatas, show up magnificently and one is tempted to wonder if these forms are not, perhaps, the most beautiful of all camellias and to envy the great, old plants in the open in Cornwall. In Class 43 the first prize went once again to the Duke of Devonshire for his wonderful semi-double form with ruby-red flowers. In Class 50 which is open to the three species and their varieties and hybrids, the entries were of such a high standard, there were four prizes and one Highly Commended. Sir Giles Loder's first prize entries included *C. reticulata* 'Robert Fortune' and *C. reticulata* 'Captain Rawes'.

Classes 61 to 74 are open to one spray each of a particular species or hybrid. In Class 62 Messrs. John Waterer, Sons and Crisp were first with a spray of 'Kimberley' which well showed the good flower-texture of this variety. Major Hill won a first in Class 63 for a very well flowered 'Doncklelarii'. In Class 65 Sir Giles Loder's 'Marguerite Gouillon', a pinkish-red flecked variety, though not first, was both interesting and uncommon. Mr. de Rothschild's wild form of *C. reticulata* took first prize in Class 67, its colour being a clear, deep rose, but it was somewhat over-shadowed by the magnificent entries in Class 67 for double forms. Once again the Duke of Devonshire's form won a first. Sir Giles Loder's 'Barbara Hillier' took the only prize, a second, in Class 72. This was considered to be and was entered in a Class as a hybrid of *C. saluenensis*, but as Mr. J. R. Sealy points out it is possibly a clone of a probable cross between *C. reticulata* and *C. japonica*, known as *C. heterophylla*. The entries for Class 74, open to any six species or hybrids were exceptionally fine. There was little to choose between those of the Duke of Devonshire who won a first, and those of Sir Giles Loder who won a second. Both included garden forms of *C. reticulata* amongst varieties of *C. japonica* as well as *C.* × *williamsii* 'Donation'.

In the classes for Camellia plants in Bloom, the outstanding entry was that of Mr. R. Try which won a first prize in Class 72 with 'Salvator Rosa', 'Elegans' and a garden form of *C. reticulata*.

Messrs. John Waterer, Sons and Crisp included amongst their entries the small, compact, double, scarlet-flowered 'Monjisho' which gave the impression of being a sturdy garden variety.

In the class devoted to flower display, Mrs. McDonald was once again first, using as last year, the rich red variety 'Margherita Coleoni'. Her material was excellent and her use of it showed how desirable camellias can be as cut flowers. There was perhaps, too much contrast in colour between the two varieties used by Mrs. G. Preston. Sir Ralph Clarke, who was third to Mrs. Preston's second made effective use of 'Donation' in admirable condition.

TRADE EXHIBITS

Four firms devoted their trade exhibits mainly to camellias. Messrs. John Waterer, Sons and Crisp Ltd. received a Flora Silver-Gilt Medal for an exhibit in which they showed amongst well arranged shrubs not only many varieties recently brought from America, such as 'Joseph Pfingstl', the scarlet 'Marion Mitchell', 'Dr. Tinsley' and the red and white 'Emmett Pfingstl', but such older varieties as 'Apollo', 'Prince Albert' and unusually good 'Mars' as well as the English raised 'Leonard Messel' a cross between *C. reticulata* and × *williamsii* 'Mary Christian'. Messrs. Hillier and Sons had an interesting mixed group with the accent on camellias. Their 'Donation' and 'Sylva' showed up particularly well. Messrs. L. R. Russell showed old favourites such as 'Lady Clare' in an original manner. Individual flowers were placed flat on level beds of peat moss amongst dwarf flowering shrubs, with as a splendid centre piece and background, a huge branch of *Magnolia kobus* which was literally smothered with flowers. Messrs. Haskins had a low exhibit at floor level of many different varieties, some of them seldom seen. Their 'Kenny', 'Paolina Guichardini', 'Maiden's Blush', and 'Rosamund' were particularly worthy of note.

DESCRIPTIONS AND HISTORY OF EIGHTEEN POPULAR CAMELLIA JAPONICA VARIETIES

By CHARLES PUDDLE and FRANCIS HANGER, V.M.H.

ENCOURAGED by the favourable reception given to our article published in the 1960 *Year Book*, we have prepared descriptions of a further eighteen varieties of *Camellia japonica* which are generally available in Britain. We invite comments and further information on these cultivars, and thank all those who wrote to us following our last article. It is only through the free interchange of information and careful observation that the confusion in camellia nomenclature can be solved.

One or two queries have been raised regarding last year's descriptions. The listing of 'Crimson Cup' as a synonym of 'Kimberley' has been challenged and further investigation may well prove that we were wrong in stating they are the same variety. Some doubt has also been expressed as to whether 'Altheaeflora', 'Blackburniana' and 'Childsii' are synonymous, for it is claimed that there are differences in foliage and habit although it is generally agreed that the flowers are very similar. Several plants of each variety have now been planted so that they can be compared growing under exactly the same conditions.

The history of 'Lady Vansittart' should be amended to include reference to the description published in *The Garden* in 1887.

'Apollo' (A.M. 1956) (Fig. 42)

SYNONYM 'Jupiter' (erroneously).

BLOOM

Form: Semi-double, Class II.

Petals: Usually 15, orbicular or oblate, 5 cm. wide and 4·5 cm. long, the central petals being smaller.

Stamens: In an irregular central cluster, the outer filaments conjoined up to one third of their length, one or two petalodes often present.

Diameter: 10 cm.

Colour: Very near Orient Red (H.C.C. 8193) occasionally blotched white.

FOLIAGE Elliptic, 10 cm. long, and 5 cm. wide, serrate from middle to tip, very shallowly serrate from middle to base, acuminate to long acuminate, apex decurved, dark green, very glossy.

HABIT Vigorous, branching open.

HISTORY The original 'Apollo' has double rose flowers, and was raised in Italy by Mariani and described by Berlese in the third edition of his *Monographie* in 1845. As this variety was recorded in Italy as late as 1930, the true 'Apollo' may still be in cultivation but unidentified in Britain. The cultivar described above is one of a group of single and semi-double varieties introduced or raised by William Paul about 1900. It was described in *The Garden* 1911, as "bright red with a central ring of bright yellow stamens". Should the original 'Apollo' be located, confusion could perhaps be avoided by re-naming the above 'Paul's Apollo'.

REMARKS The bright red semi-double flowers of good substance are fairly frost resistant and combined with good foliage and vigorous growth make 'Apollo' a very suitable variety for the British climate. Both flowers and foliage are often inclined to variegation and the name 'Apollo Variegated' has been applied to the form showing predominantly white blotched flowers. It has been confused with another Paul introduction 'Jupiter' (see 1960 *Year Book*) which in fact received an Award of Merit in 1953 when exhibited as 'Apollo'. 'Apollo' can be easily distinguished from 'Jupiter' by its deeper red more numerous petals, its open habit, and the long pointed leaves which have a characteristic slight twist.

'Comte de Gomer'

BLOOM

Form: Formal Double Class VI (occasionally Rose Form Class V).

Petals: Obovate, 4 cm. long, 3·5 cm. wide, irregularly notched, imbricated, diminishing in size to centre where they are oblanceolate, mucronate, and often creped.

Stamens: A few in centre of fully open Rose Form flowers.

Diameter: 8·5–9 cm.

Colour: Very near Carmine (H.C.C. 21/1), striped and flecked with crimson and cerise.

FOLIAGE Broadly or very broadly elliptic, 8 cm. long, 4·5–5 cm. wide, serrate, short acuminate; mid-green.

