Editorial Copy

The Journal
OF
The Scottish Rock Garden Club

Editor—J. L. MOWAT, University Botanic Gardens, St. Andrews

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Photo—W. R. Philipson

Frontispiece—The Crater of Heleakala, Hawaiian Islands

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The Club Needs More Members

★

You can help

★

PERSONAL RECOMMENDATION is our best source of new Members

★

SO PLEASE :

Mention the Club to your gardening friends.
Tell them about our S.R.G.C. activities.
Describe our *Journal*, Seed Scheme, Shows, Slide Library, and Local Groups. Invite them to join,

AND

MAKE AT LEAST ONE NEW MEMBER YOUR TARGET FOR 1966

(Use Application Form sent with *Year Book* or get one from your Group Convener)

PHOTOGRAPHIC COMPETITION

An invitation to enter black and white prints for this Competition is extended to all the amateur photographers among our members throughout the world.

Prints, not more than three per member, should be unmounted and approximately 6 ins. × 4 ins. in size.

They should be good illustrations of new, rare, unusual or otherwise interesting plants, wild or in the garden, suitable for the rock garden in its widest sense, i.e., including scree, wall, peat, water, etc., gardening, as well as Alpine House.

Two impartial Judges have agreed to adjudicate :—
Mr. JOHN CAMERON, Former Editor of the *Dundee Courier*, and Mr. R. A. DAW, Editor of the *Scots Magazine*.

Prize Vouchers for £3, £2 and £1 will be awarded as 1st, 2nd and 3rd Prizes respectively.

ENTRIES should be sent in a strong envelope, kept rigid with stiff cardboard, addressed to the Editor : Mr. JOHN L. MOWAT, University Botanic Gardens, St. Andrews, Fife, **not later than 30th JUNE 1966.** A stamped and addressed envelope should be provided if return of the photograph is desired.

Awards will be announced in the September *Journal*, when the winning photographs will be published. The Editor, in his discretion, may publish other photographs submitted.

Members should attach to the back of each print the following : Name and Address (in block letters), Camera used, Exposure and lighting data, and Camera/Subject distance.

Subject : The correct botanical name should be given, and a short description of the plant, with details of its colour, habit, situation and type of cultivation most suitable.

The following signed declaration should then follow :—
"This photograph is my property, taken by me as an amateur photographer in pursuit of my hobby."

(Signed).....

Editor's Notes

SCOTLAND, or at least the Eastern part of it, has had to suffer a hard and long-drawn-out winter. Starting as it did in early November, it continued with only a very few and very brief interludes right up to the present time (the end of February). Several times and in various parts of the country the thermometer has fallen below zero Fahrenheit ; earlier this month Edinburgh recorded the lowest temperature for over 200 years.

How is all this likely to have affected our plants ? When the milder Spring weather comes to us again will we find that some of our best-loved treasures have departed to a warmer place ? Time will perhaps tell us the whole story, but meantime we are heartened to see that in our own garden a South African plant sometimes regarded as doubtfully hardy—*Euryops evansii*—seems to have come unscathed so far through all reverses out in exposed open ground. (On the other hand a great many roses have been cut right back to ground level). The early flowering viburnums and shrubs such as Witch Hazels have had a bad time, though the damage is only superficial ; their flowers were caught as they opened by hard frosts and bitter winds and just shrivelled away.

It is only to be expected that this hard weather may have a detrimental effect on some of our Club shows, especially the earlier ones, and we do not feel it out of order to make an earnest appeal, to all who can possibly do anything, to support all our shows to the very best of their ability. We would appeal even to those who may never have shown before to make up their minds to try their hand and persuade their friends to do the same. Showing, once one has started, can be great fun.

Apropos of what we have said, this seems a suitable time and place to mention another matter in which all members, whether they compete at Club shows or not, can do a good job of work in furthering the well-being of the Club. To elaborate on this involves some brief reference to the Club's earlier days when it was founded in 1933 by a small group of keen amateur and professional rock garden enthusiasts. Few of those original founder-members are still alive today, but their work has lived on—probably beyond the expectations of the most optimistic of them.

By 1954, when the Club came of age, the original small group had increased to over 2000 and by 1962 to very nearly 4000. Surely we

must conclude that this rapid but steady increase could only have been brought about by the energetic enthusiasm of the existing members of those days. But is there any evidence of that pioneering keenness now ? For the last three years the total membership has hovered with little change at slightly under 3000.

Similarly Club shows, which started in 1934 with two, one in Glasgow and one in Edinburgh, have now increased to eight yearly, widely distributed over Scotland. But show secretaries have a hard and discouraging time trying to keep up the standard, and are always pleading for more entries and more competitors. To compare the classes themselves of today with those of 25 or 30 years ago, only four of the eight shows now have one 6-pan class each, whereas in 1939 Edinburgh and Glasgow both scheduled eight 6-pan classes and twenty-five 3-pan classes. Is it to be wondered at that show secretaries sometimes feel depressed, and that we do not get a better turn-out by the public to our shows ? Is there anything the ordinary member can do to help ?

Yes ! He or she can in many cases help by entering a few exhibits —even if only two or three—at the Club show nearest to him and so show his appreciation of all the effort put in by the show secretary and committee concerned to make the show a success. At the same time each small lot of entries help to make the show more worthy of a visit by non-members—who may decide to become members as a result of that visit to a show.

For one reason or another not all members are in a position to enter exhibits to any Club show, but even then there is still quite a lot they can do to help *their* Club. Surely they can support their group meetings to the best of their ability and to encourage interested friends to go with them as prospective new members.

One does not need to be a housekeeper to know how the prices of everything keep on rising steadily. Where income is static and costs keep rising the obvious result must be to go under unless something can be done. Unless income can be increased the only way to make ends meet is by cutting costs, and that can only be done by curtailing the services to members, because necessary expenses are already cut to the bone. If we do not want to have these various services to members reduced, then some other way of helping our finances must be found.

No one in the Club wishes to see the subscription raised again, so the only other obvious way is by a substantial increase in membership.

And this is just where every member of the Club can play his or her part. Surely most of us must have garden-minded friends or know someone interested but not yet members who might be persuaded to come to a group meeting and ultimately to join the Club. In addition to increasing our income, an inflow of new members could probably instil a renewal of vigour and activity throughout the Club.

On a later page (p. 10) members will find the programme for the Discussion Weekend, to be held this year at North Berwick on 1st and 2nd October. This programme suggests a repetition of the high standards set by previous Weekends, though it would seem impossible to surpass the general feeling of satisfaction created last year at Dunblane. The range of lectures and talks laid on for North Berwick suggest something for every member from the veriest novice to the top-ranking expert—assuming always that they are really interested in rock gardening and rock garden plants.

A few murmurings—very few—have been heard to the effect that some of these weekends have been taken too seriously (the standard has been too high (?)) and that sufficient consideration has not been given to the social side. We feel, however, that any complaints of this sort are entirely due to a misapprehension concerning the purpose of these weekends. It is very much to be doubted if those enthusiastic regular attenders at discussion weekends will admit to even a faint possibility that this could be the case.

Right from the very first Weekend they were never intended to be only social functions. They were introduced as opportunities for lovers of rock-plants to meet together socially once in a while and add to their knowledge by means of lectures, talks, and friendly discussion. Few who have attended one or two weekends can deny that after the more serious matters of the day are over and the social side comes into its own there is no lack of harmonious and friendly discussion to engage one's interest into the 'wee sma' 'oors'.

DUNFERMLINE SHOW — CORRECTION

MEMBERS are asked to note that although the dates of the Joint Awards Committee meetings appear correctly on page 11 of the *Year Book*, the dates given on p. 31 for Dunfermline Show are wrong.

The correct show dates are **13th and 14th May,** entries not later than 9th May, hall open to receive exhibits—6 p.m., 12th May, exhibits to be removed by 8 p.m., 14th May.

Club Christmas Cards

THE Club Christmas Cards this year will be copies of the four colour plates (figs. 2, 3, 4 and 5) in this *Journal*. They will be supplied in lots of NOT LESS THAN ONE DOZEN, either all of one kind or mixed, as desired. It will be sufficient to give figure numbers when ordering, which should be as soon as possible to the Honorary Treasurer : DAVID ELDER, Dalmara, Carslogie Road, Cupar, Fife, enclosing the necessary remittance. The price including envelopes is 10/- per dozen, post paid.

Costs of production and postage of the *Journal* can be offset to some extent by your support and participation in this Christmas Card scheme.

Seed Distribution 1965-66

THIS YEAR the number of donors was about the same as last year—163, and I am sure the recipients of seed would wish me to thank them very much for the time and trouble taken, also the band of assistants who do the work of the Exchange. It is a time-consuming job and it is very good of them to spare so much of that valuable commodity on your behalf.

I have three orders awaiting claimants—one from New Zealand sent without a name, which I cannot trace, as postmarks on envelope and Postal Orders were obliterated—if owner applies, it will be sent on immediately.

A very encouraging aspect of this year was the number of new donors. Would home donors please note that bulbs and corms seem to be in short supply in New Zealand and Australia—seed of these are in demand from most members from these countries. Elsewhere there seems to be no particular bias.

The arrangements for next year will be the same as in previous years. Seeds or lists of seeds to follow must reach me **not later than 1st November 1966.**

Miss JOYCE HALLEY,
16 Abercrombie Street,
Barnhill, Dundee,
Scotland.

NOTICE TO MEMBERS

MEMBERS are reminded that nominations for the Office of President, the other Office-Bearers, and for Members of Council are required by the Constitution and Rules to be sent *in writing* to the Secretary, on or before **20th August 1966.**

Such nominations shall be signed by two members of the Club, and each nomination shall be accompanied by the nominee's consent *in writing* to accept office if elected at the Annual General Meeting.

NOTE : All Office-Bearers retire annually, but are eligible for re-election. Members of Council due to retire at the end of this session are not eligible for re-election until next year. Five new Members of Council are required, to serve for three years. The four Vice-Presidents on the Council retire annually, but are eligible for re-election.

The Hon. Secretary :
Sqdn./Ldr. J. J. BOYD-HARVEY,
Boonslie, Dirleton, East Lothian.

Subscriptions

SUBSCRIPTIONS were due on 15th January. If you have not already paid yours, the Subscription Secretary would be glad if you would do so now. Last year he had to send out nearly 600 reminders. This involves much work and costs the Club a lot of money, both of which could be more profitably utilised otherwise.

The new Subscription Secretary is Mr. R. H. D. ORR, C.A., 30 **Alva** Street, Edinburgh, 2.

