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The Rhododendron Society Notes.

REPRINTED BY
THE PACIFIC RHODODENDRON SOCIETY

Acknowledgements

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RHODODENDRON, CAMELLIA
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2017

THE PACIFIC RHODODENDRON SOCIETY

"Dedicated to the Hobbiest and Home Gardeners"

Foreword

The Pacific Rhododendron Society has reprinted the Rhododendron Notes in an effort to further the knowledge of the Genus Rhododendron by those enthusiasts with an avid interest in the history, exploration and biographical sketches contained herein.

The Rhododendron Notes are offered to the end that the reader may more easily understand the progress encouraged by those who contributed the wealth of information contained in these volumes, thereby making clear our understanding of the Genus Rhododendron today.

The Society wishes to gratefully acknowledge the efforts on our behalf by the following persons and organizations: Dr. R. Shaw, Curator and M.V. Mathew, Librarian of the Royal Botanic Garden Edinburgh, Scotland, for providing the missing numbers; Lord Aberconway and John Cowell, Secretary of the Royal Horticultural Society, for certain photocopies and other considerations, Sir Giles Loder and Sir Edmund de Rothchild for their esteemed counsel, and to Thomas V. Donnelly our printer.

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The Pacific Rhododendron Society
1976

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The Rhododendron Society Notes.

NOTES

CONTRIBUTED BY

MEMBERS OF THE SOCIETY

FOR THE YEAR

1921

All communications regarding the publications of the Rhododendron Society should be made to Charles Eley, East Bergholt, Suffolk.

Vol. II., No. II., 1921.

The Rhododendron Society Notes.

MEMBERS' NOTES FOR THE YEAR 1921.

INDEX TO VOL. II., PART II.

*A MONOGRAPH OF AZALEAS.

Naturally there is no section of plant-lovers from whom this work will get a warmer welcome than the members of the Rhododendron Society, and it may at once be said that the book will fully deserve it. The publications already issued under the auspices of Professor Sargent and the Arnold Arboretum, which is really an adjunct of Harvard University, have established a very high standard of excellence, and it is no small praise to say that this, the most recent of them, is equal to its predecessors. I am informed by the Professor that the price is five dollars; and considering the cost of paper and printing in these days and that the issue is limited to three hundred copies, it is not excessive.

The authors may be congratulated on the attractiveness of their subject. A protégé of St. Crispin once opined that there is nothing like leather. One need not belong to this Society to maintain that just as there is nothing to equal Rhododendrons among evergreens, so there is nothing quite so good as Azaleas among deciduous shrubs. Their flowers either for richness, brilliancy or delicacy of colouring are unsurpassed by those of any other group of shrubs and few equal them in fragrance or in the beauty of their autumnal hues. To me, at any rate, the garden can give no deeper joy than an evening walk in Azalea time. Of the many happy memories I retain of Cornish gardens, none lingers more pleasantly than thoughts of the Caerhays woods or of Mr. P. D. Williams' beautiful garden at Lanarth in May, when these shrubs are in bloom, and especially when the sun is getting low in the west. And we whose lot is cast in a harsher climate than that of those delectable places need not be filled with the same degree of envy in regard to Azaleas, which the Cornish Rhododendrons are apt to engender. As a whole, they are much hardier and better fitted for the average climate of Great Britain, and among Azaleas in general cultivation there is a smaller proportion of those depressing kinds which, near and to the north of London, seem unable to decide whether to live or die when grown in the open air. This is even more applicable to the Eastern United States. Professor Sargent in a letter says, "for a country where broad-leaved Rhododendrons cannot be grown to advantage, these American and some of the Asiatic Azaleas are really treasures."

Although in gardens we talk of Rhododendrons and Azaleas as separate groups of shrubs, and know quite well what we mean, botanists are, I believe, unanimous nowadays in uniting them as one genus under Rhododendron, but in this work, although Azalea is used in its popular sense for the title of the book, the authors reject it as a botanical term. They do this because the name was first used by Linnaeus for AZALEA PROCUMBENS, the little shrub known now as *Loisleuria procumbens*, which constitutes a genus in itself distinct from any section of Rhododendron. Messrs. Wilson and Rehder consequently take the name ANTHODENDRON as the oldest valid one for the group of shrubs we know as Azaleas. Mr. Wilson deals with the Old World species, Mr. Rehder with the New World ones.

* A Monograph of Azaleas, by E. H. Wilson and Alfred Rehder, University Press, Cambridge, Mass., 1921.

The authors devote their first pages to a very interesting dissertation on the history, distribution in a wild state, and the classification of Azaleas. Then, after giving a key to the identification of their respective geographical groups, they proceed to deal with each species in detail. It is here, when each gets to close grips with his subject, that we are constrained to admire the thoroughness of their knowledge and the wealth of information they provide. Under each species is given first of all a number of references to the most important works in which it has been described, figured or discussed, next a list of its synonyms (sometimes appalling in its length) with their references, then an enumeration of the countries or localities where it has been found wild; finally, an essay on the plant itself. It is this last item which makes the book so valuable to the ordinary cultivator. Here we find a detailed description of the plant, a discussion on its affinities, information as to the character of country in which it grows wild, and historical details of its discovery and introduction. Sometimes this occupies two pages of closely printed matter. Except that occasionally one can infer from the geographical details something of the conditions it likes, the cultivation of a species is not dealt with; but apart from that, it would seem that little remains to be said about them.

The Sections of Azaleas.

Anyone desirous of studying Azaleas as a whole and of obtaining some idea of the relationships and differences between the various groups, must first of all get a grasp of the chief sections into which they are divided. Messrs. Wilson and Rehder make four of these sections, which they distinguish as follows:—

1. *Tsutsutsi.* Producing leaves and flowers from the same bud. Shoots covered with flattened, bristle-like hairs often pressed closed to the bark. This section includes such well-known species as INDICUM, SIMSII, OBTUSUM, AMOENUM and KAEMPFERI, and is very readily distinguished by the flattened hairs just mentioned which, so far as I have seen, always point more or less towards the end of the shoot.

2. *Sciadorhodion.* Flowers and leaves produced from the same bud—as in No. 1. The shoots, however, although sometimes downy, have not the flattened, bristle-like hairs of the preceding group. In this section come, amongst others, SCHLIPPENBACHII, RHOMBICUM and QUINQUEFOLIUM.

Both these sections are confined to Asia.

3. *Rhodora.* Flowers and leaves produced from separate buds. Stamens usually seven to ten to each flower. This includes VASEYI (which has, however, frequently only five or six stamens to a flower), CANADENSE and the new NIPPONICUM.

4. *Pentanthera.* Flowers and leaves from separate buds in No. 3, but the stamens are invariably five to each flower. To most of us, this is by far the most important section as it includes all the North American species except CANADENSE and VASEYI, the old yellow-flowered FLAVUM (here called LUTEUM), the Japanese Azalea we have long known as MOLLE, the Chinese one we have known as SINENSE and the great bulk of the hardy garden hybrids.

Having thus divided Azaleas into four leading groups, each author, by making further subdivisions provides a Key for the identification of the individual species in his own area. I am afraid amateurs as a whole find the use of such Keys rather difficult, but they are worth wrestling with. There is no surer test of sound botanical work than the construction of a reliable Key. Indolent and careless species makers are apt to shirk it, but no accusation of that kind can be brought against the authors of this monograph. Their Keys are admirably constructed and greatly help in the problem of finding the proper name for any species of Azalea.

HYBRIDS.

Most of the members of this Society are chiefly interested in Azaleas for their beauty and garden value, and the species and wild varieties are, on the whole, not so important to them as the glorious hybrids we owe to the skill and industry of workers both amateur and professional. It is curious that the first hybrids raised from Azaleas were obtained by crossing them, not with each other, but with "true" Rhododendrons. Early in the last century, such hybrids were raised in Lord Carnarvon's garden at Highclere, and in that of Lord Liverpool, at Coombe Wood. In the third decade a start as made in producing pure Azalea hybrids at Highclere, and by a baker of Ghent, named Mortier. Messrs. Loddiges, the famous nurserymen of Hackney, included some two hundred botanically named hybrids in their catalogue for 1836, most of which had been raised in Belgium or at Highclere. In later times the work was carried on by Belgian and Dutch nurserymen, and in England by the Waterers, Lee of Hammersmith, Osborn of Fulham, and George Paul of Cheshunt.

The older hybrids have smaller flowers than those of recent origin, but are, I think, superior in fragrance. Among them also are, I believe, a softness and variety of tints missing from the newer ones. Possibly this was due to the greater use made of VISCOSUM in the early days as a breeder.

Mr. Rehder gives an interesting record of the crosses that have been made between species and between species and hybrids. This must have entailed long and diligent search, and will constitute an invaluable contribution to the history of the garden Azalea.

I cannot, however, see what good end is served by giving botanical (i.e. Latin or Greek) names to groups of hybrids at whose original and multiple parentage only guesses can be made. Mr. Rehder gives us, as a new combination of his own, R." GANDAVENESE," which comprises the hybrids raised from R. MORTIERI crossed with FLAVUM and "partly VISCOSUM or ARBORESCENS." As R. MORTIERI is itself said to originate from CALENDULACEUM crossed with NUDIFLORUM and "partly SPECIOSUM," we have at least half-a-dozen species concerned in the production of R. "GANDAVENSE." That any advantage is to be gained by concocting such a name when "Ghent Azaleas" was already existing is problematical.

In the early days the use of botanical names was perhaps excusable, but, as I have already pointed out, by 1836 these Latin and Greek names already numbered over two hundred. The system becomes impossible in the end. If anyone produces a hybrid of outstanding merit, it is desirable and even necessary

to give it a name, but it should be a popular one like " Unique " or " Comte de Gomer." For a long time past, Mr. A. Waterer has ceased to give names to even his best new Azaleas at Knap Hill, or at any rate to many of them.

Nomenclature.

The most unsatisfactory feature in the relationship between botany and gardening at the present time is this matter of nomenclature. This is neither the place nor the occasion to enter into a lengthy discussion about it, but as the only unfavourable comments I have heard on Messrs. Wilson and Rehder's Book have been in connection with this matter of names—and some have been rather harsh—it may be worth while to devote a few explanatory words to it.