HABIT Open, spreading.

HISTORY Raised by Count Lechi in Italy and described, illustrated, and distributed by Verschaffelt in 1860. Illustrated in the *Floral Magazine*, 1865.

REMARKS Most variegated camellias show wide differences in the degree of variegation and 'Comte de Gomer' is no exception. Its flowers are often almost self coloured carmine, or at the other extreme very heavily flecked with deeper markings, and blotched white. Although the flowers are not of great size, it is an attractive variety which does well in the open.

Photo: J. E. Downward

FIG. 42.—*Camellia japonica* 'Apollo' (see p. 111)

Photo: J. E. Downward

FIG. 43.—*Camellia japonica* 'Madame Victor de Bisschop' (see p. 118)

'Dobrei'

SYNONYM 'Dobreei', 'Latifolia' (erroneously).

BLOOM

Form: Semi-double, Class II.

Petals: Rotund, 5 cm. long, 4·5 cm. wide, rounded, 10–12 outer petals recurved, inner petals narrower, mixed with petalodes to form a twisted mass in centre of flower.

Stamens: Conjoined in groups of about twelve, many are petalode in form.

Diameter: 9–10 cm.

Colour: Carmine (H.C.C. 21/1).

FOLIAGE Broadly elliptic or obovate, 9 cm. long, 4·5 cm. wide, serrate, short acuminate, glossy, mid-green.

HABIT Upright, Vigorous.

HISTORY 'Dobrei' is first described by Berlese in the *Annales de la Societe Centrale d'Horticulture de France* in 1849. In his *Traite du Camellia*, 1851, De Jonghe spells the name 'Dobreyi'. Later spellings have usually been 'Dobreei' and this may be confirmed when records are complete, for a Mr. Dobree exhibited camellias in 1845. It has been claimed that 'Dobreei' as represented to-day originated in the Channel Islands, but the variety in cultivation from this source seems to be very close to that described by Berlese.

REMARKS A fine semi-double red with good foliage and very successful in the open. In commerce it is often confused with 'Latifolia' (see 1960 *Year Book*) and although similar in colour there are obvious differences in flower, foliage and habit.

'Duc de Bretagne'

SYNONYM 'Duke of Britain'.

BLOOM

Form: Rose Form, Class V.

Petals: Numerous, obovate, 4·5 cm. long, 3·5–4 cm. wide, rounded or slightly emarginate, imbricated, with central petals forming a cup until fully open.

Stamens: Often none visible but sometimes a few in the centre of fully opened flowers.

Diameter: 9 cm.

Colour: Carmine Rose (H.C.C. 621) paling to (H.C.C. 621/2) in centre, often blotched and striped with white.

FOLIAGE Narrowly ovate, 9 cm. long, 5 cm. wide, serrate, acuminate to long acuminate, deep glossy green.

HABIT Vigorous, branching, making large spreading bush.

HISTORY Raised in Nantes by Drouard Gouillon and described by Berlese in the *Annales de la Societe Centrale d'Horticulture de France*, 1849. Illustrated and described by Verschaffelt in 1848.

REMARKS Old plants flower freely but blooms usually rather damaged in the open. Somewhat straggly when old although vigorous in growth.

'Hana-Fuki' (A.M. 1956) (Fig. 45)

BLOOM

Form: Semi-double, Class II.

Petals: Seldom more than 15, orbicular, 6 cm. long, 5–6 cm. wide, incurved, forming a round cup-shaped flower.

Stamens: In several clusters of twelve or more, conjoined up to half their length, turning inwards, occasionally slightly petaloid.

Diameter: 10·5 cm. when petals outstretched.

Colour: Near Neyron Rose (H.C.C. 623/2).

FOLIAGE Leaves elliptic, 8 cm. long, 4 cm. wide, sharply serrulate, mucronate, very dark green, of good substance.

HABIT Upright, compact, slender but stiff, slow growing.

HISTORY The earliest reference located is in a book dealing with the flora of Japan published in 1928 where it is described and illustrated in Japanese. The earliest listing in English is by the Chugai Nursery in their 1935/36 catalogue. There is also an illustration in colour and description in Professor Hachiro Hosaka's work of 1937. Although grown in the United States since 1930, Britain owes its introduction to Sir James Horlick who obtained plants in 1939 from K. Wada of Yokohama.

REMARKS A striking variety with its attractive cup-shaped flowers which are at their best when newly-opened. Its dense foliage has a distinctive bluish sheen and being of compact growth it is an ideal variety for the front of a camellia border. When grown in the open there is some variation in the number of petals, and single flowers are often produced. Japanese authorities inform us that the correct spelling should be 'Hana-fukki'.

'Hikaru-Genji'

SYNONYMS 'Herme', 'Jordan's Pride', 'Souvenir de Henri Guichard'.

BLOOM

Form: Semi-double, Class II to Paeony Form Class IV.

Petals: About 12–15 outer petals, broadly obovate, 4·5 cm. long, 3 cm. wide, somewhat twisted with wavy and undulate margins; central petals narrower and mixed with petalodes and stamens.

Diameter: 7–9 cm.

Stamens: 3 or 4 masses of 12 or so, each conjoined for about ¼ of its length, some stamens in petalode form.

Colour: Rose Madder (H.C.C. 23/2) streaked and occasionally blotched with Rose Madder (H.C.C. 23/1). Margin of each petal irregularly outlined with white.

FOLIAGE Narrowly elliptic, 9 cm. long, 4–5 cm. wide, shallowly serrulate, apex short acuminate, twisted and decurved. Deep green, glossy.

HABIT Erect, compact, vigorous.

HISTORY This very old popular Japanese variety is recorded in the seventeenth century Japanese literature. In its transliterated form 'Hikaru-Genji' was first published in the 1891 catalogue of the Yokohama Gardeners' Association. About the same time it was sent to Europe and in 1893 listed by T. J. Siedel of Dresden as 'Herme', a name which has remained popular in the western world. In France it is known as 'Souvenir de Henri Guichard'. Plants imported from America are often labelled 'Jordan's Pride'.

REMARKS 'Hikaru-Genji' shows great variation in flower colour and at least nine mutations have been named, many of them also having several synonyms. The typical form, with rose-madder petals, deeper streaks and an irregular white margin is described above. 'The Mikado', a sport with rose-madder petals without streaks and a regular distinct white border, was introduced by Gerald Waller and described in *The Garden*, 1889. Other mutations known in this country are 'Herme Pink' (solid pink), 'Beauty of Holland' (rose pink with white markings), 'Colonial Lady' (predominantly white with rose stripes and flecks) and 'Look-Away' (rose pink centre and broad white border). In all its forms 'Hikaru-Genji' is a good late flowering variety of vigorous growth and handsome foliage.

'Imbricata Alba' (Fig. 47)

SYNONYMS 'Alba Imbricata'.

BLOOM

Form: Formal Double, Class VI.

Petals: About 70; outer petals 4·5 cm. long, 4·5 cm. wide, apiculate, perfectly imbricated and regular, decreasing in size towards centre.

Stamens: None visible.

Diameter: 8–9 cm.

Colour: White, some petals often showing slight pink markings, and occasionally odd petals are completely pink.

FOLIAGE Broadly elliptic or obovate, 12 cm. long, 6–7 cm. wide, shallowly serrate, long-acuminate decurved tip, deep glossy green.

HABIT Compact, upright.