The Discussion Weekend 1966

THE MARINE HOTEL, NORTH BERWICK
1st and 2nd OCTOBER 1966

PROGRAMME

Saturday :

9.0-11.0 a.m.	Staging of plants for the Show
1.0 p.m.	Lunch
2.15 p.m.	Address of Welcome : Mrs. Boyd-Harvey, Group Convener, East Lothian
2.30 p.m.	The W. C. Buchanan Memorial Lecture "Chelsea Physic Garden—Past and Present" : W. G. Mackenzie, Esq., V.M.H.
3.50 p.m.	"Willie in his Garden" : Four pictures taken in the garden of the late Mr. Buchanan which are now in the possession of the Slide Library
4.0 p.m.	Afternoon Tea
5.0 p.m.	"Why do they grow there ?" Comments on the growing conditions of Alpines : Dr. Denis Ratcliffe
7.0 p.m.	Dinner
9.0 p.m.	"Japanese Plants for the Rock Garden" : Major-General D. M. Murray-Lyon, D.S.O., M.C.

Sunday :

10.0 a.m.	"What kind of Illustrated Book on Alpines ?" : Professor G. Pontecorvo, F.R.S.
11.30 a.m.	Flower Show
1.0 p.m.	Lunch
2.30 p.m.	Discussion on "Difficult Cushion Plants" Slide contributions by Mr. H. Lincoln Foster, President of the American Rock Garden Society, Professor W. R. Philipson, University of Canterbury, New Zealand, and other overseas members, showing cushion plants in nature, and a symposium of theories about their cultivation by members attending the Weekend
4.0 p.m.	Close of proceedings by Dr. James Davidson, F.R.C.P., President of the Scottish Rock Garden Club
4.15 p.m.	Afternoon Tea

HOTEL ARRANGEMENTS FOR WEEKEND RESIDENTS

Bookings for the Weekend must be made *direct* with the Marine Hotel, Cromwell Road, North Berwick, mentioning membership of the S.R.G.C. This is a most comfortable four-star hotel overlooking the Firth of Forth. The special conference rate will be 94/- per person (with an extra 11/- for private bathroom). This quotation is from and including lunch on Saturday until and including afternoon tea on Sunday. It includes service charge, all meals, coffee after lunch and dinner, early morning tea and Sunday newspapers.

Early application is advised, particularly by those members requiring single rooms, and by those who wish to make arrangements for staying an extra night or so.

Members will settle their accounts at the Reception Desk on their departure.

NON-RESIDENTS

Non-residents who require meals at the hotel should order in good time at the Reception Desk. These will be paid for in the Restaurant in the usual way.

CONFERENCE CHARGE AND IDENTITY BADGES

Both residents and non-residents will be asked to contribute a fee of 10/- a head to cover the overhead expenses of the Weekend. No rebate will be allowed for lectures not attended. Please send this fee of 10/- to :—

Mrs. L. C. BOYD-HARVEY,
Boonslie,
Dirleton, East Lothian,

enclosing a stamped addressed envelope. Identity badges to wear throughout the Weekend will then be issued to you by post. It is important to state in your letter of application whether you will be coming as a resident or non-resident, as the badges will be of different colours for the convenience of the hotel staff.

Resident members are asked to send this fee *well in advance* and certainly not later than Tuesday 27th September, in order that he may make out the badges and *post them back to reach members before they set out from home.*

Non-residents too must make early application so that the hotel may be informed, *to ensure that there will be sufficient seating accommodation for them at the lectures.*

SYMPOSIUM ON SUNDAY at 2.30 p.m.

Will members who have a few 35 mm. transparencies of CUSHION PLANTS in nature or in cultivation, and who would be willing to discuss how to grow them, please let me know early in September ?

L. CHRISTIANA BOYD-HARVEY,
Group Convener for East Lothian.

THE USUAL September Show in North Berwick will be postponed and combined with the late Autumn Show at the Discussion Weekend on October 1st and 2nd, **in the Marine Hotel,** North Berwick. No entry forms will be required in advance, but exhibitors are asked to stage their plants between 9.0 a.m. and 11.0 a.m. on Saturday 1st October.

There will be no separate Section II (Novice) "for members who have not previously won a Bronze Medal or more than six first prizes at any Show held under the auspices of the S.R.G.C." Members who would normally be eligible to exhibit in Section II will be given gummed stars to affix to their cards, so that their exhibits may be considered for the award of the SILVER CUP.

This Show will not be open to the public, and no Forrest Medal nor Club Bronze Medal will be awarded.

Special Prizes :

THE EAST LOTHIAN TROPHY will be awarded to the best entry in Class 1.

THE PEEL TROPHY will be awarded to the best entry in Class 12.

THE LOGAN HOME TROPHY will be awarded to the best entry in Class 20 by an East Lothian or Berwickshire member.

THE SILVER CUP will be awarded to the best plant exhibited by a member who would normally be eligible to exhibit as a novice in Section II.

THE MARY BOWE MEMORIAL TROPHY and THE W. C. BUCHANAN MEMORIAL MEDAL will be awarded to the exhibitor obtaining the highest number of points in the Show.

THE WELLSTANLAW CUP will be awarded to the best entry in Class 21.

The W. C. Buchanan Memorial Medal will be retained by the winner, but all other trophies will be held by the winners for one year only.

SCHEDULE

Class 1. 3 pans rock plants, of different genera.
2. 3 pans rock plants, distinct, of the same family.
3. 3 pans rock plants, distinct, new, rare or difficult in cultivation.

4. 1 pan rock plant, new, rare or difficult in cultivation.
5. 2 pans rock plants, distinct, with autumn-tinted foliage.
6. 1 pan rock plant with autumn-tinted foliage.
7. 2 pans rock plants, distinct, in fruit.
8. 1 pan rock plant in fruit.
9. 2 pans Cyclamen, distinct.
10. 1 pan Cyclamen.
11. 1 pan Erica or Calluna.
12. 3 pans Gentiana, distinct.
13. 2 pans Gentiana, distinct.
14. 1 pan Gentiana.
15. 3 pans Crassulaceae, distinct.
16. 3 pans Amaryllidaceae, Iridaceae or Liliaceae, distinct, suitable for the rock garden.
17. 1 pan Amaryllidaceae, Iridaceae or Liliaceae suitable for the rock garden.
18. 2 pans any plant, shrub and/or conifer, distinct, suitable for the rock garden.
19. 1 pan any plant, shrub or conifer suitable for the rock garden.
20. A miniature rock garden with maximum outside length or outside diameter of 18 ins. or less.
21. An arrangement of flowers and foliage cut from rock garden plants grown by the exhibitor.
22. 2 pans ferns, distinct, suitable for the rock garden.
23. 1 pan fern suitable for the rock garden.

Members who are not attending the Weekend will be admitted to the Flower Show on production of Membership Ticket between the hours of 11.30 a.m. and 2.0 p.m. on Sunday 2nd October. The Show will not be open to the public.

Obituary

THE DEATH of Mrs. John Renton after a long illness has removed one of the great figures in Scottish Horticulture. For many years she and her husband had made their garden at Branklyn, Perth, not only a great but also a personal garden where every plant was known and cherished and looked after with loving care ; and the result was a great triumph not only from the point of view of a great collection of rare plants but also as one of the few gardens in which in a comparatively confined space one never knew what was round the next corner. I personally know of no garden in which careful planning was more successful and where each and every plant was in its natural position. Much of the actual work from seedling raising to fruition was done by Mrs. Renton, and until her final illness she lived for this wonderful garden, spending every possible hour of daylight in it.

One side of her character deserves very special praise ; she never grudged the time spent in showing enthusiasts round the garden. Members of almost every branch of the Scottish Rock Garden Club will have realised what a pleasure it was to her to show and discuss with others her own special favourites. As the Branklyn garden was so well known, enthusiasts came from all over the world and went away much impressed and with an added knowledge of the treatment in particular rare and difficult alpines. As the years went on and the garden became more and more famous, the number of visitors on occasion must have almost been excessive during the months when it looked its best, but the same kindness and enthusiasm was shown to the beginner as to the expert.

The horticultural world has lost one of the kindest of women and one of the greatest of gardeners.

Note : Mrs. Renton was awarded the Veitch Memorial Medal in 1955 by the Royal Horticultural Society, and in 1960 she and Mr. Renton were jointly awarded the Scottish Horticultural Medal by the Royal Caledonian Horticultural Society. Between 1934 and 1950 various plants exhibited by Mr. and Mrs. Renton at S.R.G.C. shows were awarded George Forrest Medals (the premier award at any Club show). They were among the founder members of the Scottish Rock Garden Club.

GREECE—Flowers, Ruins and Mountains

The Clark Memorial Lecture, 1965

By A. J. HUXLEY

MY LECTURE to the Scottish Rock Garden Club was based on a large number of colour slides, and could not readily be transcribed. What follows, therefore, is a summary which mentions mainly the flowers actually illustrated. Besides these, the slides showed something of the classical ruins, countryside and people of Greece.

To do this was relatively easy, with a country so beautiful and so full of antiquities as Greece. It is possible, in April and perhaps early May, to combine flower-hunting with visits to the principle sites, for there are plenty of flowers there, including some rarities, despite the great number of visitors. Later, the sites become dry and the plants wither, and the plant hunter must turn his attention to higher altitudes.

Of the classical sites, Delphi (fig. 6) is perhaps the most rewarding. It stands above a deep valley on the lower slopes of Mount Parnassus, the site itself backed by the vertical, rosy Phaedriades cliffs, and looking across to the valley and beyond it the exposed rock of a lower ridge ; these bare hills are perhaps the most typical aspect of Greece. In and around Delphi there are scores of interesting plants, of which one might single out *Daphne jasminea*, most plentiful below the site, the local *Tulipa boeotica* and the curious *Cerinthe retorta*. There are many ophrys and on the slopes above are more tulips, crocuses, *Iris pumila attica*, *Anemone blanda*, *Hypericum apollinis* and so on.

Other sites which ought to be visited are bleak, sinister Mycenae on its hilltop overlooking the Argos plain ; lush Epidauros, with its great bowl-like theatre cut out of a hill, notable for its Serapias ; Olympia, in quieter, lusher countryside, where Monkey Orchid and Limodore are to be found with *Iris cretica* and *Anemone coronaria* ; and Corinth, under the castellations of the Acrocorinth, a hill well worth walking up to study the varying populations of the *Anemone hortensis/pavonina/fulgens* group.

The Byzantine church at Kaiseriani is on the foothills of Hymettus, just outside Athens, full of interesting plants ; around Daphni botanising is well worth while, and the Byzantine monasteries at Mistra, in Sparta, are both extremely lush and very beautiful. In the north the fantastic monasteries of Meteora and the tiny churches around Kastoria are each surrounded by quite different slices of the flora.

This flora of over 6000 species is three times as numerous as that of Britain in an area of little over half. This is largely because of the rugged nature of the country, cut up into isolated mountains, and to the large number of islands—many of which, like Rhodes and Crete, have ancient monuments of unique interest as well as endemic flowers. These islands are products of that antique cataclysm when the Mediterranean basin was flooded, and most are the tops of submerged mountain ranges. Of course mountains of any kind, even if only landlocked, are perfect centres for evolutionary activity and the production of isolated species.