In 1905, there met at Vienna a congress of botanists who drew up a Code of Rules to govern the naming of plants. One need only glance at this work on Azaleas to see that there are many plants which have been named over and over again. R. INDICUM seems from first to last to have had about two dozen names given to it. It was important, therefore, in such cases to devise some rule that should indicate which one should be selected. The ordinary individual at once says " adopt the name by which it is most generally known," which sounds like common sense. But there are difficulties in the way. There are instances in which it is very much a matter of opinion as to what is the best known name, and others where a plant is known by different names in different countries. It is manifestly desirable that a plant should be known all over the civilised world by the same botanical name if that be possible. There was a general consensus of opinion that the oldest name given to a plant should be adopted for it, and thus was instituted the "rule of priority." If any hard and fast rule is justifiable at all, it is undoubtedly the fairest and best. But that does not settle the matter. The author of the first name given to a plant often did not place it in the right genus, so there arose the question whether the specific name originally used should be adopted for it, or the one given by the author who first associated it with the true genus to which it belonged. The latter is known as the " Kew rule," from being long in use at Kew, and to me it seems the most convenient, and, if the author of a botanical name need be considered at all, the fairest to him. But the Vienna Congress decided otherwise, chiefly by Teutonic and Transatlantic votes. The rule has undoubtedly caused much and, as I think, needless confusion in nomenclature, and because of it, many names have been changed which might otherwise have been left alone. A very good instance is that of the well-known *Paulownia imperialis*. In 1784, Thunberg called it " *Bignonia tomentosa*." This was not a particularly good shot ; it did not even put the tree in the right Natural Order. But in obedience to the Vienna rule, it has to be named *Paulownia tomentosa*, because tomentosa was the first specific name ever given to it. So a good many people are growing the tree to-day, under the fond delusion that they have got something distinct from *P. imperialis*.

Rhododendron is so well marked a genus that there has been little confusion in regard to generic as distinct from specific names. Such differences as have arisen are chiefly on account of authors dividing it up into several genera—in other words making genera of what Messrs. Wilson and Rehder consider to be sections or even lesser segregrations. Thus, besides Azalea itself, we get

Anthodendron, *Rhodora* (for *R. canadense*) and *Biltia* (for *R. Vaseyi*); also some now obsolete names like *Hochenwartia* and *Osmothamnus*. Therefore the alterations from old and hitherto well known names which we find in this book are due chiefly to two reasons: the one being a strict adherence to the rule of priority, the other to the rectification of mistaken identifications by earlier authors. Unfortunately this has involved the resuscitation of many unfamiliar names, and going through the book one is oppressed with their strangeness.

One ought, however, before condemning the result to try to appreciate the authors' aim, which is, of course, that of the institution to which they are attached. This aim is to put the nomenclature once and for all on a permanent basis. In a letter to me, Professor Sargent says "of course, the changes are most disagreeable and annoying, but perhaps a younger generation will be able to learn them. There is such a thing as getting down to bed rock, and in the matter of names it seems to be a desirable thing to accomplish, even if the process is often discouraging."

It may be convenient to tabulate the chief alterations made which are as follows:—

R. INDICUM (of greenhouses)	becomes	SIMSII
R. INDICUM OBTUSUM	,,	OBTUSUM
R. MACROSTEMON	,,	OBTUSUM MACROSTEMON
R. AMOENUM	,,	OBTUSUM AMOENUM
R. KAEMPFERI	,,	OBTUSUM KAEMPFERI
R. SUBLANCEOLATUM	,,	SCABRUM
R. CALYCINUM (OMURASAKI)	,,	PHOENICEUM CALYCINUM
R. YODOGAWA	,,	YEDOENSE
R. COREANUM	,,	YEDOENSE POUKHANENSE
R. POUKHANENSE	,,	YEDOENSE POUKHANENSE
R. LEDIFOLIUM	,,	MUCRONATUM
R. NARCISSIFLORUM	,,	MUCRONATUM NARCISSIFLORUM
R. MACROSEPALUM	,,	LINEARIFOLIUM MACROSEPALUM
R. DIANTHIFLORUM	,,	LINEARIFOLIUM MACROSEPALUM DIANTHIFLORUM
R. RHOMBICUM	,,	RETICULATUM
R. DILATATUM	,,	RETICULATUM PENTANDRUM
R. QUINQUEFOLIUM ROSEUM	,,	PENTAPHYLLUM
R. MOLLE	,,	JAPONICUM
R. SINENSE	,,	MOLLE
R. RUSTICUM FL. PL.	,,	MIXTUM
R. SMITHII AUREUM	,,	NORBITONENSE AUREUM

*R. BROUGHTONII AUREUM	becomes	NORBITONENSE BROUGHTONIANUM
R. FLAVUM	,,	LUTEUM
R. RHODORA	,,	CANADENSE

Whatever one's feelings may be in regard to names—and after all it is the plant itself that matters—it is impossible not to admire and be grateful for the amount of research the authors have put into this monograph. They have immensely lightened the labours of students of Azaleas for all time. Many favourable circumstances have attended the making and production of the book. Both authors have enjoyed the inestimable advantage of studying living material as distinct from mere dried specimens in herbaria. Mr. Wilson, as we know, has travelled over nearly all the regions where the Asiatic species grow wild and has seen almost every one in its natural home, as well as nearly every variety and garden form. Mr. Rehder, too, has made extensive journeys in the Azalea regions of North America, and seen most of the species he deals with in their native habitats. A collection of living plants which has existed for three quarters of a century on Professor Sargent's estate in Massachusetts, and contains many old garden types no longer cultivated in this country, greatly helped in the work. Then the magnificent library of the Arnold Arboretum was at their hand and with them all the time were the long experience, deep knowledge and wisdom of the head of that establishment. Mr. Wilson says in his preface that to Professor Sargent, and to his sympathetic guidance and help is most largely due what merit the book contains.

INDIAN AZALEAS.

One of the most interesting things in the book is the story of R. INDICUM, the species which has long been regarded as the original source of the popular Azaleas of greenhouses. It has for more than a century been confused with R. SIMSII and R. PHOENICEUM and the three collectively have been known as "Indian Azaleas." Up to 1845, R. INDICUM was really the chief source from which the Azaleas of the period were derived, but, after 1850, Mr. Wilson informs us that it and its forms rapidly dropped out of cultivation, being ousted by R. SIMSII, and its derivatives which were still called "Azalea indica." At the present time, Mr. Wilson considers that the larger-flowered Indian Azaleas of the greenhouse are descended entirely from R. SIMSII, which, although not so hardy as R. INDICUM, is more amenable to glasshouse cultivation and especially to forcing treatment. Moreover, it is a Chinese species with normally ten stamens to a flower, whilst R. INDICUM is Japanese with only five stamens. When Mr. Wilson was last at Kew he recognised as true R. INDICUM some plants we had received from Chenault

* The unwieldy name here given to BROUGHTONII AUREUM is based on its affinity to SMITHII AUREUM, the hybrid raised at Norbiton, Surrey, about 1830 and on its supposed origin at Broughton in Peebleshire. Did it really originate there? Perhaps Mr. F. R. S. Balfour, whose home is not far away, may know if there was a nursery or private garden there ninety or one hundred years ago, which was likely to have produced it. I am inclined to think that more probably it was raised by Broughton, a gardener of Lee of Hammersmith, about that time, who raised the fine red-flowered BROUGHTONII. Broughton in Peeblesshire must have been a very remote spot before the railway reached it.—W.J.B.

of Orleans as "R. MACROSTEMON," a name which I see belongs properly to a form of OBTUSUM.

Of the third species concerned in the Indian Azalea question, R. PHOENICEUM, I do not think much is known in this country, nor, probably, is it now in cultivation here in its typical form, although Japanese garden varieties of it are occasionally introduced, such as "OMURASAKI." Mr. Wilson says it and its variety CONCINNUM are the principal stocks on which Indian Azaleas are grafted by Belgian growers. It seems to be nearly allied to R. SIMSII from which, according to the Key, it apparently differs chiefly in the bud scales being viscid on the inner surface.

RHODODENDRON OBTUSUM.

In these days the complaint is frequently made that species are founded on insufficient and unreliable characters, and those who have taken up the naming of Rhododendrons have not escaped criticism on this account. It is a matter, of course, which time and a fuller knowledge than we spectators possess will decide. In this book, I am inclined to think Mr. Wilson sometimes goes rather too far in the opposite direction; if anything he is too economical with his specific names. R. OBTUSUM becomes under his treatment a rather unwieldy species, for he includes under it at least four Azaleas which Planchon considered as full species, viz., AMOENUM, KAEMPFERI, RAMENTACEUM and OBTUSUM itself. When we remember how closely some Rhododendrons which rank as distinct species resemble each other, we realise more than ever how different the outlook of individual botanists is in this matter. In hardiness, general appearance and persistence of leaf, KAEMPFERI is markedly different from both AMOENUM and OBTUSUM. Mr. Wilson realises this and gives his reasons for uniting them, which reasons are based on the existence of intermediate forms. Yet it would have been more convenient to us all if the characters which are considered good enough to distinguish it as a variety had been deemed sufficiently important to make it a full species. As it stands, we get such formidable names as R. OBTUSUM var. KAEMPFERI f. MIKAWANUM. Mr. Wilson's name and conclusions are enshrined in this volume, and they are the result of arduous study and research for which we cannot be too grateful. We can, of course, adopt or reject them as we please. I think, indeed, we shall long continue to talk of "AMOENUM" and "KAEMPFERI," whatever we may write. Our allotted span on this earth is none too long.

Those of us, too, who know R. RHOMBICUM and R. DILATATUM only as they are represented in our gardens, find it difficult to acquiesce in the amalgamation of both under one species, which Mr. Wilson calls R. RETICULATUM. The former has ten stamens to a flower, DILATATUM has only five, and I do not gather that Mr. Wilson has actually found any exceptions, although he thinks that a careful scrutiny of many plants would ultimately reveal on the same plant flowers carrying, some five, some ten stamens. Probably the representatives of these two Azaleas we have in cultivation are in each case the progeny of one or two plants whose individual characteristics they have inherited, but as we know them, they differ in habit (DILATATUM being sturdier and more shapely), in foliage, in time of flowering (DILATATUM being two or three weeks earlier), and of course in the number of stamens. R. DILATATUM has also a richer autumnal colouring.

As regards the name RETICULATUM, it was originally given by D. Don in 1834, but it has been doubtful whether it applied to RHOMBICUM or to DILATATUM. Now that the two are to be considered as one species, the follower of the Vienna Code seizes the opportunity of using the name and thereby RHOMBICUM becomes RETICULATUM and DILATATUM becomes RETICULATUM var. PENTANDRUM.