HISTORY An early British variety introduced by Hugh Low about 1835. It is described by Berlese in the first edition of his *Monographie* in 1837 and later illustrated in his *Iconographie* in 1841. Certainly it was a very popular variety by 1840 when it was listed by most nurserymen. Although in foliage it somewhat resembles 'Imbricata' it is a distinct seedling, 'Alba Simplex' being the seed parent.

REMARKS A very fine white variety especially when grown under glass

where its perfectly imbricated flowers are seen to perfection. Old references always refer to pink stripes, and these often appear to-day.

'Incarnata'

SYNONYMS 'Lady Hume's Blush', 'Buff', 'Camurça', 'Carnea' (?).

BLOOM

Form: Formal Double, Class VI.

Petals: Outer petals obovate, 4 cm. long, 3–3·5 cm. wide, slightly notched; central petals oblanceolate, 3 cm. long with short pointed apex. Petals of intermediate shape and size from outside to centre of flower, imbricated to give a tiered appearance.

Stamens: None visible.

Diameter: 8–9 cm.

Colour: Near Dawn Pink (H.C.C. 523/3) but paler. Predominantly pale Dawn Pink when grown under glass, but in the open usually white faintly flushed with pink especially at the tips of the petals.

FOLIAGE Narrowly obovate or elliptic, 8·5 cm.–10 cm. long, 4–5 cm. wide, serrate, acuminate, light mid-green upper surface with paler veining and deep set midrib.

HABIT Upright, spreading, loosely branched.

HISTORY Imported from the East by Lady Amelia Hume of Wormleybury in 1806. The earliest reference is in the *Botanical Repository* 1812 where it was illustrated as Camellia japonica var. flore pleno incarnato, 'Flesh Coloured Camellia'. In 1816 it was described as 'Blush Camellia' in *The Botanical Register* and finally given a cultivar name in Loddiges' *Botanical Cabinet* 1818 as Camellia japonica 'Incarnata'. The name 'Lady Hume's Blush' has been in common use throughout camellia literature usually coupled with 'Incarnata'. The relationship between 'Incarnata' and 'Carnea' is difficult to decide due to conflicting old records, and they may well be distinct, although considered synonymous by Berlese.

REMARKS This distinguished old variety is very variable in colour and flower shape and in this country it is only under glass or in very favourable seasons that the characteristic flesh colour shows to its best advantage. In the open it will usually fade almost white and does not blossom freely until well established. On the same bush the normal imbricated tiered flowers are often interspersed with blooms having less numerous incurved petals. The foliage is inclined to be rather pale or yellowish green unless the specimen is thriving.

'Lady McCulloch' (Fig. 44)

SYNONYMS 'Lady MacCulloch', 'Lady Macullough', 'Sabina' (erroneously).

BLOOM

Form: Semi-double, Class II.

Petals: 15–18, rotund, 4 cm. by 4 cm., central petals smaller and sometimes broadly ovate, forming a campanulate flower.

Stamens: Conjoined in clusters of 14 or 15, with one or two petalodes among them.

Diameter: 8·5–9 cm.

Colour: White, lightly blotched and flecked with Carmine (H.C.C. 21/1).

FOLIAGE Elliptic, 8 cm. long, 3·5–4 cm. wide, relatively coarsely serrate, long-acuminate or acuminate, deep glossy green upper surface.

HABIT Spreading, bushy.

HISTORY Introduced from Japan by Gerald Waller, and described in *The Garden*, 1889. It was distributed by B. S. Williams and Van Houtte from whom it was obtained by the Caledonia Nurseries, Guernsey, in 1898.

REMARKS 'Lady McCulloch' flowers freely over a long period and is fairly frost resistant for the type of bloom. It sports freely and often at least three quite distinct coloured blooms can be found on the same specimen. The description given above is that of the true 'Lady McCulloch' and as the two most distinct mutations which usually appear do not seem to have been described, the following names are proposed:

'Lady McCulloch Pink'. Very near Neyron Rose (H.C.C. 623/2) striped Carmine (H.C.C. 21). Petals irregularly margined with white.

'Lady McCulloch Carmine'. Carmine 21/1 paler in centre of petals but blotches of deeper colour running from apex to base.

Flower shape and foliage of both these mutations show no change from that of the original.

'La Pace Rubra'

BLOOM

Form: Formal Double, Class VI.

Petals: Numerous, ovate or rotund, 5 cm. long, 3·5–4 cm. broad, rounded, or slightly notched, imbricated, outer petals reflexed.

Stamens: None visible.

Diameter: 8–9 cm.

Colour: Carmine (H.C.C. 21/1) deepening to (H.C.C. 21) in the centre.

FOLIAGE Broadly elliptic, 9 cm. long, 5–5·5 cm. wide, coarsely serrate, acute to apiculate, deep glossy green.

HABIT Bushy, vigorous.

HISTORY 'La Pace', an Italian variety raised by Santarelli in Florence, has white to white tinted rose flowers, striped with crimson. It was

described and illustrated by Verschaffelt in 1860. The variety referred to above which is the one usually grown in Britain, is the solid carmine mutation of 'La Pace' listed as 'La Pace Rubra'.

REMARKS A fine double red camellia which flowers freely, when established. Some branches often revert to 'La Pace' or show intermediate variations.

'L'Avenire'

SYNONYMS 'Lallarook', 'Laurel Leaf', 'Avenir', 'Mary Thomas' (Heligan), 'L'Avvenire'.

BLOOM

Form: Formal Double, Class VI.

Petals: Numerous, outer petals broadly obovate, 4·5 cm. long, 3·8 cm. wide, retuse, imbricated, diminishing in size towards centre of flower.

Stamens: Usually none visible but occasionally a few showing in late flowers.

Diameter: 9–10·5 cm.

Colour: Carmine (H.C.C. 21/1) paling to (H.C.C. 21/2) in centre and at the edges of the petals. Deeper veins, and often lightly spotted white or white flushed carmine.

FOLIAGE Elliptic or narrowly-elliptic, 10 cm. long, 4 cm. wide, sharply serrate, long acuminate. Upper surface of leaf dark green with prominent pale green veins. Dense foliage.

HABIT Compact, bushy, slow growing.

HISTORY Raised by Corsi in Italy, 'L'Avenire' was illustrated and described by Verschaffelt in 1854. It was referred to by Franchetti of Florence in 1855, where the spelling is perhaps correctly given as 'L'Avvenire'. The same variety was later listed by Guichard as 'Lallarook'. The name 'Laurel Leaf' is of recent American coinage and has no standing. The variety is very confused in America and many synonyms given in recent American literature are quite distinct varieties.

REMARKS Its distinctive leaves with pale green veins and sharply serrate margins give the plant an appearance closely resembling the common laurel. It flowers freely when established.

'Madame Victor de Bisschop' (Fig. 43)

SYNONYMS 'Le Lys'? 'The Lily'?

BLOOM

Form: Semi-double, Class II.

Petals: 15–18 broadly ovate, 5 cm. long, 4–5 cm. wide, rounded with irregularly cut and notched margins. Outer petals in two flat rows, and later reflexed, central petals smaller, erect and confused with petalodes.

Stamens: In a small central cluster conjoined to about third of length. Sometimes in compact central cylinder, but usually intermixed with petalodes.

Diameter: 10 cm.

Colour: White.

FOLIAGE Elliptic, 11 cm. long, 5–6 cm. wide, serrulate, acuminate, apex decurved, pale green with raised midrib.

HABIT Open, vigorous.