Though Greece is thickly populated and over-run by visitors in certain parts, because of its ruggedness surprisingly large areas are hardly explored. The late Dr. Goulimis, in the last 15 years of a life devoted in his own time to botany, collected 250 species not previously recorded in Greece, including several quite new plants, among them a tulip and a crocus. I have not been far enough off the beaten track for that, but I do want to emphasise that even on fairly well-trodden tracks one can find a great deal of interest. I have, for instance, recorded the continued existence of *Ophrys speculum regis-ferdinandi-coburgii* on Rhodes, where it had not been noted for 30 years, and have drawn attention to *Anemone stellata heldreichii*, a plant known to the botanist Hayek but ignored by the modern Flora Europaea and apparently not known in British herbaria. In neither case was I doing more than collecting what I happened to see on a fairly touristy visit.

The vegetation of Greece, like other Mediterranean lands, varies from *forest*, now rather rare except on the mountains, to *maquis*, a combination of trees, large shrubs and undergrowth, and thence to *garigue*, a degenerate flora composed mainly of low bushes. In some cases even these have gone, when the vegetation is known as *steppe*. Goats and erosion continue the damage originally caused by man's excessive tree-cutting.

Among the typical small trees and shrubs of the maquis are the pencil cypress, *Styrax officinalis* the storax tree, *Arbutus andrachne*, *Pistacia lentiscus*, the mastic bush—still cultivated, notably on Chios and Samos, for its gum which has various uses including the making of the drink *masticha* ; *Spartium junceum* the Spanish broom, *Phlomis fruticosa* the Jerusalem Sage, and *Calycotome villosa*, a gorse-like bush which often alternates with the phlomis in large areas.

Among the smaller bushes typical also of garigue are the very prickly shrubby burnet, *Poterium spinosum*, and Kermes oak, *Quercus*

Photo—S. Mitchell

Fig. 2—Dryas octopetala, Lautaret (See page 57)

Photo—S. Mitchell

Fig. 3—Rhododendron ferrugineum, Lautaret (See page 58)

coccifera, named for the scale insect which feed on it and which, when dried, was used to produce a red dye. Then there are the curious blue-flowered shrub *Globularia alypum*, various daphne relations such as *Thymelaea tartonraira*, and numerous cistuses, such as the pink *C. creticus* and lovely white, gold-centred *C. salviaefolius*.

There are many spurges in Greece, of which *Euphorbia veneta* is widely grown in gardens, usually under the name *E. wulfenii*. Others also cultivated are the sprawling blue *E. myrsinites* and the more erect *E. biglandulosa*. Spiny spurge, *E. acanthothamnos*, forms little round hummocks.

Many annuals decorate Greece in spring, often forming sheets of colour. Such are *Chrysanthemum coronarium*, *Silene colorata*, *Legousia speculum*, and the Corn Poppy, *Papaver rhoeas*, more spectacular than in England.

Among the typical weeds are *Asphodelus ramosus*, an indicator of impoverished soil, and some smaller relations ; henbane, notably *Hyoscyamus albus*, and the related mandrake, *Mandragora officinarum*, of mythical fame ; and squirting cucumber, *Ecballium elaterium*, reputed to be capable of ejecting its seeds 25 yards. There are many broomrapes, one of the biggest being *Orobanche crenata* which decimates bean crops, and another remarkable parasite is *Cytinus hypocistis*, which produces fist-like masses of red and yellowish flowers, feeds on cistus roots, and is related to the largest flower in the world, *Rafflesia* from Sumatra.

Many plants grow on the rocks themselves. Mulleins are legion ; *Verbascum undulatum* is easily recognisable with its wavy leaves, but unfortunately hard to cultivate. *Alkanna orientalis hellenica* is a handsome yellow alkanet which has proved fairly hardy. *Onosma echioides*, the Golden Drop, and *Campanula rupestris* in its many variations are often seen together on cliffs and the walls of ruins.

The hot summer encourages plants with fleshy roots which survive in this form during the dry season. Among these are the anemones—*A. coronaria* and the *hortensis/pavonina* group about which taxonomists have different views. Muscari are numerous, *M. comosum* being the commonest ; one of the attractive montane species is *M. commutatum*, dark violet and with apricot odour. The tiny lily-like *Lloydia graeca* is abundant ; there are many alliums, such as white *A. neapolitanum* and handsome pink *A. roseum*. *Arisarum vulgare* is a small aroid sometimes called Friar's Cowl ; its big relation, *Dracunculus vulgaris*, the Dragon Arum, is remarkable for its size—I have measured one

2 ft. from base to tip of the spathe—and its fly-attracting stink.

Pleasanter plants are the irises. One of the commonest is pale blue *I. sisyrinchium*, which only opens after noon. *Iris cretica* is the narrow-leaved Greek hedgerow version of the Algerian *I. unguicularis*, surprisingly difficult to flower successfully in Britain. *Iris pumila* has two forms—the seaside one with straight leaves and the alpine *I. p. attica* with curving ones. Both have off-white, yellow and violet colour variations and an attractive fruity scent, and the *attica* form at least, from my own experience, is very easy to cultivate and flower. The Widow Iris, *Hermodactylus tuberosus*, is to be found with gold and mahogany flowers as well as the green and black better known as a florist's flower here. *Narcissus tazetta*, *Gladiolus segetum* and various romuleas are other fairly common bulbs. There are many fritillaries in Greece, of which *F. graeca*, both bicoloured and plain plum-purple, is to be found on Hymettus in company with the narrow-flowered *Tulipa australis*.

There is a great host of orchids, and these are my special interest. However, they need a certain amount of study if they are to be readily identified, especially the ophrys or insect orchids which are very variable, so in this account I shall only mention a handful. The wavy-leaved, large-headed pink *Orchis italica* is quite abundant ; so are the montane species *O. quadripunctata*, pink, and *O. provincialis pauciflora*, yellow. The pink, large-lipped *O. papilionacea* is one of the loveliest species.

The biggest orchids are the livid purple or greenish-purple *Himantoglossum longibracteatum* and the saprophytic *Limodorum abortivum*, like a leafless purple cone with 1½ in. blue and white flowers.

Ophrys speculum, the Venus-Mirror, with blue reflective patch and hairy beard, and the Horned Ophrys, *O. scolopax cornuta*, with a pair of ½ in. protuberances, are perhaps the most remarkable of a large number of species, all of special interest because of their peculiar mode of attracting insects to pollinate them, which shows very high evolutionary specialisation.

Besides these there are several species of *Serapias*, orchids unknown in northern climes, which all have a large tongue-like lip protruding vertically downwards from a helmet-like structure.

In the lecture I showed a few slides of plants and places on three of the larger islands. *Ranunculus asiaticus* is to be found in its white form on Crete, its red form on Rhodes. Other Cretan plants shown were the decorative but far too successful weed *Oxalis pes-caprae*

(*cernua*), which sometimes has an attractive double form of its yellow flowers ; the endemic *Arabis cretica* ; some unusual orchids ; the pink *Tulipa bakeri* ; *Anemone stellata heldreichii*, already mentioned ; and *Cyclamen creticum*, a deep-rooted white-flowered species often regarded as rare but in fact quite abundant.

Rhodes has its special cyclamen too in *C. repandum ssp. rhodense*, white with red rim to the flower, which despite its abundance on Mt. Philerimos has only recently received scientific recognition. Here too grew the large, deep blue form of *Campanula rupestris* known as *anchusaeflora*, the giant fennel *Ferula chiliantha*, like the long-spurred pink *Orchis anatolica*, a Turkish plant, and the beautiful but tender, white-flowered *Paeonia rhodia*.

Romantic Corfu, off the north-west coast of Greece, is much lusher. *Orchis laxiflora* is prolific in its marshes, *Serapias lingua* is abundant, the Italian *Scilla hyacinthoides* is naturalised, and this is the home of the autumn-flowering *Galanthus corcyrensis*.

Mountains compose a very large part of Greece, notably the north. I have climbed several Greek mountains but only in April and May. To see the mountain flora at its best one would need to go in June or, for Olympus, Smolika and other mountains of the further north, even in July. Each peak is likely to have its own endemics, like the fabled *Jankaea heldreichii* on Olympus—to be seen, incidentally, in flower in late April at the entrance to the practically impassable Litochoron gorge. Other plants I saw on a brief visit to Olympus (fig. 7) were *Viola gracilis*, in various colours ; *Saxifraga scardica* (fig. 8) and *S. porophylla thessalica* (fig. 9), both kabschias ; *Fritillaria messanensis* ; a very good bright form of *Geranium macrorhizum* ; *Draba scardica* ; and, lower down, *Orchis simia* in large numbers and the eastern form of *Iris* (now usually called *Chamaeiris*) *lutescens*, which has proved very amenable in cultivation. Here too were various crocuses, one with very long narrow leaves still quite unidentified, and including *C. reluchensis*. The yellow *C. chrysanthus* is usually to be seen on mountains, often in combination with *Scilla bifolia* ; *C. sieberi* is the other typical mountain crocus. This reaches its most handsome on Mount Chelmos and Mount Kyllene (or Xyria), where it becomes a 6 in. globe in three colours.

Anemone blanda may vary a lot in colour—to deep violet, pink and magenta—and also in flowering time. This is often found in company with *Corydalis solida*. Spring-flowering colchicums, many ornithogalums, drabas, violas and aubrietas are all to be found. The yellow asphodel, *Asphodeline lutea*, goes quite high, as does the golden,

fragrant *Orchis pallens*. *Helleborus cyclophyllus* is a typical plant above 5000 ft., usually in light deciduous woodland. There are also forests of *Pinus heldreichii* and *Abies cephalonica*. And if you are lucky you may make a new discovery, like two friends of mine who found *Daphne blagayana*, previously unknown in Greece, on the Katara pass across the Pindus, not far from Metsovo—a find which tinges me with some envy, as I had botanised in the same area on a previous occasion.

You cannot go far in Greece without finding exciting plants ; you can easily adventure into little-known localities. Many of the plants take kindly to cultivation in this country ; but I do beg my readers to be discriminating in digging plants up. The goats have done enormous damage already ; let us not emulate the collectors who eradicated a unique species on Kyllene, and always make sure there are plenty of specimens before we take one.

DUNBLANE DISCUSSION WEEKEND — OCTOBER 1965

WILLIAM BUCHANAN MEMORIAL LECTURE

Alpines without a Rock Garden

By JOE ELLIOTT

In his W. C. Buchanan Memorial Lecture at Dunblane Weekend—"Alpines without a Rock Garden"—Mr. Joe Elliott explained to his audience the problems involved in growing rock plants, particularly lime-haters and peat-lovers, of which he was very fond, in an extremely alkaline soil such as he had to contend with. Using a series of slides to explain his points as he went along, he first of all showed us selections of his many troughs, giving the soil mixtures he used and the plants he grew in them. These troughs enabled him to have soil mixtures to suit the various types of plants he wanted to grow.