R. MOLLE, R. SINENSE and R. JAPONICUM.

For gardens in the average climate of Britain, the two species that go under these three names and their progeny, although scentless in flower, are by far the most valuable of the Azaleas coming from Asia. They are the only representatives of the Pentanthera section on that continent. The confusion which envelops the naming of Azaleas in general becomes particularly dense over these two. They are no doubt closely allied, but one is confined to China, the other to Japan. Originally they were regarded as distinct species, but when I first began to have to do with Azaleas, we followed the younger Hooker in calling them both SINENSE. Then, in 1908, Suringar, after careful study, separated them again, calling the Japanese one, long known as "MOLLE," JAPONICUM, the yellow-flowered Chinese one SINENSE. Now Mr. Wilson, delving farther into the past than his precedessors have done, finds that the *Chinese* plant was first called Azalea MOLLIS, by Blume in 1823. Consequently what we have only just got used to calling "SINENSE" becomes R. MOLLE, and what we have known for three quarters of a century as "MOLLE" becomes R. JAPONICUM. So far as I can judge from the dates and synonymy, if the pundits at Vienna had accepted the Kew rule, this tangle would have been avoided.

THE AMERICAN SPECIES AND VARIETIES.

Mr. Rehder's portion of this monograph, dealing with the New World Azaleas, covers some ninety pages, every one of which bears witness to the thoroughness and minute care which we have long known to be characteristic of his botanical work. The American Azaleas have existed much longer in cultivation than the Asiatic ones and some have been here for nearly two hundred years. Even in a state of nature, the species are very variable, and many of them are so lacking in well-marked characters that Mr. Rehder found it difficult to segregate the numerous forms into clearly defined species and varieties.

Of the Azaleas native of North America he makes sixteen species and numerous varieties. Of the species, the following eight are well known to us in this country, if not always by the actual plant at least by repute :—CANADENSE, VASEYI, OCCIDENTALE, CALENDULACEUM, NUDIFLORUM, CANESCENS, VISCOSUM and ARBORESCENS. The remaining species are SPECIOSUM, AUSTRINUM, ROSEUM, ALABAMENSE, ATLANTICUM, OBLONGIFOLIUM, SERRULATUM and PRUNIFOLIUM, which I for one know little or nothing about, except that several of them have been introduced in recent years by the kindness of Professor Sargent, and have been distributed through the agency of Mr. Eley. It is possible, however, that SPECIOSUM and ROSEUM, both of which have been known as NUDIFLORUM, and were in cultivation more than a century ago, still exist in British gardens under other names or not named at all. The other six are of comparatively recent discovery or recent introduction to cultivation, and some I fear will not be hardy except in the south-western counties and places with a similar climate. But some it is hoped will succeed in cooler districts.

R. ALABAMENSE, described in this work by Mr. Rehder for the first time, is in the nudiflora-canescens group ; it is a low shrub, its flowers said to be snowy-white and very fragrant. Seeds of it have been received from Professor Sargent, who thinks it will be hardy over most of Great Britain.

R. ATLANTICUM is related to VISCOSUM but spreads by stoloniferous growth and does not exceed two feet in height. It has fragrant flowers, white flushed with pink. Professor Sargent has lately sent seeds of it, but as it is confined to the coastal plain of North and South Carolina, he is very doubtful about its hardiness.

R. OBLONGIFOLIUM is of the same VISCOSUM group, a shrub six feet high, with white blossom. A large quantity was raised at Kew in 1920, and has grown well. How the plants will stand a hard winter has yet to be seen, but they have not suffered from frost yet.

R. SERRULATUM also is evidently nearly related to VISCOSUM and like it is late flowering and charmingly fragrant. Although it comes from more southern regions it will perhaps be hardy.

R. AUSTRINUM is closely allied to R. CANESCENS, but has yellow flowers. It is nine feet high in a wild state. We received it from the Arnold Arboretum at Kew a few years ago, but it does not promise to be really hardy there although it survived several winters.

R. PRUNIFOLIUM is regarded by Mr. Rehder as the most distinct of the five-stamened American Azaleas, and it ought to be easily recognised by the absence from it of any glandular pubescence except occasionally on the outside of the corolla ; the flowers are crimson, and the bush grows up to nine or ten feet high. It was introduced in 1920, and so far is hardy.

From these brief notes it will be seen that botanically these little known species, with the exception of PRUNIFOLIUM, belong to the confusing NUDIFLORUM and VISCOSUM groups, but the yellow flowers of AUSTRINUM, the snowy-white ones of ALABAMENSE promise new features among the American species.

Although the New World Azaleas share the dislike of Rhododendrons in general to lime, Mr. Rehder affords the interesting information that both R. ROSEUM and R. OBLONGIFOLIUM are found on limestone soil.

It is curious that R. ARBORESCENS is so little known in gardens to-day. It was introduced more than one hundred years ago, but still remains one of the rarer species of Azalea. When I was at the Arnold Arboretum in 1910 I was fortunate to see it fully in flower in late June. The people there were emphatic in its praises. In a letter received last July, Professor Sargent says "I hope R. ARBORESCENS does as well with you as it does here. It is really a beautiful plant and the flowers are delightfully fragrant. We find now that there is a rather conspicuous blotch on the upper lobe of the corolla in many of the plants." There may be something in our climate that does not quite suit it and it would be interesting to hear in the future numbers of the Notes how the members of this Society succeed with it.

We, in the colder parts of the country, will always have to rely on the hardier American Azaleas, the glorious old yellow Azalea from Eastern Europe, the Chinese species we have known as SINENSE and the Japanese one we have known as MOLLE, together with the hybrids raised from them all, to give us our great display. Other Asiatic species will give us diversity, interest and beauty too, but they are the minor instruments in the orchestra.

W. J. BEAN.

KEW, *February*, 1922.

RHODODENDRONS AT BORDE HILL, 1921.

The only Rhododendrons here that had no water carried to them last summer were a few species and hybrids in woods and plantations. Among these there are perhaps 200 plants of R. ARBOREUM, whether these are growing on a northern or a southern exposure I have never seen them looking better. R. CAMPANULATUM and R. THOMSONII suffered badly in health, but I have only found one plant of them, a Thomsonii, killed. Many however, were damaged; a SMIRNOWII and an AMBIGUUM on a southern slope died. During November these uncared for plants improved wonderfully, but I have been disappointed to notice that during the past week or two several species have lost branches, which have withered more or less suddenly, I presume a retarded effect of the drought.

Speaking generally of these plants, those that made their growth early had the best time: a R. "LUSCOMBE'S SCARLET," a Rhododendron that makes its growth late and is a rampant grower, did not grow more inches than it usually grows feet.

In the garden, water was always obtainable, and all the bushes are shaded by trees during more or less of the day. With these aids some species, notably FALCONERI and CAMPYLOCARPUM look especially well and have set an unusual number of flower buds; other species such as LANATUM, PACHYTRICHUM and some first crosses from CAUCASICUM are badly scorched, and if nothing worse ensues are for a season or two badly disfigured; whether this scorching is due to the direct action of the sun's rays on the leaves or an indirect action on the leaves through the roots, I am not prepared to say, but I have noticed in previous years how badly some CAUCASICUM hybrids have done here when grown in a somewhat sunny position in beds of peat and sand; and this year the plants in beds containing also some top spit loam seem as a rule to have done better than those in peat and sand alone; in fact all the worst cases of scorching are in beds composed of the latter.

STEPHENSON R. CLARKE.

December, 1921.

MISCELLANIES.

I feel some difficulty in finding a subject for the Notes this year. I therefore take refuge in sending a few miscellaneous remarks.

First of all the drought. Many members will probably refer to this, and it is instructive to know what the effect has been in different localities, especially on Rhododendrons. Undoubtedly the summer of 1921 was the driest and most prolonged within living memory, though the temperature did not rise so high as in 1911. In May, June and July, less than 2½ inches of rain fell at Wakehurst.

The actual casualties among Rhododendrons were few and these were chiefly older plants ; they apparently required more watering than could be given them. The younger seedlings were assiduously watered. In fact for many weeks this was the chief work in the garden. But we did not rely solely on watering, we scattered bracken or mown grass over the roots, and in some cases actually covered the smaller plants for a time. It may be true that in their own country the Kurume azaleas are sun-loving, but in a young state it has been a struggle to keep them alive in a summer such as we have just experienced.

Other Ericaceous plants suffered much more than Rhododendrons, notably the Andromedas and their allies, also the Pernettyas and Kalmias, but the Heaths did not seem to mind the drought except here and there.

The most important event of 1921 in the Rhododendron world has been the publication of Messrs. Wilson and Rehder's monograph on Azaleas. I strongly recommend the use of maps in reading it, which not only serve to localize the habitat of various species, but, to some extent, assist as a guide to probable hardiness.

As Mr. Bean points out in a most able and interesting article in the GARDENER'S CHRONICLE, of June 18th, 1921, the monograph upsets a good many old-established names, but to judge of this properly one must take into account the different codes of rules, or interpretation of rules, followed in America and in Europe. How far the new names will be adopted either by botanists or by cultivators, time alone can show.

A point which must be borne in mind is that all or nearly all the original Rhododendrons (as distinct from Azaleas) were introduced as pure species, whereas many of the early Azaleas brought to this country from Eastern Asia had long been in cultivation and were probably not pure ; this has immensely increased the difficulty and labour of tracing their origin. No investigators have had greater opportunities of unravelling this tangled skein than have Mr. Wilson and Mr. Rehder, from study on the spot, in gardens, and in herbaria, and no one will withhold from them a generous meed of gratitude for the work they have done, and for the handsome and exhaustive manner in which they have presented its result to the world.

Another publication during the past year must be noted. This is a paper entitled " *The Genus Therorhodion,*" which appeared in the Kew Bulletin, No. 5, of 1921, from the pen of Mr. Hutchinson. We have all known that one or two

species have hovered about the genus Rhododendron, sometimes included in it and sometimes excluded, one is our own native Loiseleuria procumbens of the Scotch Mountain tops, which some people still like to consider a miniature azalea ; another is R. CHAMAECISTUS of the Austrian Alps, but to most people it will be new to have to regard R. CAMTSCHATICUM (together with the less well-known R. GLANDULOSUM and R. REDOWSKIANUM) as forming a new genus named *Therorhodion*. This was founded by Dr. Small, of the New York Botanical Gardens, about ten years ago, and in this he is supported by Mr. Hutchinson, whose reasons will be found set forth in the paper referred to. The matter is only mentioned here for purposes of record.

While on the subject of names it may be interesting to note here that the name Rhododendron (Rose tree) was originally applied by Dioscorides to the plant now known as *Nerium Oleander*, the flower of which more nearly resembles that of a rose than does the flower of a Rhododendron. In this sense the name Rhododendron was used by Xenophon and Pliny. The original designation of the present day Rhododendron was *Chamaerhododendron* (i.e., dwarf *nerium*), the aptness is not very apparent but it was probably because the plants had been nibbled down by goats or dwarfed by wind and resembled small oleanders. The prefix was in time dropped and the name Rhododendron appropriated by the genus we now know by that name.