HISTORY 'Madame Victor de Bisschop' is listed in the post-war undated catalogues of Victor de Bisschop, Ghent, and is said to have been found before 1939. It seems to be identical with 'Le Lys' a variety also distributed from Ghent but dating back to about 1900 or before. The name is retained for the moment but efforts are being made to trace early records of 'Le Lys' and to clear up this confusion. Often called 'The Lily' in British lists.

REMARKS A very handsome semi-double white with large flowers and fine foliage although this is inclined to be yellowish unless grown in good conditions. A vigorous variety which has blooms as weather resistant as any semi-double white.

'Marguerite Gouillon' (Fig. 46)

SYNONYMS 'General Lamoriciere'?, 'General Lamorciere'?

BLOOM

Form: Paeony Form, Class IV.

Petals: Obovate, 4 cm. long, 3·5 cm. wide, outer petals arranged in 4 or 5 layers, rounded. Central petals smaller, and mixed with petalodes to give a raised centre.

Stamens: A few arranged in clusters but most of petalode form.

Diameter: 8–9 cm.

Colour: White, flushed very pale pink, dotted and striped with Crimson (H.C.C. 22/2).

FOLIAGE Elliptic, 8 cm. long, 4·5–5 cm. wide, shallowly serrate, acuminate, mid-green.

HABIT Upright, vigorous, spreading when of age.

HISTORY 'Marguerite Gouillon' raised in Nantes by Drouard Gouillon was described by Berlese in the third edition of his *Monographie* in 1845. It was illustrated by Verschaffelt in 1850. In recent years it has become confused with 'General Lamoriciere' another variety from the Nantes region listed by Guichard. In the light of present knowledge it is difficult to decide whether they were originally synonymous, but plants of these varieties recently imported from the Continent seem very close. The continental growers however state that they are different and stress the fact that 'General Lamoriciere' is deeper pink and has few stripes.

REMARKS A free flowering variety, bearing blooms which are rather subject to browning in the open. The degree of striping varies

considerably and white or self pink flowers appear, this latter mutation having been named 'Stardust' in America.

'Mars'

SYNONYMS 'Mercury' (erroneously), 'Apollo' (erroneously).

BLOOM

Form: Semi-double, Class II.

Petals: About 15–20, narrowly obovate, largest 5 cm. long, 3·5 cm. wide, irregularly retuse, of delicate texture, outer petals recurved.

Stamens: In central cylinder, the outer filaments of which are conjoined to about one third or half their length.

Diameter: 10 cm.

Colour: Very close to Turkey Red (H.C.C. 721/3), occasionally showing white streaks.

FOLIAGE Elliptic, 8–10 cm. long, 5·5 cm. wide, shallowly serrate, short acuminate, dark green, glossy.

HABIT Open, branching lax.

HISTORY 'Mars' as described above was introduced or raised by William Paul about 1900 and is listed in *The Garden*, 1911, as 'semi-double crimson'. The name 'Mars' has been used for at least two other varieties in old literature.

REMARKS A large semi-double red which despite its thin petals does well in the open. Many plants distributed as 'Mars' are correctly 'Mercury' or 'Apollo', with which it is often confused. It is considered by some authorities to be synonymous with 'Iwane' or 'Iwane Shibori', a Japanese variety listed by the Yokohama Nursery Company in 1895, but after close study we have concluded that Paul's 'Mars' is not related to 'Iwane'. Besides obvious differences in the petals and foliage, 'Mars' is a predominantly solid red, whilst 'Iwane' always shows extreme white blotching, and in our experience corresponds to its original description 'light red and white variegation tipped with bright crimson'.

'Princesse Baciocchi'

SYNONYMS 'Principessa Baciocchi', 'Princesse Bacciochi' and many variant spellings.

BLOOM

Form: Formal double, Class VI.

Petals: Numerous, very broadly obovate or rotund, 4 cm. long, 3·5–4 cm. wide, rounded or apiculate, imbricated, outer petals reflexed, inner petals cupped.

Stamens: None visible.

Diameter: 8–10 cm.

Colour: Very near to Claret Rose (H.C.C. 021) with deeper venation and often showing white stripes and blotches.