From this method he passed on to 'raised beds', which also allowed him to grow lime-haters above the naturally limey soil of his garden. After showing us a number of slides of the wide range of plants he was able to grow under these conditions, he next passed on to his 'alpine house', showing slides of it (and one of H. Esslemont's for comparison) and explained in detail his set-up and fittings and went on to show slides of a number of plants which he grew in it. It was

generally agreed that Mr. Elliott proved his point that an alkaline soil did not debar one from growing a very wide range of alpine plants even though it demanded a little more thought and care than might be necessary in a more neutral soil.

SLIDES USED

Stone troughs of various shapes and sizes
Phyteuma comosum
Viola delphinantha
Douglasia vitaliana praetutiana
Potentilla nitida rubra
Wahlenbergia serpyllifolia major
Edraianthus pumilio
— — violacea
Hypericum cuneatum
Alyssum serpyllifolium and Dryas octopetala minor
Gentiana verna angulosa & Phlox douglasii ' Violet Queen '
Cyananthus integer
Helichrysum milfordiae
Oxalis enneaphylla minutaefolia
Saxifraga grisebachii ' Wisley var.'
— burseriana ' Major Lutea'
— retusa
Myosotis rupicola
Rhodothamnus chamaecistus
Daphne cneorum album and Salix reticulata
Euryops evansii
Calceolaria darwinii
Lewisia x ' Brachyheck '
Campanula raineri
— ' Covadonga '
Dianthus boydii
Cypripedium reginae
Pyrola rotundifolia
General view of raised beds
Pentstemon roezlii
— pinifolius
Syringa palibiniana
Euryops evansii, in flower
Berberis ' Corallina Compacta '
Juniperus communis compressa
Androsace lanuginosa
Dianthus ' Janet Walker '
Hepatica media x ' Ballardii '
Sanguinaria canadensis ' Plena '
Adonis amurensis plena
Cypripedium cordigerum
— parviflorum
— pubescens
Alpine House—Esslemont's
— —own
— — under snow
General view inside alpine house
Daphne petraea grandiflora
Saxifraga burseriana 'Major Lutea', pan.
— ' Winifred ', pan
— ' Chrystalae ', pan
Primula allionii
— marginata
— — ' Linda Pope '
Campanula raineri
— allionii ' Izoard '
— morettiana
— — v. alba
— zoysii
Phlox nana ensifolia
Hypsella longiflora
Salix boydii
Cytisus demissus
Owl
Cat
Gentiana farreri
— macaulayi
— verna angulosa
— saxosa
— septemfida
— dinarica
Daphne blagayana
— cneorum
— arbuscula
Thalictrum diffusiflorum
Oxalis laciniata
Senecio candicans
Platycodon grandiflorus apoyamus
Lewisea x phyllellia
Leontopodium aloysiodorum
Sedum kamtshacticum 'Variegatum'
Viola cornuta minor
— tricolor ' Jesse East '
Aethionema grandiflorum
Iris histrioides major
— winogradowii
Tulipa sprengeri & Salix lanata stuartii
Tulipa batalinii
Nomocharis aperta

The Origins and Form of the Primulas

By Dr. R. B. CAIN

ALTHOUGH the genus *Primula* is a comparatively modern one evolutionary-wise, the range of floral and habitat forms into which it has diversified is extraordinary. Nevertheless, several characters distinguish the genus, among which are pentamerous flower structure, the dimorphic pistil, superior ovary, and the cylindrical seed capsule which splits at maturity into a series of short teeth. The only important exception to this latter character is found among the Craibian (petiolarid) primulas where the capsule splits off a cap to release still-green seed.

The floral variation among a genus of over 600 species and hybrids is, as might be anticipated, enormous. From the primitive superposed whorls of flowers on long stout scapes in the Candelabra group, one can trace a condensation into tight congested heads (*P. sikkimensis*, *P. denticulata*, *P. hyacinthina*), reaching the extreme form in the 'red-hot poker' appearance of *P. vialii*. Among the soldanelloids alone one has representatives of bell-shaped (almost ericaceous) flowers (*P. wollastonii*) through the more typical campanulate flower (*P. wattii*, *P. reidii*) to the quite flat-faced (typical primula) flower in *P. sandemanniana* and *P. sherriffae*). Among other extremes of flower form, *P. cawdoriana* has fringed, dissected petals ; in *P. maximowiczii* var. *euprepes* the petals are reflexed completely and in addition rolled along their own axes ; while in *P. pycnoloba*, the sepals take over the floral function, this species having a much-reduced corolla but extensive development of the calyx.

Habit variations range from the tall (up to 6 ft.) but deciduous scapes of *P. florindae* to the persistent but completely prostrate and stoloniferous mats of *P. reptans* which rarely exceeds 1 inch.

The genus is divided into sections on morphological grounds, but these sectional divisions have more recently been reinforced by confirmatory data from cytological and pollen analysis results. There is, however, one major character which separates all the primulas into one of two classes, without any exceptions or intermediary groups ; this is the form of leaf vernation. Only 4 sections are *involute* (leaves rolled outwards as they emerge from the crown of the plant) ; all the rest are *revolute* (leaves rolled inwards). Although the 4 Involutae sections are geographically well separated, recent work has shown that they have other genetic similarities too. The much larger Revolutae

are subdivided on the basis of their ability or inability to produce farina and it is interesting to observe that the non-producing Efariniferae are nearly all woodland species or shade-lovers where they are rarely subject to strong sunlight. The Fariniferae, on the other hand, are usually found in open or high alpine situations.

Distribution is circum-terrestrial *in the Northern hemisphere* ; only a few species have crossed the equator and are confined to restricted areas in South America (*P. comberi, P. magellanica, P. decipiens*) or the Indonesian archipelago (*P. sumatrana, P. imperialis*). The centre of distribution seems to be the 'Primula Belt' of Western China within which elevation is almost as important a factor in distribution as geographical position. Whether Primula originally evolved as a subtropical genus and after the retreating Ice Age re-established for itself a second centre of distribution in China, or whether it originally evolved in this temperature zone and has thrown off a few tender species during evolution, is at present speculative, but what does seem to be established is that the primitive *archaeprimula* bore some resemblance to our present day *P. farinosa.* The evolutionary tree shown in the lecture showed prominent branches coming off to include (i) the Vernales primulas related to our primrose, which extends into Russia and the Far East as *P. sibthorpii, P. juliae* and *P. megaseifolia,* (ii) all the 12-chromosome woodland primulas, resembling *P. cortusoides* ; (iii) the 11-chromosome meadow primulas of the Sikkimensis, Candelabra, Petiolaris, Nivalis and related sections ; and finally (iv) an agglomeration of forms related to *P. farinosa* but in which at least one clear line of descent can be traced, namely : Farinosae → Auriculatae → Denticulatae → Capitatae → Muscarioides → Soldanelloides.

These evolutionary modifications and in particular those concerned with American primulas were illustrated with slides of present-day representatives of the groups and by distribution maps.

Fact or Fiction?

By L. C. BOYD-HARVEY

I OUGHT to explain why I have selected the title of this talk. Although it is usual for the lecturer to impart information and answer questions, I intend instead to reveal my ignorance and *ask* questions. At the same time it will be useful, with the help of the experts here, to examine

my own cherished beliefs and those of other people, and come to some conclusion as to whether they are factual or fictional.

Let us begin at the beginning with seeds. Who is to sow them ? Which member of the family ? According to Frazer in "The Golden Bough" this was no problem for the Indians of the Orinoco. The work was always done by the women with young children in their arms. A Catholic priest who was working there, reproached the men for sitting idly in the sun while the women did all the work. He was told, "Father, you don't understand these things and that is why they vex you. When the women sow the stalk of the maize bears two or three ears of corn and the roots of the yucca yield two or three basketsful, and everything multiplies in like proportion. Now why is this ? Simply because the women know how to bring forth and they can teach the seeds how to bring forth. Let them sow, then ; we men do not know as much about it as they do".

Frazer quoted this story of the women setting the seeds a good example in fruitfulness as an example of belief in magic. Do you think that perhaps those Indian husbands, without ever having heard the word "hormone", had accidentally discovered something of importance ? Is it too far-fetched to suggest that perhaps the women had traces of growth substances on their skin, minute quantities of which could be transferred to the seeds they were handling ? But could the growth hormone of a young human being affect a completely different species ? I leave it to you to tell me. I can tell you, though, that the growth hormone of the Japanese fungus *Gibberella fujikuroi* can increase the length of the stalk of the rice-plant ; it can improve the quality of seedless grapes by lengthening the fruit stalks, so that the bunches are looser and less liable to go mildewed, and, as Dr. Tod will confirm, it will break the dormancy of stale petiolarid primula seeds.

The next question is when should the seeds be sown ? Many people believe that this should be done during the period of the waxing moon—another example of setting the seeds a good example—the seeds will grow as the moon appears to grow. Another old belief is that seeds should be sown at the time of the rising tide. The peasants of Brittany used to believe (again I am quoting from Frazer) that clover seeds sown when the tide was ebbing would never grow to full stature and cattle fed on the stunted plants would burst. Since the time of Aristotle it has been believed that the lives of the dying ebbed away with the ebbing tide, and that births took place at high tide. "There

is a tide in the affairs of men which, taken at the flood, leads on to fortune''. Is there a tide in the affairs of plants ? About 300,000,000 years ago, when the Cambrian period was passing into the Silurian, the state of the tide would have meant life or death to the primitive forms of life which were emerging from the waters to populate the land. Has an ancestral memory of response to tides persisted in their descendants ?

There is at least one plant which we grow in rock gardens which in nature must often be sown at high tide, and that is *Mertensia maritima*. Its seeds are inflated and look like little boats. They float on the sea until finally they are thrown high and dry by the highest spring tide, and there they grow.

It is easy to be patronising about the superstitious beliefs of primitive people, but there is one twentieth century cherished belief which I should like to expose as fiction before it does any more harm. Up to the middle of the nineteenth century, it was believed that seeds when sown should always be kept in darkness, although nature always sows on the surface. From about 1860 onwards seeds were being tested for their light response, and it was found that many of them must have light in order to germinate.

In spite of a whole century of research, almost every popular gardening book which refers to seed-sowing says that they must be covered. Farrer says, use brown paper and a piece of glass, other writers suggest a piece of slate or asbestos sheeting. Unfortunately, the findings of the early investigators are hidden away in abstruse publications unavailable at the local lending library, but they are quoted by present day writers. In ''The Genus Primula'' (section Auricula) Wright-Smith and Fletcher quote Ludi as saying that most Primula seeds need strong illumination and a period of low temperature. *Primula minima* in the light will germinate within three years to 99%, but in the dark, nil. That refers only to Primula seeds, but R. H. Stoughton in the R.H.S. Journal for October 1955 reported that Kinzel studied the seeds or fruits of 964 species and found that 70% were light-favoured, 26.5% were dark-favoured, and 3.5% were indifferent.