A very interesting discovery should be recorded in the pages of the Rhododendron Society's Notes. This is the finding of R. PONTICUM in a new area in Europe, just on the Bulgarian side of the Thracian frontier, at an altitude of 1,300 feet, and also in the Istrandja Dagh in Eastern Thrace. Hitherto, R. PONTICUM has only been known in Asia Minor, Azerbaijan, Syria, and in the south-west of Spain and Portugal. There seems little doubt that the plant found is very nearly identical with R. PONTICUM, though it has been described as a variety under the varietal name SKORPILII, after the collector who found it. The discovery is of great importance in connection with the fossil remains of Rhododendrons in other parts of Europe, but as the matter is to be dealt with authoritatively in the Kew Bulletin, I need say no more here.

Two articles appeared in the January (1921) number of the Journal of the Arnold Arboretum, one entitled " AZALEA or LOISELEURIA," by Mr. Alfred Rehder, who expresses the opinion that the genus Azalea (now a sub-genus of Rhododendron) was founded by Linnaeus on AZALEA PROCUMBENS (now known as *Loiseleuria procumbens*). If this theory be accepted, it is a curious instance of a genus being founded on a plant which is no longer considered to belong to that genus.

The other article in the same publication of more interest perhaps to cultivators, is a description by Mr. E. H. Wilson of a fine collection of " Indian " Azaleas at Magnolia Gardens, near Charleston, South Carolina. This collection was begun in 1850, and now contains very fine old specimens, some as much as 16 to 18 feet in height. Although the number of different species is not large there appear to be several unusual forms in the collection. The place is now the property of Miss Marie Hastie, granddaughter of the founder of the garden. It may be mentioned that a coloured plate showing some of the azaleas of this garden

appeared as the frontispiece to Vol. I. of Bailey's "*Standard Cyclopedia of Horticulture,*" in 1914.

Two further lists of Rhododendrons, named and described by Professor Sir Isaac Bayley Balfour, have been published during the year in the Notes of the Royal Botanic Garden, Edinburgh; the first in Vol. XII. contains 40 species, and the second in Vol. XIII. contains 70 species. Nearly all are from Forrest's introductions, but a few are from Ward or other collectors. Professor Balfour has added the "series" into which they fall—a great assistance in understanding the classification.

Both Forrest and Kingdon Ward are at present once more collecting on the frontiers of Burmah, China and Thibet.

The news of the death of William Purdom, in China, has been received with deep regret. He was a Kew man, and first went out to China for Messrs. Veitch. Later he accompanied Reginald Farrer on his first expedition, and subsequently took up an appointment under the Chinese Government. He survived his friend but one year. He died at Pekin, on November 7th, 1921.

The Rhododendron Society can hardly pass over in silence the impending retirement from their respective posts of Sir David Prain, Sir Isaac Bayley Balfour and Sir Frederick Moore; of their great services to Botany and Horticulture this is not the place to speak. All three of them are Honorary Members of our Society, have taken great interest in its work and have rendered it untold assistance through its early years, for which we are all deeply grateful. Every member of the Society will join in wishing them many years of health and leisure, relieved from exacting duties of office; and while thanking them for their past services we hope that we may often see them at our gatherings and continue to enjoy the benefit of their advice.

GERALD W. E. LODER.

December, 1921.

RHODODENDRON ARBOREUM AT LOCHINCH AND NOTES, 1921.

Two facts will ever recall to my mind this year of 1921. Firstly, the wonderful flowering of Rhododendron ARBOREUM in Wigtownshire; secondly, the drought that followed.

One very windy day in mid April, I went to Lochinch to see R. ARBOREUM then in full bloom, practically every tree, and there are hundreds, was thickly covered with fully expanded flowers, most of them white or very light shades of pink. The waters of the Black Loch and of the White Loch, reflected blue from the sky, made a fine background to the masses of white flowered R. ARBOREUM. These plants are growing close together, the one into the other for the most part, and here is an example of protection afforded, without which they could hardly have survived against the winds which so often sweep over them in the winter months, and certainly they would never have grown to the large size that they now are.

The dense shade they give, growing so close together, keeps the soil moist over a considerable area where they grow and under these Rhododendron trees spring up self-sown seedlings.

R. ARBOREUM as a specimen standing alone is such a beautiful object at all times that it may seem a pity to mass these plants, since their full beauty cannot develop. Yet the benefits of massing them on an exposed site is clearly demonstrated by the large plantations at Lochinch.

R. ARBOREUM also flowered magnificently at Logan this spring, all were literally covered with bloom, most of them good colour and habit.

Several of Forrest's seedlings (1918 collection) flowered this year, these I take to be all Dwarf Alpine varieties and are numbered as follows :—

No. 16287, light yellow;

No. 16282, purple or lavender;

No. 16577, dark purple;

No. 16296, purple to pink.

The drought during the summer was severe, even here, though not so bad as further south and east. Still, I remember nothing like it, and the ground became very dry. Perhaps it was the moisture in the atmosphere at night from the close proximity to the sea that brought the Rhododendrons so well through this trying time. Anyway, now in December, I can see that none have suffered much, though many of them seem to have found it necessary to shed their one-year-old leaves, presumably for the benefit of strengthening the newly formed foliage of this year, which shows good and healthy. Flower buds have not set in abnormal numbers, which I should have expected to find after so hot and dry a summer and autumn.

KENNETH McDOUALL.

Logan, *December*, 1921.

LAMELLEN, 1921.

The hard frost in December, 1920, did not do much harm here, some plants of R. SCOTTIANUM and NEMATOCALYX in the open alone suffering.

January and February were very mild, and some 25 species and hybrids flowered during the former month; but later there were several rather severe frosts, and the new shoots of many plants were blackened; a thing which has not happened for several years.

Owing to the wet summer of 1920, there are but few new flowers to report; the first was R. TRAILLIANUM 5870F, during the first week in March; flowers white, spotted with crimson in the interior of the upper segment; 12 or more bells in a fairly compact truss, 5-lobed campanulate $1\frac{1}{2} \times 1\frac{1}{2}$ inches, style and filaments white, stamens white with touches of pale brown.

Last week in March. R. EUANTHUM 5881F. Flowers, Neyron rose red, 11 in a truss, spotted sparingly on the upper segment with a darker shade of the same colour, 7-lobed broadly campanulate $1\frac{1}{4} \times 3$ inches, stamens 14 light-brown, filaments white, style yellowish-pink clothed with minute red hairs, stigma dull green. As the flower matures the style turns red throughout its length, and so far as I can judge from a partially frosted flower—for I sent the other, which was a perfect one, to Edinburgh whilst in bud—this should prove a good plant.

At the end of April several plants of what I take to be a natural hybrid NERIIFLORUM and HAEMATODES, raised from Chinese seed, and which I have named tentatively R. "NERIIHAEM," flowered. I fancy I mentioned this last year, but this year shows it to be a very fine thing, dwarf, very floriferous, with larger flowers than NERIIFLORUM, and equalling or surpassing that species in brilliancy of colour. A plant of the same lot, which flowered later, had lovely cherry-red flowers.

During the first week in May one of Forrest's forms of Azalea INDICA flowered. He collected it in 1912, and described it as Azalea INDICA *forma IV*. It has been unprotected in the open for several years, and seems fairly hardy. Flowers in two's at the end of the shoots $1\frac{1}{2} \times 2\frac{1}{2}$ inches, 5-lobed openly campanulate Turkey red, with some reddish-brown spots on the three upper segments, and a shading of reddish-purple on the uppermost; style and filaments same colour as the corolla, stigma somewhat darker, and anthers reddish-brown. A vivid flower. Also a natural hybrid of CAUCASICUM STRAMINEUM, 12 in a rather loose truss, 5-lobed campanulate $2 \times 2\frac{3}{4}$ inches, very prettily imbricated, violet old rose fading to blush, with a strong blotch of crimson extending into crimson spots on the upper segment, style and filaments white, stigma green, stamens light-brown. A very pleasing and refined flower, which I have named R. "AGLAIA."

Also R. " ASCOT BRILLIANT " × AUCKLANDII, named R. " THALIA," 10 in a rather loose truss, 5-lobed, broadly campanulate, $2\frac{3}{16} \times 3\frac{1}{2}$ inches, mauve-rose, with a heavy crimson blotch extending to spots on the upper segments, filaments blush-white, anthers dark brown, style rather pinker than filaments, stigma green. A nice flower.

Fourth week in May. One of a batch of No. 298 OREOTREPHES × 4238W AUGUSTINII *forma*. Five in a truss, palest light lilac (*violet de cobalt*) with a few spots of greenish-brown on the upper segment, very broadly campanulate $1\frac{3}{16} \times 2\frac{1}{2}$ inches, filaments white, anthers light brown, style tinged pink, stigma red-brown. It is curious that the colour in this is so faint, but I am inclined to think that when the bush gets bigger it may be very pleasant to look at.

Early in the summer I was planting some biggish seedlings out of one of the nurseries, and in digging the pits for them found that *Davidia involucrata* is emphatically not a tree to plant among Rhododendrons, as its thick white roots extend near the surface of the ground for a long way on all sides. When first I had it I tried it in a dry place where it did not thrive, so it was moved to a north aspect in a wood, where it is now growing rampantly and has evidently got what it likes. Another plant on low ground near the stream facing north-west had all its new shoots cut by frost in April this year.

Among the seedlings just mentioned as planted out of the nursery several plants of R. LANATUM, and one of R. PHOLIDOTUM were completely stripped by rabbits—the latter recovered, but all the former were killed.

The drought dealt severely with us, a good many plants 4 to 5 feet high in one of the nurseries being killed, and a certain number of seedlings both in the frames and nurseries. Lack of labour and lack of physical strength made it impossible to water as much as was needed, and in the case of the small things moles accentuated the damage.

When the rain came in late August and September, besides the small species, R. XENOSPORUM, one bush of HAEMATODES, and two or three of ADENOGYNUM, flowered profusely; whilst NOBLEANUM and even PRAECOX had some flowers in mid September. R. LACTEUM 6678F seems especially susceptible to sun and drought, and I lost three plants, as well as one of my two plants of R. REPENS.

In the frames there are two lots of seedlings, which should produce yellow flowers, namely CILIATUM × BOOTHII, and TRIFLORUM × AUREUM—in both cases the cross has certainly taken.

E. J. P. MAGOR.

Lamellen, St. Tudy, Cornwall,
October, 1921.

MONREITH, WIGTOWNSHIRE.