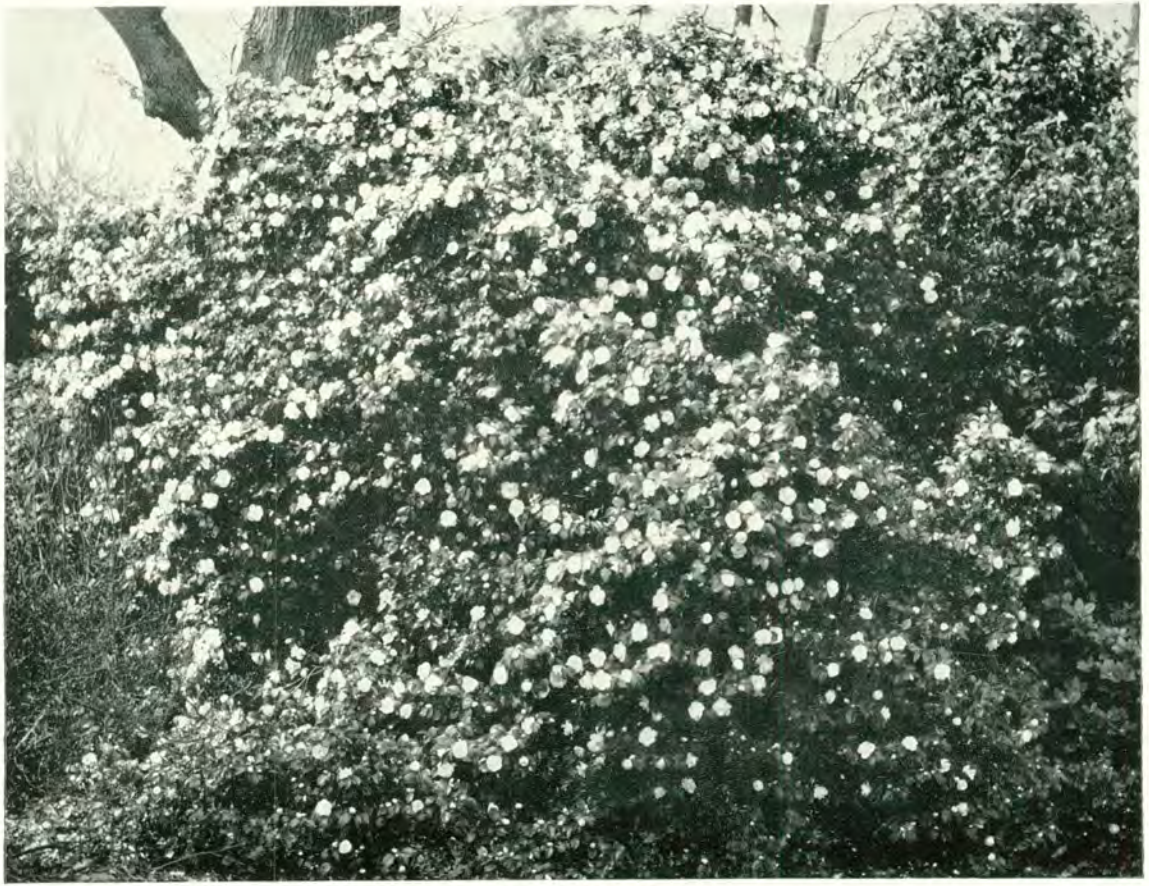
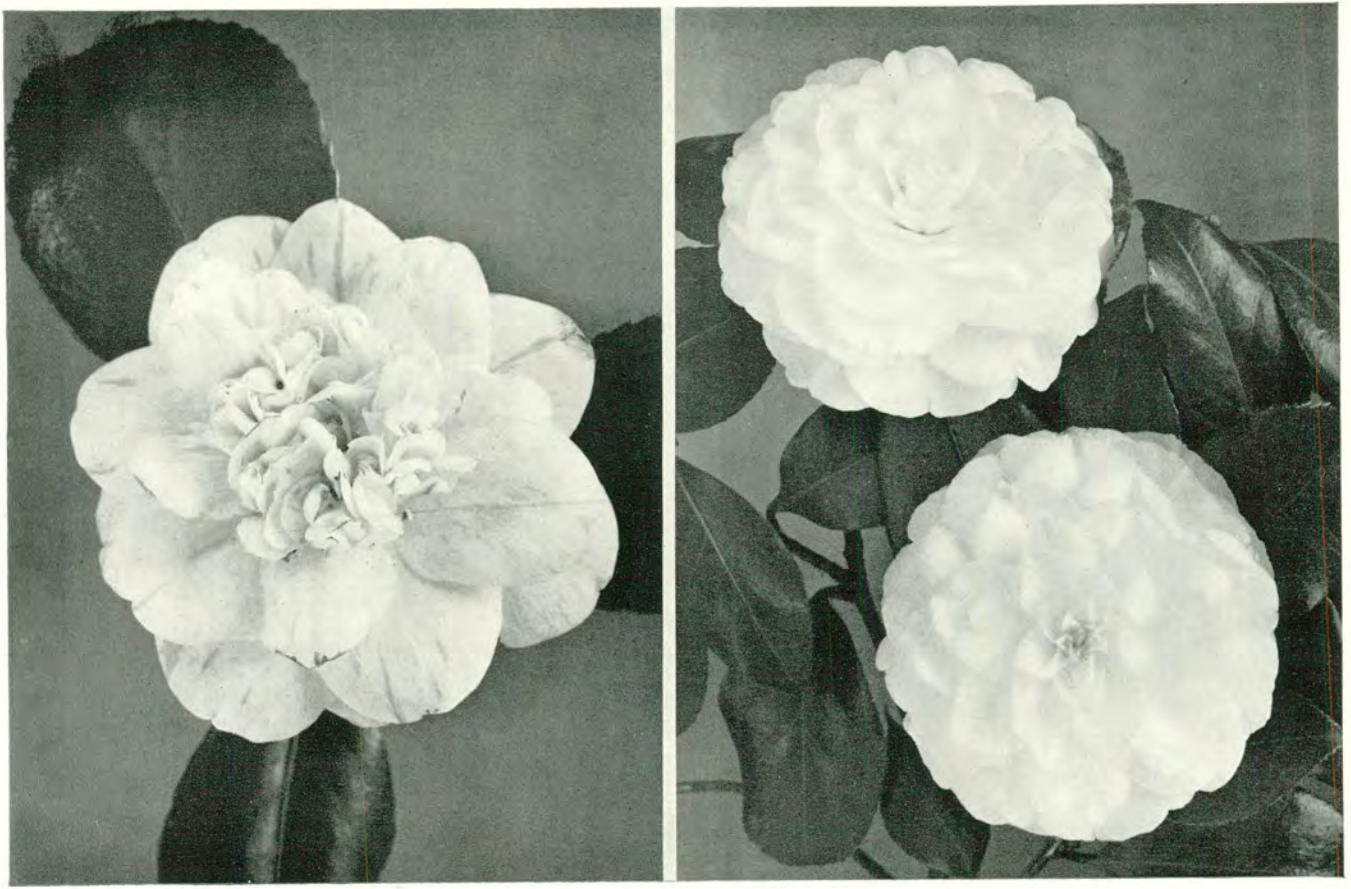


Photo: J. E. Downward

FIG. 44.—*Camellia japonica* 'Lady McCulloch' at Leonardslee (see p. 116)

Photo: J. E. Downward

FIG. 45.—*Camellia japonica* 'Hana-Fuki' (see p. 114)



Photos: J. E. Downward

EIGHTEEN POPULAR CAMELLIA JAPONICA VARIETIES

FIG. 46.—*Camellia japonica* 'Marguerite Gouillon' (see p. 119) FIG. 47.—*Camellia japonica* 'Imbricata Alba' (see pp. 115 and 124)

Photos: J. E. Downward

FIG. 48.—*Camellia japonica* 'Lanarth', A.M. April 5, 1960. Shown by M. P. Williams, Esq., Lanarth, St. Keverne, Cornwall (see p. 124)

FIG. 49.—*Camellia japonica* 'Kouron-Jura', A.M. May 3, 1960. Shown by the Crown Estate Commissioners, The Great Park, Windsor, Berks (see p. 124)

FOLIAGE Leaves broadly elliptic, 9 cm. long, 5·5 cm. wide, serrations medium spaced, shallow, acuminate.

HABIT Upright, slender, slow growth.

HISTORY This variety is extremely confused from a nomenclature point of view, and there are over twenty variations in the spelling of the name. It is difficult to be certain whether every reference applies to the same variety, but they are all based upon a double red variety, either self-coloured or showing various degrees of white variegation. The earliest reference located is by Berlese in his *Iconographie*, 1843, where he gives the spelling 'Princesse Bacciochi' yet in 1845 in the third edition of his *Monographie* it is 'Princesse Baciocchi'. In 1846 it was described and illustrated in *Flore de Serres* as 'Princesse Baciocchi', and the same spelling was used by Verschaffelt in 1850. In Italy where it was introduced by Boffi about 1841, the spelling generally used is 'Principessa Baciocchi', but no record pre-dating the above has yet been found.

REMARKS A late flowering double red, with dense foliage. Does well in the open, but not very floriferous until well established. Often shows considerable white variegation.

'Sara C. Hastie'

SYNONYM 'Debutante'.

BLOOM

Form: Paeony Form, Class IV.

Petals: About 12 outer petals in two rows, orbicular, 3·5 cm. by 3·5 cm. retuse or emarginate, Central mass of petals twisted and curled, with petalodes interspersed among larger petals.

Stamens: Usually none visible.

Diameter: 7·5 to 8·5 cm.

Colour: Rose Pink (H.C.C. 427/3) flushed Rose Pink (H.C.C. 427/2) in the centre.

FOLIAGE Elliptic or narrowly obovate, 10–12 cm. long, 5–5·5 cm. wide, short, acuminate, sharply serrate, glossy mid-green.

HABIT Compact, vigorous.

HISTORY A plant of unknown origin found growing in Magnolia Gardens, Charleston, U.S.A. was named 'Sara C. Hastie' and validly published by E. H. Wilson in *House and Garden* 1930. Later when introduced into commerce it was described as "Sara C. Hastie (Debutante)" by Fruitland Nurseries 1936–37, and in 1938–39 by Gerbings Azalea Gardens as 'Debutante', the name used subsequently by many American nurserymen. There are at present conflicting views as to which name should be employed and as a final decision can only be taken by the Camellia Registration Authority when it is formed; we have retained the earliest valid name as directed by the principles of the Nomenclature Code.

REMARKS In the open it grows well and flowers freely, but the blossoms are easily damaged by bad weather. Further investigation may prove that 'Sara C. Hastie' is a mutation of a well known old British variety 'Albertii' which it closely resembles. Many of the older camellias at Magnolia Gardens are of European origin, and have been re-named and now bear American synonyms.

'Valtevareda'

SYNONYM 'Valtevaredo'.