Seventy per cent ! This means that if the contents of ten packets of different kinds of seeds are sown and covered with slate, seven out of the ten are likely to be failures. Last year 11,500 packets of seeds were sent out by the Seed Distribution Manager. If all the recipients covered the pans with slates 8,500 packets might just as well have

been thrown on the fire. But remembering that 26.5% of seeds do insist on darkness, may I suggest that each packet should be divided between two pans, one to be kept in light and the other in darkness.

There is a story I should like to repeat about the treatment of cuttings. The late Mrs. Culme-Seymour, when she moved from Edinburgh to Devonshire, told me that she intended to take cuttings of her favourite plants plunged into the eyes of a potato. My first reaction was "What an interesting old piece of traditional gardeners' folklore". On second thoughts, though, I realized that there might be something in it. A potato looks quite inert, but after its period of dormancy has passed, it is capable of great activity, sending out both roots and shoots from the eyes with surprising rapidity. Can we assume, therefore, that there is an accumulation of growth hormones concentrated at the eyes ? If so, was not Mrs. Culme-Seymour doing something similar to what you and I are doing when we dip the tips of cuttings into little pots of synthetic rooting powder ?

Passing on to adult plants, we can find plenty to laugh about in the ridiculous beliefs of our credulous ancestors. It was supposed to be dangerous to pick *Helleborus niger* if eagles were flying in the sky. As a protection a circle had to be drawn on the ground and the correct prayers had to be recited while facing towards the east. The Mandragora was even more dangerous to pick, because it screamed when its roots were pulled up and anybody hearing the screaming would die. The only safe thing to do was to tie a piece of rope round the plant and the other round a dog's neck. Then you hurried away, and the dog tugged and tugged trying to follow. The strangest plant of all must have been the Barnacle Tree which had fruits like sea-shells which hatched out into wild geese. We still have our twentieth century fairy tales. There is the Edelweiss which is supposed to grow only on the topmost icy peaks, and many a yodelling young lover has lost his life leaning over just that much too far trying to pick one flower for his lady. Farrer tried to debunk that one by recording that it grows in places where twelve perambulators could be raced side by side without imperilling their occupants. But still the legend lives on, and perhaps nine out of ten visitors to this garden congratulate me on my skill in growing so difficult a plant at sea-level.

We in Scotland are apt to be sentimental about poor little *Primula scotica*, which feels home-sick for Orkney unless it has root company. I have seen a specimen at the Edinburgh Show which had recently germinated grass seedlings growing all round it in the pot instead

of the usual top-dressing of chips, the idea being, I suppose, that the grass roots kept it from feeling lonely in the Assembly Rooms. There is definite evidence that all the Ericaceae, Orchidaceae and Leguminosae do have symbiotic association with fungi or bacteria, to their mutual advantage.

An interesting case was reported to the Scientific Committee of the R.H.S. some years ago. A Fellow had a bed of Antirrhinums growing next to a bed of Canterbury Bells. Where the two beds met, the Antirrhinums were outstandingly finer and more vigorous than in the rest of the bed. This starts off a train of thought. Antirrhinum, Castilleja, Euphrasia, Pedicularis, and Rhinanthus all belong to Scrophulariaceae. So does that tricky, short-lived plant *Calceolaria darwinii*. Is it possible that it too is a hemi-parasite ? Perhaps there may be many other plants which would benefit from the presence of a friendly weed or fungus. Are our gardens too weed-free, and our alpine houses too sterile and hygienic ? Would not a little honest dirt teeming with soil micro-organisms perhaps be the answer to some of our plant problems ?

My own garden certainly does not suffer from too much tidiness, and when visitors ask to see it at this time of year, I feel dreadfully ashamed of it and say : "It is full of weeds, but if you search deep down among them you may find a few good plants". This morning we have laughed together at a lot of foolishness, folklore and fiction, but deep down you may be able to find a few facts. Before the lights go down and the screen comes on, I would like to quote you the words of Jack Point in "The Yeoman of the Guard" :

> I can teach you with a quip, if you've a mind ;
> I can trick you into learning with a laugh,
> Oh winnow, winnow, winnow all my folly and you'll find
> A grain or two of truth among the chaff.

Slides shown included :

Seeds and plants of *Orchis strictifolia, Pulsatilla vulgaris, Cardiocrinum giganteum, Lilium formosanum* var. *pricei, Cirsium drummondii* var. *acaulescens.*

Seeds, germinating seedlings and flowering plant of *Dianthus alpinus.*

Roots of Ericaceae and Leguminosae.

Plants of various species of Calluna, Rhododendron, Genista, Cytisus, and Astragalus, Cypripedium and Calypso.

Two cats to illustrate (*a*) symbiotic association, and (*b*) hemi-parasitism.

Various species of Pedicularis and Castilleja.

Calceolaria darwinii with and without 'Root company'.

White flowers of *Gentiana saxosa* and *Myosotis explanata.*

Soldanella alpina (growing through snow. Melting it ?).

Coiling peduncle, self-sown seedling, and old plants of *Cyclamen neapolitanum.*

During Question Time the following was contributed by Dr. Hamish Robertson :—

The development of our knowledge of plant growth substances can perhaps be said to have started with the publication by Charles Darwin in 1881 of his book 'The Power of Movement in Plants'. Darwin's simple experiments using seedlings, a light source and a razor blade, demonstrated that the tip of the growing shoot of a plant is involved in the way it bends towards a source of light.

Oddly enough, however, the first naturally occurring plant growth substance, indolacetic acid, was first isolated not from plants but from human urine. Although this was first isolated and its activity in plants demonstrated by Kögl in 1934, it was not until some twenty years later that it was shown that indolacetic acid occurred naturally in plants.

Mrs. Boyd-Harvey has raised the interesting association of ideas, namely the connection between the fertility of the Orinoco Indian women and their effect on the fertility of their crops by being planted by them. Since both male and female urine contains idolacetic acid, one suspects that the male population of the Orinoco Indians knew when they were on a good wicket letting the females sow the crops while they, no doubt, gossiped in the village.

Plants of Interest at Keillour

IT WAS particularly pleasing to have Major and Mrs. W. G. Knox Finlay with us to show slides and a colour film of the famous Keillour Castle garden. This garden and its collection of rare and difficult plants is known to botanists and plantsmen throughout the world. Particularly is it famous for the success that its owners have had in

raising and maintaining in cultivation a very large number of the more fastidious Himalayan plants which proved themselves so recalcitrant in most gardens in Britain. It is greatly due to the care and efforts of the Knox Finlays that many of the plants so prized today first gained a foothold in our gardens.

Major Knox Finlay described Keillour's many treasures in his own inimitable way. His talk revived happy memories for some, of Club visits there in the past, and encouraged others to hope that they too might be able to see the wonderful displays in the future.

That this hope is capable of fulfilment is due to the great generosity of Major and Mrs. Knox Finlay in showing their garden willingly and graciously to organised Club parties.

The Club as a whole owes a great debt to these two able gardeners.

Major-General D. M. Murray-Lyon,
D.S.O., M.C., S.H.M.

THE ANNOUNCEMENT that the Royal Caledonian Horticultural Society had been pleased to award the Scottish Horticultural Medal (S.H.M.) to Major-General D. M. Murray-Lyon, former President of the Scottish Rock Garden Club, for his services to Scottish horticulture in the field of rock-gardening brings great pleasure to his many friends throughout the gardening world. (see fig. 10)

The General has long been one of the S.R.G.C.'s most active members. He has enthusiastically taken part in almost every branch of the Club's activities—growing, showing, judging, lecturing on plants and cultivation, contributing articles to the Club and other horticultural journals, has been a member of Council, show secretary, and advertising manager. In 1955 he was elected President of the Club and re-elected in the three following years.

Most of the General's military service, which he made his career after first having qualified in medicine, was spent in India and its frontiers. His love of gardening, though in some part inherited, must surely have been enhanced by the opportunities of seeing so many of our present-day rock garden favourites growing wild in their native Himalayas.

In Ardcuil, his home in Pitlochry which he bought in 1938, he planned and planted the framework of his present garden during spells

of leave, and after retiral in 1946 settled down to build and plant a really noteworthy rock garden—a garden in which to grow plants. However, by 1951 it was decreed that he had been overdoing things in his steep hillside garden and health reasons took him to Edinburgh. Here he at once proceeded to create from scratch a compact rock garden in the ground in front of his house to accommodate his most precious favourites, and in this small town garden he brought to perfection a number of difficult plants and won prizes with them at Club shows.

By good fortune, in 1958 the opportunity occurred of regaining his garden in Pitlochry, and on his return there the General was delighted to find that many of the plants put in years before were still thriving, so that in no time Ardcuil had again made its name as one of Scotland's rock-garden showpieces.

The lifting and transporting of plants from Edinburgh to Pitlochry was quite a story in itself, and was followed with keen interest by all in the Club who knew him. In a very short time the General was ready to throw open his garden gates and with ever generous hospitality welcome people to come and see things for themselves.

Since then the garden at Ardcuil must have brought keen pleasure and interest to the many hundreds of visitors who have been so generously invited by the General and his gracious wife to join them in homage to the many choice and rare plants growing so happily there.

"THE SWEET O' THE YEAR"

Down by the edge of the wood,
A glow by the river—
Farflung delight, I could
Feast my eyes ever.
Oh ! how this springtide gift,
Daffodils blowing,
Intangible gloom can lift,
Leaving joy beyond knowing !

JEAN ARRÉ

Gems of The Olympics

By Mrs. OSCAR L. NELSON
Orick, California

WAY OUT in the northwest corner of the State of Washington lies the Olympic National Park and the Olympic National Forest. In short, there lies the Olympic Mountain Range. This range is not noted for elevation as its highest peak is near 8,000 feet. These mountains are kin to the sea, born of the sea, still rising imperceptibly toward the sky and keeping their family ties to the sea. They rose from the Pacific Ocean a few million years ago and are among the youngest of the world's mountains, beginning perhaps as some primeval dome, cut and seamed and colored by the water through which they came. The same winds that blow from the ocean over these peaks and glaciers have in times past blown strange peoples to the shores. The Indians who long ago have forgotten how they came here in the beginning are still here and are not mountain dwellers but beach dwellers.

It is said that these mountains are written of in ancient Chinese chronicles and that Buddhist Monks from China sailed by here 500 years after the death of Christ. Some are said to have lingered and become a part of the land. There was a sixteenth century Greek sailor with the Spanish name of Juan De Fuca who charted this land and who gave his name to the northern straits that separate the U.S.A. from Canada and are just 25 miles wide at Port Angeles, Wash. He marvelled at the glacier capped mountains and carried their story to Europe. This is a land that is never discovered and ever discovered.