One notable feature in the meteorology of the United Kingdom during the last two years has been the sharp contrast between the conditions prevailing north and south of the Caledonian Canal. Whereas the summer of 1920 over the whole of Great Britain south of that line was colder, and in all except the eastern counties wetter, beyond recent precedent, the Scottish Highlands enjoyed more sunshine and less rain than usual. In 1921, the conditions have been reversed. By the end of September, the north of Scotland had received an inch and a half in excess of its average rainfall, and Mr. Osgood Mackenzie assured me that the summer had been the coldest and darkest in his long experience of the West Highlands ; while the weekly returns of the Meteorological Office record a shortage of rainfall in England at the end of September amounting to 221 mm., which is all but one-half of the average 561 mm.

The great drought having been accompanied by extraordinary and prolonged heat, serious injury might have been anticipated among such shallow-rooting plants as Rhododendrons ; but in this place, situated in the extreme south-west corner of Scotland, they have not suffered seriously, notwithstanding that practically no rain fell between 27th April and 22nd July. There is a marked difference in the effect of the drought on the species with large leaves. On R. FALCONERI and HODGSONII the leaves are only half the length of those produced in 1920, while on R. CALOPHYTUM, SUTCHUENENSE and SINOGRANDE they are of the usual size. With our present attentuated staff, regular watering has been out of the question ; but my daughter, Mrs. Graham, and I carried occasional canfuls to newly planted Rhododendrons. I attribute our comparative immunity from the effects of drought to three causes, whereof two are natural ; viz., first, proximity to the sea, which insures more humidity (invisible vapour) in the atmosphere, flowing in its normal course from south-west to north-east across the ocean, than it can retain in passing inland ; second, a cool subsoil of boulder clay underlying sharp loam thickly charged with stones of all sizes which tend to check evaporation ; the third cause is artificial, viz., the application each winter of a heavy mulch of dead leaves to all Rhododendrons until they are of a size to screen their own roots with foliage. A layer of leaves nine inches or a foot thick, overlaid with sticks (the nearer rottenness the better) to prevent birds scraping away the leaves, will be found at the end of summer to have dissolved into about an inch of digestible humus. Grass mowings are sometimes recommended as a mulch, but that material, if laid on thick, interferes injuriously with æration of the soil.

We have derived advantage in several instances from putting into practice an *obiter dictum* of the late Sir Edmund Loder. He said that a Rhododendron in ill health was often the better of carriage exercise. The following are cases in point :—

R. ZEYLANICUM (*Rollisoni*). Planted in an east exposure about ten years ago, never made more than a couple of inches growth, foliage stunted, but healthy. Moved in February, 1920, to a similar exposure half a mile distant, has made shoots nine inches long with luxuriant foliage in 1921.

R. SINOGRANDE. Growth buds frosted in 1919, looked like dying, passed winter of 1919-20 under glass, planted out in woodland in February, 1921, has made shoots 10 inches long and leaves 16 inches.

R. FALCONERI. Was growing on full south exposure, quite healthy, foliage abundant, but leaves (stalks included) only eight inches long and nearly circular. Annual growth very slow. Moved into woodland in February, 1920, responded that season with leaves 15 inches long.

R. CAMPYLOCARPUM. In border facing north, cast most of its leaves, did not flower, moved in February, 1919, to border facing east, is now well furnished with leaves and has set flower buds.

Sero sapiunt Phryges, and a good many also who are not Phrygians. We who do not enjoy the privilege of being Cornishmen little understood thirty years ago the wants of any Rhododendron except the common PONTICUM, especially in the matter of aspect. I thought that I was treating a plant of R. BARBATUM with special favour when, in the eighties of last century, I placed it facing full south. It is now nine feet high, and 10 feet through, and flowers most profusely; but the foliage is not what that fine species ought to bear, the leaves averaging only about five inches in length. Layers were taken off this plant about twenty years ago and are now growing in woodland, bearing leaves seven inches long and plenty of them, these youngsters might really be mistaken for a different form of the species.

The spring of 1921 was very trying; late frosts, coming after a winter of exceptional warmth, injured some of the growth buds on R. GRANDE, SINOGRANDE, NIVEUM, OREODOXA, etc. Much of the bloom on early flowering species was cut, but not until we had enjoyed the display for a considerable time. On some of the later flowering species the blossom was very fine, especially R. NERIIFLORUM*, CRASSUM, EDGEWORTHII (seven feet high on walls), DECORUM and CAMPYLOCARPUM.

Mr. Bean and Mr. Millais both write somewhat disparagingly of the Himalayan R. ANTHOPOGON as an ornamental species. I venture to think that the delicate colouring of its compact little trusses entitle it to some esteem.

Although the unusual warmth brought out more autumnal flower than usual on R. PONTICUM and some of the old garden hybrids, there was no exceptional stir among the Chinese species other than R. HÆMATODES, which lit up several fulgent lanterns.

In the spring of 1922 there has been a marked deficiency of bloom on R. BARBATUM, NIVEUM and FULGENS, while R. DECORUM is profusely set with flower buds.

No harm was wrought by the drought on shrubs other then Ericaceous, albeit the influence of the cold, wet summer of 1920 was apparent in the sparse bloom of some species. Two old plants of *Xanthoceras sorbifolia*, for instance, did not produce a single truss of bloom, although their near relative, the horse chestnut, was never finer. Neither was there any flower on about thirty plants

* This is an obvious misnomer and ought to be NERIIFOLIUM, for it is the foliage of this species that is like that of *Nerium oleander*, and not the flowers, which bear not the faintest resemblance to those of the oleander.—H.M.

of *Cordyline australis*, though several of them bloomed in 1920. *Eucryphia pinnatifolia* and *cordifolia*, both moisture loving subjects, were sheeted with snowy blossom. The latter has sent up strong suckers this year, which I have not known either species to do in the past. This will prove a convenient means of propagating this beautiful shrub, which we have hitherto done by cuttings. In his paper on Castlewellan (Rhododendron Notes for 1920, page 44), Sir John Ross of Bladensburg speaks favourably of a double flowering form of *E. pinnatifolia* ; but surely this is a deformity of a lovely flower. I, at least, was much vexed when some of a batch of seedlings which Colonel Malcolm kindly sent me from Poltalloch, produced double flowers.

HERBERT MAXWELL.

October, 1921.

THE TRUE FORMS OF RHODODENDRON CAMPYLOCARPUM AND RHODODENDRON WIGHTII.

For some years I have been convinced that the plants of these two species found in British gardens were not the original forms as described by Sir J. Hooker in " The Rhododendrons of Sikkim—Himalaya."

Let us consider the first of these, namely, R. CAMPYLOCARPUM. Hooker described this as " a small bush " averaging (when mature) six feet in height, rounded in form, with very hairy (as shown in the illustration, Tab. XXX.), petioles to the leaves and spherical flower buds. Now none of these characters (except occasionally hairy petioles) are found in the plant which is common in British gardens.

At Stonefield, the old plant is 14 feet high, whilst there are several examples of what we used to consider as true CAMPYLOCARPUM in Cornwall and Devon, over 10 feet in height. Moreover, nearly all these plants are *not* rounded in habit but upright or somewhat conical; another difference, and a most important one, is that the winter flower buds of this common form are *rounded* and not spherical. Also, the colour of the flowers is pale primrose instead of a good sulphur-yellow.

It will be seen therefore that the plant which Sir Joseph Hooker discovered is a very different one both in habit and character from that known to us as true R. CAMPYLOCARPUM.

Some years ago when inspecting the beautiful garden at South Lodge, I was struck by a dwarf rounded bush of R. CAMPYLOCARPUM in flower. Instead of the tall somewhat leggy variety it was low (not more than 3 feet 6 inches), had very bristly petioles, and beautiful sulphur-yellow flowers. It was a plant in every way distinct from the common variety usually seen in gardens and, on enquiry from F. D. Godman, he told me that it came, 20 years previously, from Reuthe, and that it had been raised direct from seed sent there by Sir J. Hooker. This I found to be correct.

Some years later I noticed some plants almost exactly similar to the above in the nursery garden of *Mr. Gill, at Tremough, and purchased three of them. These plants had been raised from seed procured in Sikkim by Mr. Gill's collector, in the same area in which Sir J. Hooker collected in 1852. In 1920, I received other examples similar to the above, but even more dwarf and compact in character, from the same place, and in 1914 Mr. Charles Nix received seed from the Bombay Botanical Society, from which he raised a number of plants very similar, with very hairy petioles and yellow flowers.

These facts confirm my opinion that Sir Joseph Hooker's original plant was a very different one from the tall-growing, pale flowered variety we have been led to accept as the true form.

At present we do not know who introduced the tall variety to British gardens, but there is good reason to presume that it came from a different district, either in Sikkim or closely allied states. Further investigation on this point is desirable for it seems that when we know more regarding the areas inhabited by Himalayan

*Messrs. R. Gill & Sons, Nurserymen, Penryn, Cornwall.—C.C.E.

species in Sikkim, Nepal, and Bhutan, we shall find intermediate forms connecting the tall growing, pale flowered variety of R. CAMPYLOCARPUM with the dwarf yellow flowered true form. In fact the plants raised by Mr. Charles Nix are indeed such an intermediate type. For purposes of distinction I propose to name the tall growing, pale flowered plant, R. CAMPYLOCARPUM var. PALLIDUM.

The characters of both forms are as follows :—

R. CAMPYLOCARPUM, *Hook. fil.* True species.

A small bush, seldom over four feet in our islands, rounded in form, leaves on slender petioles, very hairy, ¾ of an inch long, slightly coriaceous, 2 to 3½ inches long, 2 inches broad, rounded and mucronate at the apex. Flower buds spherical and sharply pointed. Flowers, horizontal and do not nod so much as the pale variety, spotless, and a rich sulphur-yellow, 2 inches long and broader across the lobes, new shoot dark-green. Other characters as in Hooker.

R. CAMPYLOCARPUM var. PALLIDUM.

A tall upright bush up to 12 feet in height or more. Leaves more or less similar to true form. Petioles almost smooth or with very minute dark hairs. Flower buds rounded, and in intermediate forms semi-spherical, new shoot pale yellowish-green. Flowers nodding, horizontal, a very pale spotless primrose. Other characters similar to the foregoing.*

Another Himalayan species which has led to some confusion is R. WIGHTII of Hooker.

Our knowledge of this species is small, owing to the paucity of specimens in British collections. In fact the only two large specimens in our islands are respectively at Kilmacurragh, Co. Wicklow, and Littleworth Cross, Tongham, Surrey. From these a certain number of grafted plants have emanated and are in a few gardens. From what source Colonel Acton and Mr. H. Mangles obtained their plants I do not know, but it seems that they did not come from the same area as Dr. Wight's Rhododendron as described by Hooker. In fact the plants at Kilmacurragh and Littleworth are evidently an inferior variety to the true species, both in flower and leaf.