BLOOM

Form: Formal Double, Class VI.

Petals: Small, very numerous; outer petals very broadly-obovate or rotund, 4 cm. long, 3 cm. wide, recurved, central petals forming a cup. All petals retuse.

Diameter: 7·5 cm.

Colour: Very near Carmine Rose (H.C.C. 621) paling to (H.C.C. 621/3) in centre.

FOLIAGE Obovate, 8 cm. long, 4·5 cm. wide, half serrate, short acuminate, mid-green, glossy. Foliage dense.

HABIT Upright, vigorous, compact.

HISTORY An Italian seedling raised by Rossi, illustrated and described by Verschaffelt in 1853 and subsequently listed by most leading nurserymen of the day.

REMARKS An attractive variety with perfect flowers, which as they are produced late in the season, often escape weather damage. The dense glossy foliage and upright compact growth make it a valuable garden plant throughout the year. The flowers are occasionally spotted and striped with white, and this form was listed by Franchetti in 1855 as 'Valtevareda Variegata'.

'Zoraide Vanzi'

SYNONYMS 'Zorai de Vanzi', 'Zoraide Wanzi'.

BLOOM

Form: Formal Double, Class VI.

Petals: Numerous, broadly obovate, 4–5 cm. long, 4 cm. wide, rounded or emarginate, imbricated, outer petals reflexed.

Stamens: None visible.

Diameter: 9·5 cm.

Colour: White flushed pale pink, lightly speckled and splashed Carmine (H.C.C. 21/2).

FOLIAGE Broadly elliptic, 9 cm. long, 4·5–5 cm. wide, coarsely serrulate, acuminate, apex depressed.

HABIT Open, loose, but vigorous.

HISTORY Raised by Franchetti of Florence before 1860, this variety

was distributed by Hendersons and is described by B. S. Williams in *Choice Stove and Greenhouse Flowers*, 1869. Also listed in Verschaffelt Catalogue 1869–70.

REMARKS A rather coarse foliaged variety which does not flower very freely in the open when young. The flowers are of good substance, and are fairly resistant to inclement weather. The amount of variegation varies greatly and self-coloured flowers also appear.

A NEW CAMELLIA SPECIES

NUMEROUS *Camellia japonica* hybrids are introduced into this country year by year, especially so from the western part of the United States of America, but seldom do we have the pleasure of receiving new species. From time to time we are fortunate enough to receive a rare species from the Orient, either from China, Korea or Japan.

According to Mr. J. R. Sealy in his book *A Revision of the Genus Camellia* a single plant of *C. granthamiana* was found by Mr. C. J. Lau during the latter part of October 1955 in Hong Kong New Territory Shing-Mun, China. As soon as the discovery of this plant became known and in response to the requests of interested persons, Mr. H. C. Tang made a special trip to visit the plant when in flower a few months later. He found it growing in partial shade at a height of 2,000 ft., which definitely rules out all possibilities of the plant being hardy in this country.

During 1957 the Director of the Garden Division, Urban District Department, Hong Kong kindly sent scions from the plant to Wisley. These were grafted onto *C. japonica* stock and success was obtained in each case. The largest plant is now nearly two feet in height and produced four flowers this season. The flower illustrated from the plant at Wisley is much smaller than the one illustrated on page 166 in *A Revision of the Genus Camellia* which is 4 inches in diameter, the petals being rounder and overlapping with a fine large raised cushion of deep yellow stamens.

This camellia flowered first in cultivation in America and the following year for the first time in this country at the Royal Botanic Garden, Kew, during the latter part of last year.

The Wisley flowers have been hybridized with a rose pink *C. sasanqua*, and it is hoped that the hardiness of *C. sasanqua* will help to produce another race of early flowering hardy camellias for the woodland garden.

FRANCIS HANGER

CAMELLIAS AND RHODODENDRONS WHICH HAVE RECEIVED AWARDS IN 1960

Camellia japonica 'Donckelarii', A.M. March 8, 1960. Of all camellias this cultivar remains one of the most popular as it will bloom freely out-of-doors and yet, equally, it responds extraordinarily well to cultivation under glass. Sixteen petals make up each semi-double flower which is usually some 4 inches across. The flower is characteristically coloured Claret Red (H.C.C. 021) and marbled—sometimes heavily—with white. Exhibited by the Misses E. and E. Godman, South Lodge, Horsham, Sussex.

Camellia japonica 'Imbricata Alba', A.M. March 23, 1960. About fifty petals, some notched, and in many rows, make up the formal double flower of this cultivar. Each flower is 4 inches across and white in colour. Exhibited by the Misses E. and E. Godman, South Lodge, Horsham, Sussex (Fig. 47).

Camellia japonica 'Kouron-Jura', A.M. May 3, 1960. Col. Sir James Horlick, Bt. introduced this plant from Japan in 1939. The medium-sized flowers are formal double and Turkey Red (H.C.C. 721) in colour. Few stamens are to be found as the majority are petaloid. Exhibited by Crown Estate Commissioners, Windsor Great Park, Berks. (Fig. 49).

Camellia japonica 'Lanarth', A.M. April 5, 1960. Here it should be noted that the cultivar name is a new one, given to a plant which has been confused with *C. japonica* 'Kimberley' in the past. In size the flower is 4 inches across, it is semi-double and has a tight, central cluster of stamens The colour of the petals is Cardinal Red (H.C.C. 822/1). A particularly fine illustration of the cultivar is to be found in *The Camellia*, Vol. II, t. XXVIII (The Leslie Urquhart Press), 1960. Exhibited by Michael P. Williams, Esq., Lanarth, St. Keverne, Cornwall (Fig. 48).

Camellia japonica 'Mrs. D. W. Davis', A.M. April 5, 1960. This is stated to be a plant best suited for the cool greenhouse. The

flowers are Rose Pink (H.C.C. 427/3) in colour, semi-double and 4½ inches across. A few stamens are petaloid but the majority form a tight, central cluster. Exhibited by Her Majesty The Queen (*Frontispiece*).

Camellia japonica 'Pink Champagne', A.M. April 5, 1960. Among the many new and good American cultivars this is one of the most attractive. In shape the flowers are paeony form, 5 inches across and coloured a bright, variable shade of Dawn Pink (H.C.C. 523/1–523). Exhibited by Her Majesty The Queen (Fig. 27).

Camellia japonica 'Tomorrow', A.M. April 5, 1960. This cultivar originated in America and is recommended for cultivation in cool greenhouse conditions. It has large flowers of paeony form some 5 inches across and coloured Neyron Rose (H.C.C. 623–623/1). The stamens are nearly all petaloid. Exhibited by Her Majesty The Queen (Fig. 28).

Camellia japonica 'Yours Truly', A.M. February 23, 1960. The parent of this plant is *C. japonica* 'Lady Vansittart' from which it sported. The semi-double flowers have 14 petals and a central cluster of stamens, an occasional one of which is petaloid. In colour the flowers are Neyron Rose (H.C.C. 623/2) with the veination a deeper shade and the margins bordered white. Exhibited from the R.H.S. Gardens, Wisley, Ripley, Woking, Surrey (Fig. 31).

Camellia tsaii A.M. February 9, 1960, as a flowering shrub for the cool greenhouse. This species, native to Western China, can only be grown in a cool greenhouse in all but the most sheltered parts of this country. The shining, dark green leaves are narrowly oblong-lanceolate, caudate and serrulate, about 3½ inches long and an inch wide, with noticeably undulate margins. The five-petalled, glistening white flowers are about an inch across, becoming somewhat flattened with age. Exhibited by The Crown Estate Commissioners, Windsor Great Park, Berks. (Fig. 50).