The Olympics with Mt. Carrie and Mt. Olympus at the most western end of the range rise nearly 8,000 ft. Olympus like a cold queen on her throne lets her glaciers fall at random like flowing robes of white. Below, the melting snows feed the great rivers of the valleys and at her feet lie the great, almost tropical rain forests, with ferns and mosses a six inch blanket in which hundreds of seedlings from the great trees above fall and grow. This is the western reach of the range.

The central and eastern portions are very different, being rock and crevasses and glaciers, and it is here that the great floral display comes into being. There are long, deep crevasses many of which are inaccessible, and all the peaks and crevasses are accessible for only three or four months of the year before they are again shrouded in veils of snow. At timberline grow the alpine firs, *Abies lasiocarpa*,

which is perhaps the most beautiful tree in the world. The branches are in perfect whorls and the fat, purple cones stand erect on the branches as do all true firs. The whole tree is sculptured by snow and reminds one of church spires reaching to the heavens, while at the base where the snow lies deepest and longest, the branches are spread out like petticoats. The alpine hemlock, *Tsuga mertensiana*, grows here too and is also choice. From here onwards is where the alpine gardener comes into his own !

Flowers, say the Indians, are the spirits of children whose footsteps have passed from the earth, and who now reappear to gladden the pathway of the living. But perhaps nature, in an effort to balance the handicap of eight to nine months of snow blanket, has seen fit to endow the peaks, screes, and crevasses with an abundance of choice alpine flowers ; and, because the floral change that is found in the Olympics at an elevation of 4500 feet occurs in other ranges at 7000 feet or more, the Olympic hold their own with other ranges. They are distinctive. They taunt the imagination. For those of us who have lived in them and seen their floral display in all its unmatchable beauty, we feel that if the snows would only melt back on the peaks a little farther one year we would find undiscovered gems. Perhaps this is only part of the same make-up that sets the alpine gardener apart and makes him climb peaks on his hands and knees instead of on his two feet. Because this range is comparatively unworked, due to its vastness and inaccessibility except on the outer fringes, there is no doubt but that new plants remain to be found.

There are at least nineteen species endemic to the range—some listings say twenty-one. From the standpoint of the layman, some are very choice while others are not worth the effort of collecting or cultivating, and others offer a very great challenge to the keenest gardener. Collecting in the National Park is of course forbidden without a permit, but I know of no restriction on gathering seed.

Viola flettii, one of the rarest and most difficult violets known, is as desirable for its foliage as for its bloom. It is a tough little gem to establish or collect seed from. It is seen most often in a crevice that is way over your head or else way below you and impossible to reach from any approach and the seeds have the nastiest habit of popping just as you reach them. In this situation, and only in this, it is happiest and does its best where no trace of soil is apparent, only rock. It blithely clings in the crevasse assured that it won't be molested. The leaf is a perfect heart, very dark green veined with red on the front and deep maroon red on the back. The bloom, which is wide open

Photo—S. Mitchell

Fig. 4—Sempervivum arachnoideum, Mt. Cenis (See page 58)

Photo—S. Mitchell

Fig. 5—Viola cenisia, Mt. Cenis (See page 58)

with spaces between the petals, is not violet but rather a combination of violet, red and pink, making a color that cannot quite be described contrasting with the very dark leaf. The whole plant is not over four inches high. In one spot that I know of it has been found growing in patches in the scree and here it has adapted itself and seeded in clumps. It is hard to move even here but so worth trying. Probably because it is so rare you are determined to make it grow or be worn out in the attempt. The latter is the most common result. White ones have been heard of but the usual type form is rare.

Another very fine crevice plant found here is *Petrophytum* or *Spiraea hendersonii.* Its foliage is evergreen, sage green in color and the leaves form a tiny rosette which lies flat against the rocks of the crevice. When it is in bloom the crevice is covered with tiny spikes of creamy lace two or three inches long which curl over slightly at the tip and arch over the tiny rosette. If planted in pockets this plant forms neat cushions. Cuttings are the best way to establish it unless it can be found through a dealer.

The dwarf *Campanula rotundifolia olympica* is common in the blue form and occasionally in a white. There is one form that is not common which does not lengthen out in the garden and stays about four inches. It is very good but grows only in one or two places in the Olympics. This plant has caused confusion in Europe, for quite a few years ago seed of it was sent there as *Campanula piperi,* which it in no way resembles.

The real gem, Piper's bluebell (*Campanula piperi*) grows along the cracks and crevasses at the very base of the high cliffs where the sliding talus has covered the pieces that have broken and fallen from the cliff above. Here the bell and foliage are larger because the soil is more plentiful, richer and more moist. On the high peaks it grows out of cracks in the rocks, or rather seams, that are so minute you would think nothing could grow and it completely fills the seams, sometimes for several hundred feet on the face of the rock. Almost always it grows up and down and not crosswise in these places. The beautiful, wide open bells against the small rosettes of dark evergreen holly-like foliage hold one spellbound. How can anything so small be so perfect ? The bloom is large in comparison to the plant and the newly opened bells have a gorgeous dark red or maroon pistil, while the older bells, more like blue stars opened wide and turned up to the heavens, no longer show the maroon pistil for it splits. This maroon pistil is characteristic of the true species. There is a white form here too but it has been seen by very few. *Campanula piperi* is difficult to

establish but cuttings do adjust, and the fresh seed germinates readily.

Senecio websteri, another endemic, was found and named for the late E. B. Webster, who loved these mountains and perhaps was more familiar with the Flora and Fauna than any other person. He, with Professor J. B. Flett, for whom *Viola flettii* was named, and C. V. Piper, whose name was given to *Campanula piperi*, spent many days botanizing in the mountains, especially near Mt. Angeles, and for these three many plants of the mountains are named. This senecio is very definite in form. Its leaves are dark green and shiny, with a reddish cast for their veining is red. The leaves are thick and pulpy, dentate, and basal, with several lying flat and several erect and about five inches long. From this basal group rise the large, lemon yellow aster-like blooms, with a large, rich, rust brown center. The yellow rays are wide at the base and twist and curl as they go outward, giving a dainty fragile appearance. This plant is nowhere to be found in any amount and must have scree and moraine to grow at all. Seed is the only way to have a chance. It is very different from 'the *Senecio flettii* which is a bright yellow flat umbel of tiny blooms.'

Douglasia laevigata grows in abundance in the Olympics ; the form is good and the color deep rose. From observation of the plant in its natural habitat and in my garden over a period of years there would seem to be several forms here. They are all classed as one but there is a wide variation in size and shape of blossom and at the risk of being accused of splitting, which I abhor, I do think the botanist will some day recognize different varieties. There is a rare white form of this too. It can be moved in very small sizes, cuttings are good and it germinates from seed readily. In the days before this area was park, I have seen collectors try to take large mats of it and this, as I see it, is all wrong. A small plant will live, a mat won't ; and in destroying the mat a seeder plant has been taken to no avail. A tiny plant of any alpine will establish more readily and become a larger plant in half the time a large one will even if it should live, which is not often. *Douglasia* is a good alpine, it blooms early in spring, forms neat compact cushions and its bright primrose-like flowers are a joy.

Penstemon menziesii thrives here and seems to be happy anywhere in the rocks, and at blooming time the tiny evergreen leaves are smothered by the profusion of inch-long blooms in shades from rosy lavender to almost purple. It is easy from seed or from cuttings, which usually have rootlets where they have reached out into the scree. There is a very small plant of this which grows in about one or two locations. This may have a name by now or may still be classed as the above,

but it has a distinctly different form of growth, is much smaller and slower, and the patch I had in my rockery in the Olympics after twenty years covered about a nine inch square. I called it *P. menziesii serpyllifolius.*

One of my favorites and one which I have growing and holding its proper height here in my garden in California is *Erigeron compositus trifidus.* It is dainty and worthwhile. It never fails to draw the attention of people in the mountains or in the yard. Tiny pin-cushions of finely divided chrysanthemum-like foliage of bluish, sage grey carry little creamy white daisies about 1 in. to 2 ins. high and often smothering the mats or sometimes stuck in like pins in a pincushion. Easy from seed.

To cover all the plants would take far too much space in the *Journal.* There is the tiny *Salix nivalis,* so tiny it is most generally overlooked and trampled upon by the hiker. It is lovely when covered with its little catkins.

Eriogonum roseum has a dead white foliage with a rosy cast. Its flower is not outstanding but the mat, growing in the grey shale, as it does, is very striking.

Delphinium bicolor makes a riot of color with its bright metallic blue hood and white eye. Too large for the rockery proper, it makes a lovely spot of color tucked in at the base or in an angle at a lower level. There is a lovely soft pink form with a blue eye that has been seen by very few. There is a riot of Alliums, *Phacelia sericea* with its long protruding stamens, Polemoniums, *Phlox douglasii* in white, lavender, and rosy pink, Lyall's Lupine, *Synthyris pinnatifida tomentosa,* a 4 in. beauty that I am sure often blooms under the snow ; Sedums ; Saxifrages ; rose-colored Indian Paintbrush ; *Heuchera racemosa* ; white and pure yellow Erythroniums or avalanche lilies following the snow as it melts in spring and not many days behind with their bloom. *Anemone occidentalis* with its lovely seed pod ; *Dryas octopetala* and its frowsy head, and many more not mentioned make this region a paradise for the lover of alpine flowers. Add to this the splendor of snow-capped peaks as far as the eye can see, the panorama of mountain, ocean, and sky ; the distant Cascade Range, the Islands of Puget Sound and the Straits of Juan De Fuca and across them to British Columbia. On very clear days the streets of Victoria can be followed. As you stand there where nature has paraded her gems in any direction you want to turn, there comes the realization that the Olympics offer everything to the lover of the great, primitive, open spaces. Here Nature has struck a balance, in fact, a perfect balance.

Personal and Otherwise

By J. R. MATTHEWS

IT MIGHT BE assumed that a botanist, by virtue of his profession, would have an interest in the growing of plants, but in many cases the assumption could well be wrong. Fashions in botany have changed, as in other things, since the days when the late Professor Bower of Glasgow University was wont to declare that every botanist should spend at least three months in the potting shed. In my early years I served a longer apprenticeship and have never regretted the experience. It has frequently provided the answer to questions about the botany of everyday life. All too little time has been available, however, to practise the art of gardening with my own hands until retirement descended upon me in 1959.