About the year 1908, Mr. Gill received seed of true R. WIGHTII from Sikkim, but only succeeded in raising one plant which was purchased by Colonel Stephenson Clarke, in whose garden at Borde Hill, Sussex, it is now flourishing, having flowered more than once. From this plant Mr. Gill grafted two plants, one of which I saw recently in the greenhouse at Edinburgh, whilst the other is in my garden, and has recently flowered. The difference between these two forms is very marked. Hooker's species being a much stronger grower and possessing much larger leaves and better flowers with the flower at the apex of the truss not so nodding. Hooker's plate is somewhat misleading, which is unusual in one so accurate in description. He figures the flower truss as somewhat closely packed with the flower at the apex upright, whilst in his description he states that the flowers are "*not* densely packed." As a matter of fact the

*Plants of the CAMPYLOCARPUM series, distributed throughout N. Himalaya and S.W. China, range from individuals of 20 feet in height to small dwarf compact shrubs on the high open plateaux, scarcely 2 feet high when mature.—J.G.M.

topmost flower is always nodding to one side, but not nearly so much so in the true species as in the smaller form.

Characters. R. WIGHTII, *Hook. fil.* True species.

A thick-set shrub, up to 10 feet or more. Branches thick and woody, the ultimate ones puberulus; petioles, pale yellow-green, slightly puberulus, 1 inch in length. Leaves 7½ to 10 inches in length, 3½ inches in breadth; dark bright green above and somewhat glossy; beneath, deep rufous and covered with a close oppressed tomentum, bracteal scales chestnut brown, coriaceous and viscid. Pedicels 1½ inches long, rather slender. Corolla bell-shaped, five lobed, primrose with yellow suffusions, blotched, and on the three upper lobes; top flower slightly nodding. Other characters as in Hooker.

R. WIGHTII var. MINOR.

A thick set shrub up to 9 feet. Leaves seldom more than 5½ inches in length, 2¾ inches in breadth. Flowers a paler yellow and top one very nodding with whole truss somewhat loose and smaller than the preceding. Other characters as above.

Another point of distinction that I have noticed is that in the true species the leaves droop slightly from the other half, whilst in the small variety they seem stiffer and hang more horizontally. It is possible however that this character may be exhibited also in the smaller form when plants become more mature.

J. G. MILLAIS.

December, 1921.

NOTES ON CULTIVATION, 1921.

To gardeners in general the year 1921 will doubtless present memorable features, some pleasant and some the reverse, but on the whole, at all events in this part of the country, the compensations will, I think, be found to outweigh the disadvantages when the final balance is struck. In spite of a severe April frost which here, on the night of 14th, destroyed the bloom on thirty species of Rhododendrons and crippled much early growth, the exceptionally favourable conditions prevailing in May and June made effective reparation, and plants generally withstood the drought of July and August better than might have been expected, whilst ample autumn rains restored the vigour and freshness of many specimens which in shallow ground or sunny positions had previously suffered from dryness at the root. The keen cultivator who provides a good mulching for surface-feeding plants came, at all events, by his reward in 1921, and possibly many a less careful grower has learned a valuable lesson. The liberal mulching which conserves moisture is more serviceable and less expensive than the hose-pipe which temporarily supplies it, and, in such a summer as the past has been, it may mean the difference between life and death to many a valuable plant.

One conspicuous result here of the comparative lack of moisture and super-abundance of sunshine this summer declares itself in the exceptional freedom with which many Rhododendrons are now thickly set with flower bud. Two groups of R. DISCOLOR containing some thirty twelve-year-old plants up to six feet high and as much through, not one of which has so far flowered, are now freely budded, and promise a display of flower next summer which will doubtless reward us for a disappointing delay. This species, like its kindred R. HOULSTONII and R. KIRKII, seems slow to reach the flowering stage, though its youthful energies are well employed in building up a handsome plant of bold upright habit.

A similar freedom of bloom buds is noticeable in the case of R. "MADDENII series," on which, though eight years old from seed, there has so far been no flower, and in R. *aff.* CRASSUM, a July flowering species, whose long white sweetly scented trumpets and bold foliage provide the qualities of a really good plant.

The praise which in previous notes I have endeavoured to bestow on R. NERIIFLORUM is being increasingly justified, and a group in a wood, after being a mass of scarlet in spring, now promises an equally brilliant display next season. Similarly R. CALLIMORPHUM, a healthy compact grower, which no one can fail to admire when its delicate bells of pink are fully expanded.

Near by, though somewhat earlier in the season, a well-formed truss of R. HABROTRICHUM distinguished a promising young plant, the colour a clear pale pink boldly blotched at the base of the corolla. It may be too early as yet to form a decided opinion as to the merits of this species, but my experience here with a number of seedlings leads me to believe that in shade and shelter this will develop into an admirable plant. So far the finest flowers here have been borne on specimens whose leaves are distinctly smaller, smoother, paler on the under-side, and less hairy than is characteristic of the typical plant; the flower bud too, instead of being dark red, is of greenish-yellow colour. All, however, were raised ten years ago from the same batch of imported seed.

The Rhododendron Society Notes.

Three outstanding Rhododendrons here, during the past March, April and May, have been R. PRAEVERNUM, R. DELAVAYI and R. ROYLEI respectively. Each in its own way has been genuinely good, distinct and attractive in flower. The first-named represents a decided advance in quality of bloom on the typical R. SUTCHUENENSE, more compact in habit, with none of the latter's coarseness of growth. The brilliant crimson colouring of R. DELAVAYI would distinguish it in any group of plants, but the substance of the flowers and their exceptional lasting qualities add still further to the value of this fine species. The R. ROYLEI in question is a singularly rich-coloured, large-flowered form grown from seed received from Calcutta, and a six feet bush in full bloom with the sun at its back presents an astonishing blend of orange and apricot with an exterior shading of purple.

The few species which the limits of space permit me to mention thus briefly have all been grown here from seed, and from personal observation of them during the past eight or ten years, they occur to me as worthy of careful cultivation in any collection, however choice.

H. ARMYTAGE MOORE.

Rowallane, Saintfield, Co. Down,
October, 1921.

NOTES FROM BEAUFRONT CASTLE, 1921.

The winter of 1920-21 was very mild. Old brakes of R. "NOBLEANUM" came into flower on January 6th, quite three weeks earlier than usual.

The first week in March, R. "PRAECOX," R. MOUPINENSE and R. CILIATUM were in flower or over without any harm from frost.

In April, R. SUTCHUENENSE flowered better than ever before, also R. PRAEVERNUM, and R. DAVIDII, R. FARGESII, R. WALLACHII and R. CAMPYLOCARPUM were very good, but the drought, even as early as this, seemed to affect the opening of the buds of both FARGESII and CAMPYLOCARPUM.

All the hybrids were far more affected by the drought than the majority of the species, but R. CAMPANULATUM, R. CHARTOPHYLLUM, R. OREODOXA, R. THOMSONII and R. AUGUSTINII although scattered about in various positions and aspects, were much affected by the heat and drought, their leaves for weeks on end hanging limply down and none of these made any growth worth mentioning until after some heavy showers of rain in August.

I should be very glad if anyone could tell me how to successfully take cuttings of a Rhododendron that I got from Gauntlett, under the name "DUCHESS OF YORK," × LUSCOMBEI: it is very sweet scented, a beautiful rose-pink loose truss with a greeny-yellow spot and leaves somewhat like THOMSONII. I have tried layering and think I am going to have some success that way, but so far cuttings taken in July or August have been a complete failure, and several people who have seen the plants in flower are anxious to have a plant.

KATHLEEN A. RAYLEIGH.

December, 1921.

RHODODENDRON NOTES, 1921.

I visited a good many Cornish gardens last May and June and, though I learnt much, I fear I have no notes that would be of any interest to members of the Rhododendron Society, to whom most of the gardens I visited belonged.

All I have to say of my own observation is that I have found all the plants of R. CAMPANULATUM suffer this year from the drought worse than any other species. On 15th April I had here 5° of frost in the screen which wrought terrible havoc; there were eight or ten plants of FARGESII in a long bed with several other species of the same age under exactly the same conditions as to exposure, and while all the others were very badly cut by the frost the FARGESII were quite uninjured and began opening perfect flowers two days later, from which I infer that it is very resistant to frost, besides having a most attractive little flower.

J. M. ROGERS.

Riverhill, Sevenoaks, Kent,
December, 1921.

NOTES FROM ROSTREVOR.

We suffered from drought in Ireland in the past summer, but it was not so prolonged as it was in England. It began in this district about the 1st June and lasted for six weeks, during which time there was a clear blue sky, scorching heat, and no rain at all. Then about the middle of July we had two months of almost sunless weather, clouds thick and lowering, a great deal of rain, and sometimes it turned quite cold. After these experiences, we returned to more normal conditions, and on the whole we enjoyed a fine autumn. With the exception of a little frost early in November, which lasted no more than two days—lowest reading of the thermometre 27°,—it continued quite mild up to Christmas time. The effect on the plants was various. A great many have made a very satisfactory growth, but much of the flower was not as good as usual. It was burnt up in June and July in the glare of the hot sun, and later on it failed to show the luxuriance of a summer garden. Some of the plants on the other hand, seemed to enjoy the unusual heat; for instance *Feijoa Sellowiana*, *Mandevillea suaveolens*, *Pentstemon cordifolius* were better than I have seen them before, the first-mentioned even produced some flower at Christmas time. Rhododendrons however, seemed to be more affected, and as a rule there was a poor display among those that open in June. The growth moreover in some instances was not as vigorous as usual, leaves less developed. This was to be observed in R. SINOGRANDE, R. FICTOLACTEUM, R. EXIMIUM, not so much in R. FALCONERI, R. CALOPHYTUM; while R. SPINULIFERUM, R. FULVUM were not in any way troubled by weather conditions. One species indeed sent to me without name or identifying number, made quite a record growth; it seems to belong to the FORTUNEI group with handsome very long waving leaves, but has not yet flowered. Want of moisture at the proper time must of necessity leave some mark on Rhododendrons, noticeable here to some extent on R. CAMELLIAEFLORUM, and on another interesting one which may possibly be described as R. OBSCURUM; but on the whole I came off well and lost none of them by the drought. When two years ago we had a drought in the late summer, I observed that *Dacrydium Franklinii* seemed to be very susceptible to it; a large plant damaged then, was killed outright this year, but neither *D. cupressinum* nor *D. Colensoi* were in any way affected by it; while *Tetraclinis articulata* (from Morocco) said to be drought-resisting, appeared to revel in the heat.