Camellia williamsii 'Citation', A.M. March 8, 1960. On this hybrid the flowers are semi-double, measure 3½ inches across and contain 16 petals; the stamens are numerous in a central cluster and a few are petaloid. The flowers are coloured Rose Pink (H.C.C. 427/2) with a slight deepening of the colour at the base of the petals and in the veination. Exhibited by Lord Aberconway and The National Trust, Bodnant, Tal-y-Cafn, Denbighshire (Fig. 32).

Rhododendron baileyi, A.M. April 26, 1960. Naturally this is a low-growing shrub reaching 3 feet in height. On the plant which was nicely exhibited in Edinburgh, the flat rotate flowers are found 7–10 in a cluster. Each was $1\frac{1}{4}$ inches wide and coloured Doge Purple (H.C.C. 732/3) with large purple spots on the upper lobes. The pedicel was $\frac{1}{2}$ inch long, scaley and crimson-stained. Exhibited by Messrs. A. C. and J. F. A. Gibson, Glenarn, Rhu, Dumbartonshire.

Rhododendron (griffithianum hybrid × 'Hawk') 'Bray'. A.M. May 23, 1960. This plant has a lax, flat-topped truss made up of 8 flowers. The corolla is $2\frac{3}{4}$ inches long and 4 inches wide, campanulate in shape and coloured a very pale shade of Mimosa Yellow (H.C.C. 602/3) with the upper lobes a pale shade of Mimosa Yellow (H.C.C. 602/2) and the reverse side showing limited, pale pink shading. In contrast the buds are a varying shade of deep pink. Exhibited by Crown Estate Commissioners, Windsor Great Park, Berks.

Rhododendron eudoxum, A.M. April 26, 1960. It is recorded that this rhododendron is found in parts of South-East Asia in open thickets at an altitude of 11,000–13,000 feet. About six flowers or less make up a terminal umbel. The corolla is $1\frac{1}{2}$ inches long and $1\frac{3}{4}$ inches wide, deep campanulate and coloured Solferino Purple (H.C.C. 26) with a deep crimson tinge in the base. Exhibited by Messrs. E. H. M. and P. A. Cox, Glendoick, Perthshire.

Rhododendron formosum, A.M. April 26, 1960. At the Royal Botanic Garden, Edinburgh, this plant is grown as a cool greenhouse shrub. The flowers occur in pairs and each one is tubular campanulate in shape. In colour the flowers are white with a pale orange tinge in the throat while the reverse has a light staining of pale pink. Exhibited by the Regius Keeper, Royal Botanic Garden, Edinburgh.

Rhododendron glaucophyllum var. **luteiflorum, A.M.** April 26, 1960. The leaves are near lanceolate in shape, silvery on the underside with some scaling. The flowers appear in clusters of up to 6; on each one the campanulate corolla is $1\frac{1}{2}$ inches wide and 1 inch long and coloured Dresden Yellow (H.C.C. 64/2). Exhibited by The National Trust of Scotland, Brodick, Isle of Arran.

Rhododendron rubiginosum 'Wakehurst', A.M. May 3, 1960. On this form the truss was made up of about 25 flowers each on a long, red-stained, scaly pedicel. The campanulate corolla was 2 inches wide and 1½ inches long and coloured Mallow Purple (H.C.C. 630/2) with prominent crimson spots on the upper lobe. Exhibited by Sir Henry Price, Bt., Wakehurst Place, Ardingly, Sussex (Fig. 25).

Rhododendron 'Saint Tudy', A.M. May 3, 1960. It is said by the exhibitor that this free-flowering hybrid was raised about 11 years ago from a cutting of unknown parentage. Now it has developed into a plant some 5 feet in height and shows a densely bushy habit. Up to 15 flowers are in the trusses and on each flower the pedicel and calyx are scaly. The corolla is 2 inches wide and 1¼ inches long, shallow campanulate and coloured Lobelia Blue (H.C.C. 4122). Exhibited by Major-General E. G. W. W. Harrison, C.B., C.B.E., M.C., M.A., J.P., Tremeer, St. Tudy, Bodmin, Cornwall (Fig. 50).

Rhododendron (moupinense × spinuliferum) 'Seta', F.C.C. March 8, 1960. Not without very good reason this singularly attractive and early-flowering hybrid has become increasingly popular since it was first shown from Bodnant in 1933. Wherever it has been planted in collections of rhododendrons, it blooms freely every year and the flowers are fairly resistant to frost. In colour the tubular-campanulate flowers are white suffused, in varying degrees, with Solferino Purple (H.C.C. 26/3). About 18 such flowers make up each truss. Exhibited by Lord Aberconway and The National Trust, Bodnant, Tal-y-Cafn, Denbighshire (Fig. 20).

Rhododendron trichostomum var. **radinum. Forrest No. 20480, A.M.** May 23, 1960. This is a shrub 3–4 feet in height; leaves 1¼ inches long and ¼ inch wide, margins recurved and undersides densely scaly. The tight, small, globular truss is made up of about 25 flowers. Each of these is narrowly tubular in shape with the tube ⅔th inches long and coloured Tyrian Rose (H.C.C. 24/3) suffused with white to give a pleasing shade of soft pink. Exhibited by Crown Estate Commissioners, Windsor Great Park, Berks. (Fig. 26).

Rhododendron (nuttallii × veitchianum) 'William Wright Smith', F.C.C. April 26, 1960. This is a shrub for the cool greenhouse. The lanceolate leaves are pale green above and beneath show a light

silvering and some scaling. As new growth develops a light indumentum soon glabrous is apparent. The heavy flowers are in clusters of up to four and are slightly scented. The campanulate corolla is 5 inches long and 5½ inches wide, its lobes recurved and margins prominently frilled. In colour the flowers are white with a distinct orange tinge around the base and the outside tinged with varying shades of pink. Exhibited by the Regius Keeper, Royal Botanic Garden, Edinburgh (Plate 3).

Rhododendron (Yunncinn grex) 'Youthful Sin', A.M. May 23, 1960. By crossing *R. cinnabarinum* and *R. yunnanense* this hybrid was obtained. The plant blooms very freely with flowers in clusters of up to six. On each flower the pedicel is scaly and the calyx rim-like. The campanulate corolla is Rhodamine Purple (H.C.C. 29/2) and the stamens, pubescent at the base, are the same colour. Exhibited by Lord Aberconway and The National Trust, Bodnant, Tal-y-Cafn, Denbighshire (Fig. 23).