When the time for retirement did arrive, gardening became both an occupation and a hobby. There is no need to dwell, however, upon the general-purposes garden, which my wife and I made at our Aberdeenshire cottage, set in the midst of the magnificent pinewoods of Blelack Estate between the rivers Dee and Don. Herbaceous plants predominated. They generally flowered early and withered all too soon. The glacial sand and gravel of the district would doubtless have been more congenial to some rock garden plants, and, indeed, *Dianthus deltoides* flourished exceedingly. But we did not make a rock garden. It was more beneficial and less arduous to enjoy the natural heath garden which lay at our door. Under the varying shade of pine trees, the red whortleberry, *Vaccinium vitis-idaea*, formed a glossy evergreen mantle with its box-like leaves, sometimes replaced by its near relative the blaeberry. Cross-leaved heath, *Erica tetralix*, confined itself mainly to damp hollows, while *E. cinerea* kept to the drier banks. Heather was plentiful and straggly, as it often is in woodland. Far more engaging than these common plants of the forest floor were some of their associates. Five species out of the nine or ten which are characteristic of old native pine forests occurred in varying abundance. These were *Pyrola media* and *P. minor*, *Trientalis europaea* and two small orchids, *Listera cordata*, the Lesser Twayblade, and *Goodyera repens*, Creeping Lady's Tresses, named after John Goodyer, an eminent Hampshire botanist of the 17th century. It is remarkable in being our only native evergreen orchid. Its creeping stems inhabit the superficial layer of raw humus of pine and moss litter, branching freely,

each branch ultimately ending in a rosette of green leaves. Rosettes are produced annually and persist throughout the winter to give rise to a flowering stem in their second or third year. It is this behaviour which confers the evergreen habit. Yet the plant is not markedly xerophilous. The mosses, which are so frequently associated with *Goodyera*, aid in the retention of moisture around the plant.

At one time or another I have grown these five species. They should be given a place in the peat or heath garden, rather than the rock garden, a relatively moist soil rich in acid humus, and a considerable amount of shade. This is essential in the case of *Goodyera*, since it is intolerant of drought or exposure to full sunlight. They are not, of course, spectacular plants, but each has its own charm, and I recall seeing a dining table in a Speyside hotel decorated with quantities of *Pyrola media*, gathered in the belief that it was wild Lily of the Valley. Such indiscriminate collecting of our native plants ought to be discouraged, especially our genuine Alpines, and one hopes the time has long since ended when, according to a reliable report, some 3000 specimens were collected in a single season by one botanist in the Perthshire mountains alone. What a vast quantity of seed was lost to Nature thereby ! I have sometimes been asked, however, about the establishment of *Trientalis* in cultivation, and will take a risk in referring to a method which has proved successful. Grown from seed, the plant takes two or three years to reach the flowering stage, so patience is necessary. But the species possesses efficient means of vegetative reproduction, and if the underground parts of the plant be carefully lifted in late September or October it becomes possible to trace the long slender stolons produced by the old parent plant. The stolons bear small propagative tubers at their tips. These are the things to transplant, and in the following summer they will reward the owner by producing what Clarence Elliott has described as "an enchanting fairy plant for lovers of such small delights."

So much for some of the natives of our northern pinewoods. Three years ago we left them in their own haunts when we took up residence in a new bungalow at Banchory. Here we were confronted with the making of a new garden out of the roughest of rough pasture, which had not seen a plough for more than 40 years. Cocksfoot was the prevailing grass, and altogether more than 60 species were recognised which, for present purposes, can only be described as 'weeds', many of them obnoxious, all of them undesirable with one possible exception, *Hypericum humifusum*. It is one of the "smaller delights"

of the genus, and now that the garden is made, it keeps reappearing (not by any means alone) and is allowed to trail its slender stems here and there between stepping-stones of the pathway.

To return to the rough pasture. After deep ploughing, followed some time later by disc harrowing, it was possible to get a spade into the ground. The site slopes towards the south, lending itself to the construction of a "rock border" along the length of the terrace upon which the bungalow stands. Let me say at once that a rock garden was not attempted. Some local stones, neither rocks nor boulders, were used primarily as stepping-stones, although they help also to retain a soil which is definitely on the heavy side for ease of working. A narrow herbaceous border runs immediately in front of the terrace, forming a decorative background to the rock border below. Among its occupants are *Salvia superba* 'East Friesland,' *Geranium endressii* 'Wargrave,' *Oenothera tetragona*, *Stachys macrantha* 'Robusta,' various forms of *Astilbe* and *Solidago*, all of which are noteworthy plants, even if their names should not occupy space in the pages of the S.R.G.C. *Journal* !

It is a mistake to be in a hurry when making a new garden, whatever its ultimate form. For various reasons, however, we were in a hurry, and when planting became possible in the late Spring of 1963, I appealed to friends for plants. The response was more than generous, and should any of the donors read these lines, I make this further acknowledgment of their several gifts. A mixed bag of self-sown Primula seedlings from an Aberdeen garden produced in due course four attractive members of the genus : *P. aurantiaca*, *P. bulleyana*, *P. cockburniana* and *P. pulverulenta*. From other sources came the old favourite and thoroughly reliable *P. denticulata* in several colour forms, *P. japonica*, *P. florindae* and the brilliant *P. rosea*. Space will generally be found in most gardens for *P. juliae* or some of its allies or hybrid offspring. By division of a few clumps, we secured a score of plants or more ; but primroses, however attractive, are not the best subjects to give quick ground cover. More effective were half a dozen plants of *Alyssum saxatile*, and anyone who has recently started like ourselves to clothe a sloping bank and has happened to dip into Collins recently published "Guide to Alpines" by Mrs. Griffith will find encouragement in her remarks about this species. "Very floriferous and the treasure of the rock gardener who is not concerned with rarities but only aims at bringing gaiety to a steep slope which happens to lie in his domain." Good cover is afforded also by *Polygonum*

affine, whose change of flower colour from pale pink to deep red is an added interest, and by *Phlox subulata* 'Temiscaming,' so named in recognition of its having come originally from the town of that name in the Province of Quebec. Even more vigorous in growth is *Prunella grandiflora*, a really aggressive plant especially in a damp situation. Its mauve-coloured form is perhaps preferable, since it appears to spread more slowly. The sub-shrubby *Dryas drummondii* is another rapid grower, although its flowers are disappointing compared with the native *D. octopetala*. Of the *Sedums* little need be said. Perched on a dry infertile rock, *Sedum album* may be restrained, but on a good hearty soil its propensity to spread, multiply and invade is surely unrivalled. Better behaved is *S. lydium*, although this also quickly forms an expansive mat. For a real carpet, however, there is nothing much better or more pleasant to tread upon than a thick covering of our native *Thymus serpyllum*. The deep red *coccineus* is said to have been discovered originally on Old Aberdeen links, but whatever their origin the wild plant exhibits numerous colour forms having the desirable feature of varying considerably in time of flowering.

Valuable as most of the foregoing plants are for ground cover, if left to themselves they will sooner or later get out of bounds. They are not sufficiently circumscribed and lack the individuality possessed by species whose growth-form is the rosette, tuft or cushion, although even these forms vary in size and stature. Some 30 to 40 of these types have come our way and only a few can be mentioned, including *Erinus alpinus*, both pink and white flowered forms. More than half a century has passed since I first became acquainted with this species growing on an old wall not far from Callander, and it appears to have become thoroughly naturalized in the West of Scotland. Regarded as "one of the hundred best rock plants" is *Androsace sarmentosa*; not content with one rosette, its runners produce new ones so freely as to form a colony in a relatively short time. Small cushion types are represented by such plants as *Saxifraga sancta*, *Erodium chamaedrioides roseum* and *Dianthus gratianopolitanus*, by which uncouth name the beautiful Cheddar Pink must now be called. Apparently it does not resent the absence of lime, although it is a limestone plant in its natural habitat in Somerset. Another native, the Maiden Pink, *D. deltoides*, is more lax in its habit and a few plants brought from Blelack have seeded "all over the place," their progeny exhibiting a wide range in flower colour with white as an absentee. The variety with white flowers was distinguished by the early botanists as var.

glaucus and is said to have been first found in Scotland in the Queen's Park, Edinburgh.

If I have mentioned the native but rather insignificant *Hypericum humifusum*, I cannot omit such outstanding members of the genus as *H. olympicum* and *H. rhodopeum*, both from S.E. Europe, and both with large resplendent flowers. They are almost sub-shrubby in habit, as is *Pentstemon scouleri*, always free flowering, yet *P. rupicola* has been described as the finest of all rock Penstemons. With us it has not behaved so well as *P. pinifolius*, which seems to be perfectly happy in a heavy soil. More exotic perhaps than any of the foregoing is the South African *Dimorphotheca barberiae* var. *compacta*, which has proved quite hardy. Up to the time of writing, my original plant (March, 1963) has shown no sign of running by underground shoots as described by H.T. in the *Journal* for September 1964, but side shoots layer themselves freely.

Small shrubs are a desirable feature in any rock garden and among some which we find useful and attractive are *Veronica lyallii*, which covers itself in flower, *Thymus* x *citriodorus*, both the golden and silver variegated forms, *Lavandula vera compacta*, several forms of *Potentilla fruticosa*, and the bi-generic *x Halimiocistus ingwersenii*, together with several dwarf conifers, the favourites being *Picea albertiana conica* and *Chamaecyparis lawsoniana* 'Ellwoodii.'

Already a good many plant names have crept into this story, and a few more call for mention, since they refer to some of the plants sent by a kindly donor unexpectedly. They have given much pleasure and it is unnecessary to extol their merits : *Astilbe chinensis* 'Pumila', *Gentiana* 'Kingfisher,' *G. sino-ornata*, *Geranium dalmaticum*, *Meconopsis quintuplinervia*, *Oxalis enneaphylla* and lastly, *Patrinia palmata*, in full flower when most other alpines are over.

Nothing will be said about heaths and other members of the Ericaceae beyond the fact that a nice consignment from furth of Scotland has provided the start of a "heath border" which has yet to be extended.

If I have written at length, the explanation is to be found in a letter from our Editor, who wrote as follows : "It is quite some time since anything by the S.R.G.C.'s Hon. President appeared in the pages of the *Journal*, and I am writing to ask if you would contribute an article for our next issue." It is not easy to refuse a personal request such as this, but I am far from being sure that I have written what the Editor expected.

The Hawaiian Silversword, Argyroxiphium sandwicense

By W. R. PHILIPSON

SEVERAL of the volcanic cones which form the Hawaiian Islands are high enough to rise above the limit of tree growth. Their summits of crumbling lava form the rims of enormous craters. On this harsh ground a scattered vegetation of wiry shrubs and a few herbs is to be found. It is not a rich alpine flora, but it is of interest because these few mountain peaks in mid-ocean have evolved their own peculiar mountain plants. These are often so distinctive that they have no close relatives either in the American mainland or in other parts of the Pacific. The most spectacular of these is certainly the Silversword. Tropical peaks in other parts of the world also bear giant composites, but though the tree Senecios of East Africa and the giant Espeletias of the Andean paramos are larger than the Hawaiian plant, they cannot rival it for beauty. When I saw *Argyroxiphium* in the crater of Haleakala on the island of Maui, I felt certain I had never seen a more impressive plant. Young specimens consist of a dome of stiff stiletto-like leaves. Each shines with a metallic brilliance and yet the play of shadow and highlight gives to the plants as a whole the soft blue translucence of glacier ice. When they come to flower, which may not be for many years, a great spike rises as high as a man, bearing hundreds of red-purple heads. The plants are monocarpic.