In 1915 I took a few measurements of trees growing here especially of some of the species of Eucalyptus. None of them were large, but I was anxious to see how they would develop after a few years' time, and with that view I remeasured some of them this year. As everything that concerns the growth of trees is interesting, I feel tempted to end these notes by giving one or two of these measurements. The heights are only approximate, the girths have all been taken five feet from the ground.

Eucalyptus coccifera and *E. Muelleri* were planted in the autumn of 1894, immediately preceding one of the most severe winters on record, at all events

for many years in Ireland. The former was uninjured, the latter was cut to the ground but soon afterwards recovered.

In	1915	*E. coccifera*	was	slightly	over	60ft.	high,	girth	4ft. 1in.	round.
,,	1921	,,	,,	,,	,,	70ft.	,,	,,	5ft. 0in.	,,
,,	1915	*E. Muelleri*	,,	,,	,,	50ft.	,,	,,	3ft. 1in.	,,
,,	1921	,,	,,	,,	,,	66ft.	,,	,,	4ft. 2in.	,,

The three following were planted about the year 1904 :—

In	1915	*E. amygdalina*	was	slightly	over	36ft.	high,	girth	1ft. 11in.	round.
,,	1921	,,	,,	,,	,,	50ft.	,,	,,	2ft. 11in.	,,
,,	1915	*E. cordata*	,,	,,	,,	39ft.	,,	,,	1ft. 11in.	,,
,,	1921	,,	,,	,,	,,	57ft.	,,	,,	2ft. 9in.	,,
,,	1915	*E. globulus*	,,	,,	,,	48ft.	,,	,,	2ft. 4½in.	,,
,,	1921	,,	,,	,,	,,	65ft.	,,	,,	3ft. 2½in.	,,

E. acervula and *E. urnigera*, planted about 1907 and 1908, neither of them measured in 1915, are now respectively some 50ft. high and 2ft. 0in. round, and 42ft. high and 2ft. 7½in. round. *E. MacArthurii* planted in the spring of 1916, appears to grow rampantly, and is now 21ft. high and 11½in. round.

Acacia melanoxylon planted about 1903, not measured in 1915, is now 30ft. high, 2ft. 7in. round. Owing to a snow storm accompanied by much wind, some 10ft. from the top of this plant was broken in the winter 1914-15, otherwise the height might have been greater ; in consequence it has a spread of some 30ft. through.

Abies religiosa	planted in autumn	1911,	was in	1915,	16ft.	high,	6½in. round.
			,,	1921,	32ft.	,,	1ft. 11½in. ,,
Juniperus Cedrus	,, ,,	1910,	,,	1915,	14ft.	,,	6½in. ,,
			,,	1921,	25ft.	,,	1ft. 3in. ,,
Cupressus cashmiriana	planted about	1899	in	1915,	14ft.	,,	1ft. 1½in. ,,
			,,	1921,	20ft.	,,	1ft. 4½in. ,,

There is no record to show when the two following were planted, they must be at least from 60 to 80 years old, perhaps more :—

Cupressus sempervirens,	was	in	1915,	a little over	60ft.	high,	4ft. 6in. round.
		,,	1921,	,,	72ft.	,,	4ft. 10in. ,,
C. sempervirens var. *fastigiata*,	was	in	1915,	nearly	50ft.	,,	3ft. 3in. ,,
		,,	1921,	,,	55ft.	,,	3ft. 5in. ,,

JOHN ROSS OF BLADENSBURG.

Rostrevor House, Co. Down, Ireland,
December, 1921.

NOTES ON MY GARDEN AT EXBURY, 1921.

The winter of 1920-21 was a very busy one. Planting was extended down the wood and consignments of Rhododendrons from Leonardslee, Guernsey and Holland safely disposed of. As usual a goodly number came as a present from Caerhays, and its most generous owner allowed me to dig up one of his plants of SINOGRANDE, when I was on a visit there at Easter, and take it back in my car to Exbury ; it was planted within twenty-four hours of leaving the ground and seems none the worse for its adventure.

The preparations made for the annual drought at Exbury did good service this year. The spring has held out well, and watering, which commenced in May, has continued till now with hardly a break. As a consequence, very little has been lost, through some shelter trees planted where watering was impossible have succumbed.

The better class Rhododendrons at Exbury are hardly large enough at present to give a general flowering but some of the hybrids made a good display. Especially fine were some azaleas from Anthony Waterer. One yellow unnamed seedling had a flower six inches across and was promptly crossed on every truss of its bloom.

R. DISCOLOR was again forced into flower and crossed with many species and its pollen freely used.

Some amusing hybrids of SPINULIFERUM with RACEMOSUM and CILIATUM were seen at Kew and, as a result, a plant of SPINULIFERUM, well set with flower, was crossed with every one of the smaller-flowered species available, some dozen altogether, and seed has set.

It is interesting to notice the effect of the hot weather on plants despite the waterings. Growth has been phenomenal, but the leaves are not as large as usual. The only plant to really suffer was R. EXIMIUM, which owing to its late habit of making growth could not develop its leaves properly because of the dry atmosphere in spite of copious waterings. The new leaves are small and crinkled, although the plant remains in good health. Many transplanted Rhododendrons have set flower freely and the well-established plants also, so that quite a lot of flowering is to be expected next year. The hot weather seems to have suited other Chinese plants. *Viburnum Henryi* is covered with fruit, and *Ceratostigma Willmottiana*, a sheet of blue flower. These and other Chinese plants will probably never be seen to such good advantage in this country again unless similar weather conditions prevail.

LIONEL DE ROTHSCHILD.

Exbury, Hants,
October, 1921.

LOCHINCH.

In spite of the rules of the Society, I have never previously attempted to contribute to the Notes, for a variety of reasons or excuses. The chief reason was that I am no writer, moreover, Sir Herbert Maxwell during my absence wrote one article on this place, which I could not hope to compete with, and one or two other members had also mentioned things here.

During the last few years most of us have had more urgent things to attend to than gardening, and everybody's garden has suffered from want of men during the war. To make matters worse, the last two head-gardeners here covered a period of 80 years in charge, and the latter of these, at the end of his time, was quite incapable of coping with the handicap of shortness both of labour and of cash entailed by war and post-war conditions, with the result that garden conditions here hardly bore thinking about, still less writing about.

We have now however a keen and energetic younger man, Findlay from Logan, who is a Rhododendron enthusiast, so things are beginning to look up, and it is possible to plant a new thing without the certainty of its being lost forthwith.

1921 has been an interesting season in many ways. The spring of 1920 found us with almost all Rhododendrons, in all but exceptionally sheltered situations, practically stripped of foliage by the bad winter; this was followed by an exceptionally wet year, 53 inches, the wettest on record for many years, as result of which the foliage made a wonderful recovery, but on December 3rd, 1920, we had a gale which blew down 6,000 trees, followed by some minor gales which brought down a good many more trees, newly exposed by previous gale. Throughout 1920 there was never anything like a dry spell, and we had seven inches of rain in January, 1921, with warm muggy weather, and no frost to speak of until March. The defoliation of bushes was not nearly so bad, or general, in spring 1921, as in the spring of 1920, but was remarkably capricious.

Some bushes were almost bare, whilst others similarly situated did not appear to have lost a leaf. In one case, in a not very exposed situation, in the garden beside this house, a large R. ARBOREUM, very much overcrowded between two large hybrids, facing west, lost practically every leaf, whilst its two neighbours did not suffer at all, though subsequently all three flowered freely, and are now quite flourishing.

We had no frost to speak of except 20° on March 7th, 1921, and various odd nights of up to 8° right up to the 18th April. These latter did comparatively little harm as they came during the only dry spells. A certain number of buds were frosted, but I think that probably did good, as there appeared to be a danger of a great many over-flowering. As it was we had the finest show of bloom all over that I ever remember seeing here.

The plants of R. ARBOREUM suffered more than most from leaf stripping, but it was not confined to them, other species, THOMSONII particularly, although the leaves were not stripped off, had all their ends turned a sort of grey-brown colour. I see that other people complain of the same thing in the south, and attributed it to the dry season of 1920, and it seems peculiar that we should have it as result of wettest season on record.

The following notes as to dates of flowering of some earlier species may be of interest :—

R. BATEMANNII in flower on February 1st (six days earlier than in 1920), continuing to flower profusely until cut down by frost on March 7th (20°).

R. BARBATUM showing colour on February 6th, and almost in full flower by March 7th, but whether in low situations down close to water, or on banks in higher situations, did not suffer to same extent as others.

R. PRAECOX commenced flowering at the beginning of February and was destroyed on March 7th.

R. DAHURICUM, in flower more or less all winter, was very fine till March 7th.

R. "CORNUBIA," in a sheltered corner facing south-west, in flower during early March, escaped with little injury from frost, only a few outside petals being damaged.

R. MOUPINENSE, in full flower latter half of February, was all destroyed on March 7th. The March 7th frost destroyed nearly all the ARBOREUM bloom, and curiously enough, we had practically the same thing on the same date (March 7th), in 1920.

Very few of our Rhododendrons here are growing on peat, most of them are on loose gravelly sandy soil, which appears to suit them very well, particularly R. ARBOREUM, in our wet climate. We have not had the sort of drought this year that has occurred in other parts. The dry weather only lasted from the middle of April till July 15th, but even that resulted in a rather abnormal second flowering.

On August 31st we had five species in flower, namely, CAMPANULATUM, CAUCASICUM, DAHURICUM, FERRUGINEUM, PONTICUM, besides "NOBLEANUM," "PRAECOX" and various other hybrids.

On Christmas day DAHURICUM and NOBLEANUM were in full flower, and the latter has been in flower the whole winter.

Escallonia Philippiana is now in full flower, and the rambler rose "Dorothy Perkins" has a fair sprinkling of flower and has been so for the past month or six weeks.

A good many of our own seedling Rhododendrons flowered for the first time this year, including one from R. "NOBILE," but the latter has not come quite true, it has the same large pink truss, but has not got the small darker specks on the upper petals. I have a certain number of ARBOREUM seedlings to exchange with any member who wants them.

STAIR.

Lochinch, Castle Kennedy, N.B.,
December 27th, 1921.

LENGTH OF LIFE OF RHODODENDRON POLLEN AND THE DROUGHT, 1921.

I have been unable to preserve pollen for any length of time without its losing its powers of fertilization.

On May 10th to 12th I collected various pollens on camel hair brushes in sealed tubes, and placed these in a cool dark cupboard. After three weeks I made various crosses (forty in all) with these pollens at intervals on PONTICUM, MAXIMUM, DISCOLOR, and AURICULATUM, and was unsuccessful in every case.