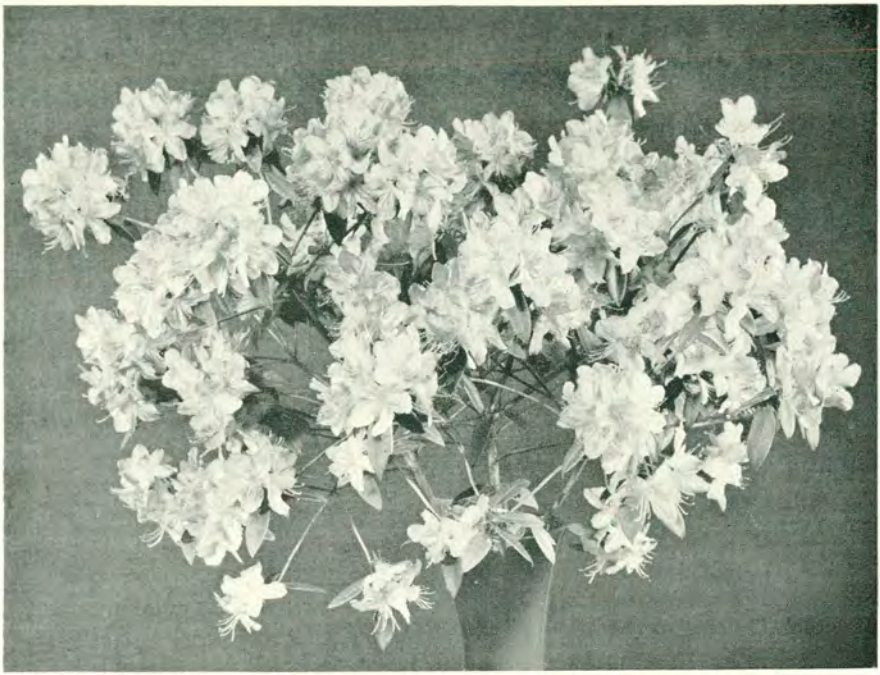


FIG. 50.—*Rhododendron* 'Saint Tudy', A.M. May 3, 1960. Shown by Major-General E. G. W. W. Harrison, Tremeer, St. Tudy, Bodmin, Cornwall (see pp. 71 and 127)

FIG. 51.—*Camellia tsaii*, A.M. February 9, 1960. Shown by the Crown Estate Commissioners, The Great Park, Windsor, Berks, as a shrub for the cool greenhouse (see p. 125)

Photos: J. E. Downward

Book Notes

CAMELLIA[1]

THE superb colour plates provide the chief attraction in this camellia book from Japan, the text being very subservient to the illustrations. With almost 300 pictures, it shows the esteem the camellia plant holds in that country.

Divided into 8 sections, the first deals with the "snow" camellia (*C. japonica* subspecies *rusticana*). Doubtless the hardiness of these plants will interest many people living in the colder parts of this country. Amongst the plates—which unfortunately are not named—one recognizes many varieties of *japonica* similar to those already growing in this country, and it well may be that different climatic conditions induce a different habit of growth, and the name "snow" camellia has been given to these.

The next section, on the Higo camellia, is probably the most interesting in the book. Belonging to *Camellia japonica* nominally, the varieties of the Higo-camellias are mostly single—the stamens opening at the centre in a cluster like those of *C. sasanqua*. It is a type of which we have very few examples here, 'Furoan' being one of them. Twenty-five varieties are beautifully illustrated, with names, and a list of 49 are given, with their descriptions. I have little doubt that all these would grow well in this country and prove a welcome addition. There is a further section dealing with the cultivating of dwarf Higo camellias, a cult that the Japanese have carried out for centuries.

The section on *C. japonica* is represented by more lovely plates. Besides those of individual flowers—named in most cases—there are pictures of magnificent old camellia trees growing amid temples. The majority of the varieties shown are singles, though some few remarkable anemone centred varieties are featured as well. Only a few of the names are familiar to us over here, though again some look similar to ones grown here. Further sections are on the history of camellias in Japan, and also the customs and uses this plant is put to in that country.

The final section which comprises almost half the book, is on

[1] *Camellia, its Appreciation and Artistic Arrangement*, by Choka Adachi. 278 pp., illus. (Koyo Shoiu Ltd., Tokyo), $25.

floral arrangement, and is probably the chief raison d'être of the book. For those interested in this art, the superb plates, with supporting explanatory diagrams, show to what a high plane of culture such arrangements have attained in Japan. Using camellia flowers and foliage as a medium, some beautiful decorations are featured, together with the motif behind them. It is a pity the text throughout had not been edited more carefully, as apart from mistakes of grammar, the meaning at times is not at all clear. However, the excellence of the plates fully makes up for these minor defects.

GILES LODER

THE CAMELLIA[1]

THIS most handsome volume contains paintings of some of the finest camellias which it is possible to grow in English gardens. There are six varieties of *C. reticulata*, including both 'Robert Fortune' and 'Capt. Rawes', the remainder of these being drawn from the recently introduced Yunnan camellias. 'Donation' is a worthy representative of the *williamsii* hybrids. This is surely one of the most lovely and also most adaptable of all garden plants for a lime-free soil. The remainder are varieties of *C. japonica* and among them are several recently raised in America such as 'Mrs. D. W. Davis' to which an Award of Merit was given only this year. It is a very large semi-double of delicate blush pink. The white Australian-raised 'Polar Bear' is another variety of great beauty, rather resembling the better known 'Gauntletti' which was featured in the First Volume. The drawings show the plants almost to perfection, and the reproductions by Messrs. Lohse of Frankfurt, Germany are some of the richest and best which I have seen for some time. The quality of the whites and the greens, both difficult colours to reproduce satisfactorily, is superb. Each plate is accompanied by a page of text giving synonyms if any, a good description, history and sometimes also a note from the raiser. It is interesting to have four variants or sports of 'Lady Vansittart' together on one page and to read that these were all picked from

[1] *The Camellia*, Vol. II, edited by Beryl Leslie Urquhart, with 2 reproductions from paintings by Raymond Booth and 14 reproductions from paintings by Paul Jones. Folio (The Leslie Urquhart Press, Plaw Hatch Hall, Sharpthorne, Sussex), 5 guineas.

the same bush. Mrs. Urquhart contributes also a Foreword and an interesting account of the introduction of camellias from China, especially the Yunnan varieties of *C. reticulata* and we should be grateful to her for the enterprise and care which have been devoted to this production. We look forward to further volumes in the Series.

PATRICK M. SYNGE

LIST OF MEMBERS OF THE RHODODENDRON GROUP

For the information of Members, a list of names and addresses of all the Members of the Rhododendron Group is published below. Those gardens of Members which are open to Members or the general public are indicated as follows:

* denotes open to Members of the Rhododendron Group by appointment made in writing and also on certain dates to the general public.
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†A. C. Barnes, 54, Lombard Street, E.C.4.
Egbert Barnes, Hungerdown, Seagry, Chippenham, Wilts.
Leo Baxendale, 15, Davidson Street, Broughty Ferry, nr. Dundee, Scotland.
F. J. Bedson, Tower House, 78, Westmoreland Road, Bromley, Kent.
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A. P. BOND, Caversham, Southcourt Road, Linslade, Leighton Buzzard, Beds.
J. A. BOYLE, 29, Prospect Road, Southborough, Tunbridge Wells.
MRS. JULIAN BOYLE, Rossmore, Fairmile Lane, Cobham, Surrey.
H. L. BRADFER-LAWRENCE, Sharon End, Ripon, Yorks.
MRS. D. A. BRAZIER-CREAGH, Flat 7, 6, Hans Crescent, S.W.1.
H. A. BRITTAIN, 164, Moseley Road, Birmingham 12.
R. M. D. BROOKS, 49, Wyngate Drive, Leicester.
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§DR. I. A. B. CATHIE, Barton House, Moreton-in-Marsh, Glos.
LORD CAWLEY, Openwood, Bagshot Road, Worplesdon, Surrey.
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L. H. K. COGSWELL, 33, Tangier Way, Tadworth, Surrey.
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(a) *denotes Azalea*

In order to save space neither the rhododendrons in the List of Species on pages 17–19 in H.M. The King of Sweden's collection at Sofiero have been included in the Index, nor the synonyms of the *Camellia japonica* varieties on pages 111–23.

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