On May 25th I sent a hamper of partially opened blooms of both species and hybrids to a Cold Storage Co., and had them placed in Temp. 33°F., and returned to me on June 22nd. A few days in the greenhouse had the blooms opening fairly well, with any amount of pollen, which I noticed to be in a rather dry and powdery state. I made a considerable number of crosses with this pollen, and again I was unsuccessful in every case.

I should be extremely interested to hear if other Members have been successful in preserving pollen, and what methods they adopted.

As regards the drought, we are situated in a dry area—being practically without rain from January 25th till September 11th, when I was blessed with two inches in the day—and, having but little water supply, I think I felt the drought to the full. Although I sing a tale of woe, I am surprised that I have got through without a far larger list of casualties.

The most serious loss among the Rhododendrons was that of my only two LACTEUM 6778F. They died in the most annoying way. Despite care and attention, shade and water, they slowly expired bit by bit, first one branch then another, then total collapse.

The most affected were the OREODOXA, HAEMATOCHEILUM, FARGESII group. They curled their leaves round tight and they looked like lead pencils hanging down ; I suppose in self-protection. However, fifteen died—just half I had.

Except for occasional deaths the majority of the true Rhododendrons got through all right ; nearly all of these were heavily mulched with bracken. In most cases they made fair growth, and a considerable number have set flower bud for the first time. I lost very few plants of R. PONTICUM. The azaleas had a very bad time and scores of plants appear to be dead. Many, however, are throwing up shoots from the base, but even in those cases the plant will have to be cut right down.

The OCCIDENTALIS and the Ghents were least affected, the MOLLIS hybrids more so, and the true Pontic R. FLAVUM most of all. A fine old plant of *Corylopsis pauciflora* made no attempt to get through, dying in June. But my worst disaster is the loss of nearly all my *Kalmia latifolia*—plants fifteen to twenty years old—all stone dead. I had a fine collection, and now I have only one plant over six feet left.

E. H. WILDING.

Wexham Place, Stoke Poges,
November, 1921.

SOME CHERRIES FOR WOODLANDS.

Somewhile ago Mr. Eley raised the question as to the best kinds of trees as companions to flowering shrubs in a woodland. I have myself turned to the species of Cherry which have been introduced from Asia in recent years in the form of seed. I think if we are to have real trees from them we must start with seedlings, for the grafted plants in many cases are neither shrubs or trees.

Mr. Wilson has, first and last, sent us a great number, not all of which are in cultivation now I fear, but the following are some of them :—

Prunus Conradinae is the earliest and best, it is sweet scented, grows very fast and, though so early, has flowered well at Kew; at its best it is a really wonderful flowering tree. I have seen it as much as 25 feet high and in full flower at less than nine years old from the sowing of the seed. It fruits here in most seasons and cuttings will strike well.

Prunus pilosiuscula, said to reach 40 to 50 feet, we only have here from cuttings given me by Kew, but it has done finely there and even the cuttings begin to flower fairly early in life.

Prunus Dielsiana, a tree of 30 feet, we have had here and it was killed by silver leaf, but Mr. Wilson told me once that it was the best of his Chinese series. It is nearly sure to be at the Arnold Arboretum.

Prunus serrula. I have not yet seen in flower, but the bark is in the young plant of a singular beauty, and Wilson's form has a drooping habit which should make it distinct.

Prunus salicina I saw last spring in flower at Kew on March 6th, and it was one of the earliest to open there ; though not the best in flower it is desirable, and Wilson says it reaches 30 feet. It is very distinct in its habit.

Prunus dehiscens, said to be 6 to 12 feet high, is very early indeed, and has rather a nice pendulous form of growth.

Then of Wilson's later finds in Japan, there are several species likely to serve the purpose of woodland shrub growers ; of these the following are probably the best.

Prunus serrulata sachalinensis (syn. *P. Sargentii*), this is a really fine fast growing tree, capable of reaching a height of 60 feet with a large single flower and in the autumn, even in Cornwall, gives a very brilliant scarlet colour.

Prunus yedoensis, I have only seen small seedling plants of this which carried a bright foliage in the autumn, and Mr. Wilson's description of the great use of it by the Japanese encourages me to plant the few I have raised from seed.

Prunus subhirtella in its various forms is now well known, and though it seems to vary a good deal, they are all of them good when in full flower.

There are several more species of *Mr. Wilson's finding, and a good many of Mr. Forrest's finding, but I might if they are of interest to readers report on them another year.

J. C. WILLIAMS.

Caerhays Castle, Cornwall.

December, 1921

*On February 8th, 1920, Mr. J. C. Williams wrote, saying, " Since I wrote my Note on Cherries, Wilson's 4146 has flowered very finely indeed. It has a great mop head to it, and you could hardly see through the mass of small white scented blooms. I think he calls it *P. mume*."—C.C.E.

RHODODENDRONS AND THE DROUGHT, 1921.

I believe it is wished that we should give some record of how the different species of Rhododendrons stood the prolonged and severe drought of 1921.

The following plants all suffered badly and much in the order that I name them. R. SINOGRANDE, R. BASILICUM, R. FALCONERI-GRANDE, though the largest number of deaths from drought came amongst the INTRICATUM-IMPEDITUM lot, which had been moved in the spring of 1921, instead of the autumn of the previous year.

The forms which suffered least were IRRORATUM, DECORUM and the YUNNANENSE, DAVIDSONIANUM, CHARTOPHYLLUM set, and I believe Mr. Forrest's experience in the great drought they have had in Yunnan, is nearly identical with this.

The thing which helped the plants most was a really good mulch early in the year. Then having ample shade by reason of the vigour of their own foliage to support and shade the mulch. Next to this, being within the shadow of big trees, so long as the boughs were not near enough to reduce the value of the few small showers we did get.

The causes of the worst injury from the heat were :—First the neglect of mulching, then planting shade-loving plants in hot dry places. Next the capture of what rain did fall by overhanging boughs. Last, but not least, the absence of shelter from the hot drying winds.

As regard other kinds of plants which like more heat and warmth than the average, we have very few, but things like the Yuccas did as they very rarely do, and I should expect the whole of the deciduous flowering shrubs and trees to give an abnormal amount of bloom next year, and it would be reasonable to think that the plants having to send their roots further out to get their moisture, would be able to grow better another year.

Probably there will be a real gain, too, in the heat accumulated in the soil, for I think that in Cornwall we hardly realise how much we owe to the greater warmth of the land itself in winter, as well as to the mildness of the air.

I fear to quote rainfall figures, but I have the general impression that though we had a little more rain than the East of England, our greatest gain came from the fact that much of it took the form of a slowly falling mist with damp air before and after the rain, rather than short heavy showers. It is in this direction that even in the average year we do best.

J. C. WILLIAMS.

Caerhays Castle, Cornwall,
December, 1921.

CONVERSION OF WOODLAND INTO SHRUBBERY.

As many members are raising Rhododendron seedlings which require much room for development, I propose to give you my somewhat limited experience in this type of gardening.

Nowadays when woods are not given over almost exclusively to game as in pre-war times, it is, in may cases, possible to adapt a wood for planting out Rhododendrons and shrubs with far more satisfactory results, than by planting them in tightly packed beds in the more orthodox garden. Preferably such a wood should not be a fir wood, but it should be near the house.

In Cornwall, where I live, the wind is undoubtedly the most difficult thing that we have to contend with and we find that shelter is much more easily built up in a flat wood than on a slope. In less stormy districts sheltered combes with steep sides may be perfectly satisfactory.

Assuming that a suitable wood has been decided upon, the outside margins of the wood where the wind comes in should be so planted with evergreens that the remainder is comparatively sheltered. For windbreaks on the outside, I would suggest Laurels, Hollies, PONTICUM and CAUCASICUM Rhododendrons. One hesitates to recommend the Yew owing to its poisonous nature to farm stock. The Holly is probably our best evergreen, though a slow plant if there is not a lot of humus in the soil. I consider *I. Aq. camelliæfolia* the best, though *I. Mundyi* and *I. Hodginsii* are both quite excellent.

It must always be remembered that, while the actual outside of such a wood is probably better left alone, the stunted trees being the natural result of battling with the elements and a great protection against them, some thinning of the forest trees will be necessary to obtain the best results from the newly planted evergreens.

Having made good the wind protection in the most important places, the wood should be gradually thinned and planted with groups of tall growing evergreens, which will break up the sweep of wind coming in over the tops of the trees that is so destructive to Rhododendrons and other smaller shrubs.

I would advocate for such work to some extent, shrubs that are easily propagated, so that cuttings can be taken at once with a view to extending the size of the original groups if thought desirable.

The following, while not hardy in all cases, might be worthy of consideration :—

Drimys Winteri. This is probably hardier than usually supposed and grows rapidly in partial shade.

Drimys aromatica, not such a strong doer but a more attractive plant.

Grisselinia littoralis, a very strongly rooted plant. It is of a very refreshing green colour.

Myrtus Luma (syn. *Eugenia apiculata*) is a most attractive plant for partial shade, especially if the stems are kept free of under branches so as to show the wonderful apricot bark. This plant grows freely and rapidly from seed.

The Common Bay is a good shrub for planting in groups in a wood. The best form is probably *canariensis* which has a broad leaf.

Tricuspidaria lanceolata (syn. *Crinodendron Hookeri*) is softer than some of the above, but is such a quick grower and so easily struck from cuttings that I feel it ought to be mentioned.

Viburnum coriaceum is, with its near relatives, likely to become a valuable shrubbery plant for such work. I have not seen it over 25 feet, but it looks as if it would grow considerably taller.

Escallonias are very liable to overseed themselves and die unexpectedly: of these *E. Exoniensis* seems the tallest and fastest, *E. pterocladon* the most upright and rigid, but *E. macrantha* is probably the best.

Of the *Olearias*, *O. Fosteri*, owing to its height, is probably the most valuable, though I expect it would resent shade. *O. macrodonta*, *O. nitida*, and *O. oleifolia*, are quick growers but rarely exceed 10 feet. They break freely if cut back in the spring.

Of Bamboos, *A. fastuosa* is a most valuable plant and attains 20 feet without difficulty. *A. anceps* will grow in dense shade but is such a trespasser that it must be encircled by a ditch.

While many of the *Pittosporums* are most beautiful plants, they are not hardy and seem liable to windshake.

I will conclude by mentioning what does not seem generally known, namely, that *Choisya ternata* and *Thujopsis dolobrata* will grow under beech trees.

P. D. WILLIAMS.

Lanarth, St. Keverne, Cornwall,
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