The Silversword occurs on some other Hawaiian volcanoes and was formerly common. After a period of thoughtless destruction by visitors, it is now rigorously protected. Another, less striking, species, *A. virescens*, is much more scarce.

This magnificent plant is probably not impossible to cultivate, at least in an alpine house. I saw quite large plants flourishing in the gardens around the offices at the entrance to the Haleakala National Park. Since the climate can be quite rigorous, even in Hawaii, at 10,000 ft., this plant cannot be unduly tender. (See frontispiece and fig. 14)

Old Florists in Yorkshire—Auricula Growers

By TEEM

IF YOU HAD been a traveller in Yorkshire say a hundred and fifty years ago, you might have fallen in with a companion on the highway who could have excited your curiosity. Like Christian he would be carrying a Burden. Maybe two—from a yoke across his shoulders. However carried, it was obviously precious. Had you fallen into talk you would have learned he was going to a local auricula show—and that he was carrying his "recklers." Accompanying him to some nearby town or village, and led to a local inn there, you would have noticed converging on it many of the fraternity from miles around. An unusual sight would have been copper kettles dangling from poles thrust out of upper windows. They were the coveted prizes for which battle was about to be joined. In the big upper "lodge room" the recklers were unpacked with a little more care than if they had been the crown jewels. Strange plants in pots, already of ancient pedigree, and of remarkable and unusual appearance. Other than show auriculas, what other plants are there with blooms disporting grey, black, and really green petals ? All are alike in one respect ; they have a sumptuous circular centre of pure snowy meal or farina. When this first occurred as a mutation is not exactly known, but probably in the 1730s. It was immediately seized upon as a beautiful and valuable feature, and the show auricula started on its long career. Often the whole plant is delicately mealy, so requiring protection from the elements, even when not in bloom, but otherwise imperturbably frost-proof and hardy. These peculiarities made it from the first purely an exhibition plant, grown in pots, guarded and cherished the year through.

Yorkshire men were pre-eminent among the noted auricula growers, particularly round about a century ago. The Rev. F. D. Horner, Hull born, later vicar of Kirby Malzeard, was instrumental in setting up the National Auricula Society in 1872, and was the first secretary. Simonite of Sheffield, Woodhead and Midgley of Halifax, the Lord brothers of Todmorden, were a few of the Yorkshire enthusiasts who competed fiercely at the big shows, taking their treasures as far afield as London and Birmingham. There were classes scheduled for as many as fifty plants, but later dozens became more frequently asked for. Gradually there had grown up an almost unbelievably rigid set of standard requirements, to which a flower had to conform before being considered at all show-worthy.

The standards required, or perhaps aimed at would express it better, can be stated best by the adjective circular. These were fixed, and very rigidly, about a hundred and forty years ago, and insist that roundness is all. The golden centre (tube to the initiates), the snowy ring of farina, the outer rim of the individual bloom, all must conform. At a time when the daffodil was a ragged yellow mop, and the rose a fragrant, blowsy bundle, the show auricula had already attained a prim, ordered excellence from which there has been neither deviation nor, some do hold, any improvement. That absolute perfection has never been reached is probably one factor making for the plant's perpetual fascination—the one great splendid auricula, the world beater which will make horticultural history for all time, is to the fanatic seedling raiser always just round the corner. This marvel is ever to come for certain—next year. Here again is an irresistible bait luring the enthusiast to yet more effort. The seedlings raised from show auriculas are ineradicably wayward, and unpredictable. The most careful and the cleverest grower can cross fertilise the best auriculas extant, and knows only too well, or should know, that after a wait of two or three years from seed sowing the progeny may to the very last plant be, by any standard, just useless rubbish. And he will go on trying. On the other hand a raw beginner on his first attempt at seedling growing may find in his seed boxes a real gem, a pearl of price. Further, nobody—repeat nobody—knows why this is so. One of the world's greatest botanists, himself an auricula grower for forty years, could only advise—cross your best plants and keep on hoping. A lottery with few prizes, but to the enthusiast how glittering they seem. Needless to say, the more seedlings raised, the bigger the chance of a winner, but it isn't a big one anyway.

The editor would certainly allow no more space to be used to describe the colour of the various varieties, nor to attempt cultural advice, but it may be enough to say this flower is unique in many ways, is a curiosity, is a collector's piece, an extremely beautiful and exciting flower, which will obstinately refuse to do its best except when and where it chooses. Our forebears tried to tame it with very moderate success, but in their fervent optimism held shows every spring up and down the North Country and one of the greatest of them did memorable things at Falkirk.

Those days are over, but there are still devotees in Yorkshire and the Northern Counties as dour and fanatical as their forebears. They hold an annual show in Manchester on the same date as the

Cup Final, to them a much inferior occurrence. There assemble the present day auricula men from far and near, to indulge in an orgy—no other word will do—of almost silent, but ecstatic enjoyment. Critical murmurs may be heard, couched in their own abstruse but forthright jargon, as they meticulously examine what to them is the flower of flowers. Long may this unique and ancient horticultural bypath be trodden.

Of late years this cult has reached the United States, where they are avid for the plants, and most years visitors cross the Atlantic just to see these rare and mysterious beauties on parade. (See figs. 11, 12 and 13)

THE WINTER OF MY DISCONTENT

"WINTER ROSES." This heading to an advertisement in a popular Gardening Journal caught my eye. There followed an assurance that flowers (frost-proof) from November to APRIL were obtainable, in a variety of colours. The important link between the "Roses" and the details was (in smaller print and in brackets) the word "Helleborus". No mention was made of *niger* or of *orientalis*, or any other clue to what was offered, at 7/6d each. Presumably, therefore, the plants are un-named seedling hybrids. Although *H. niger* probably is better and more widely known as the "Christmas Rose", it seems that *H. orientalis* is not so commonly spoken of as the "Lenten Rose". Certainly in more than one book of reference the first mentioned gets prominence in its own right, but not the "Lenten Rose". In fact, some writers refer to the latter as a group embracing a very large number of species and varieties. It is very confusing. Why not offer the Hellebores as such ? Most people would surely wish to know what they are buying at the price !

J. R. A.

The Kerlingarfjöll, Central Iceland

By W. R. PHILIPSON

TO ANYONE interested in the alpine plants of Europe, the closely linked arctic flora has a direct appeal. So I welcomed an opportunity to break a trans-Atlantic flight for a few days in Reykjavik. It is true that Iceland merely touches the Arctic Circle and that few of the plants with strictly arctic distributions are to be found there. But on this treeless island of lava-floes, moraines and glaciated mountains, some of the most familiar plants of the Swiss alps descend to sea level and reach their northern limit. I was fortunate to be assisted by Dr. Eythór Einarsson, of the Museum of Natural History in Reykjavik, who showed me the coastal vegetation, mainly of willow and birch scrub on rough lava floes that had never been smoothed by glaciation. As it was the middle of September, autumn colouration was at its height, with bright yellow willow leaves, rich brown birch, and the most brilliant red foliage of *Vaccinium uliginosum.*

Dr. Einarsson most kindly gave up two days to take me by jeep along the road that crosses the island to settlements on the north coast. At first we were following valleys whose alluvial soils support grassland rich enough for dairy farming. At the village of Hverageroi many large glasshouses are heated with water from neighbouring hot springs. It was strange to see such quantities of fine conservatory flowers, fruits and vegetables being grown in so inhospitable a climate. We were able to visit the site of the ancient open air parliament at Thingvellir and also some of the finest hot springs and geysers, that merely served to emphasize the keenness of the wind. The island must be a paradise for ornithologists, for I noticed Divers, Mergansers, Geese and Whooper Swans as we drove past moorland lakes and pools. Equally delightful were the droves of Iceland ponies, most of which are piebald in bright colours.

Once we had passed the gorge where the Hvitá (White River) descends in an impressive fall, the Gullfoss, we entered less fertile country. A high wind blew from the centre of the island, bitterly cold, and strong enough to lift the dry soil in clouds. The whole atmosphere was so brown with dust that we could barely see the mountains backed by ice sheets that bounded the broad inland plateau. The road wound through country that was a bare stony desert, but this waste-land had recently borne moorland vegetation. Areas of

unbroken plant cover still remained where a few sheep were grazing. Once the sward is weakened by grazing, the unprotected soil is soon blown out to sea. Here and there we could see the edges of wind-eroded areas where there were banks several feet high topped by vegetation. Below these banks, the dried sticks of the plants still lay, clinging by dead roots among the stones. Rocks which formerly had just shown above ground level were now exposed for six to twelve feet. They were capped with dark lichen-covered zones, but their newly exposed bases were still pale and clean. The wind blew all night and as we returned next day stretches of the road were buried deep in soil and the rivers were mud coloured from the dust that had fallen into them.

Late in the afternoon we turned along a track leading on to the Kerlingarfjöll range of mountains and reached a ski hut as night fell. In the morning even the streams ran under a coating of ice, and a large river had icy margins. But the sky was clear and the wind not quite so fierce. We set out to climb a neighbouring peak, and as we went we noted down all the plants we could see. The accompanying photograph (fig. 15) shows the barrenness of the situation, so the list was not a long one. Indeed it was surprising to find so many species on such an exposed site, and I was interested to meet again many of the plants I had seen so recently at high altitudes in the south of Europe. Here is the full list of plants found near the summit of this mountain. Even in the Highlands (!) many more species would be present on any mountain, and in the Swiss or French Alps the list would be many times as long.

Thalictrum alpinum
Saxifraga stellaris
Saxifraga caespitosa
Silene acaulis
Silene maritima
Cerastium alpinum
Cerastium cerastioides
Sibbaldia procumbens
Potentilla crantzii
Pedicularis flammea
Cassiope hypnoides
Veronica alpina
Armeria maritima
Gnaphalium supinum
Salix herbacea
Salix calicarpa
Polygonum viviparum
Oxyria digyna
Poa flexuosa
Poa glauca
Trisetum spicatum
Festuca vivipara
Festuca rubra var. mutica
Kobresia myosuroides
Carex bigelowii
Rhacomitrium canescens
Erigeron uniflorum
Taraxacum sp.

Swiss Holiday 1965

By B. CLOUGH

ALPINE plant hunters who can choose their holiday time usually go to the European Alps in early July, especially if they want to see high alpines. If they go earlier, there is a risk that the plants they have come to find will be covered with snow or inaccessible. Also early July is the time for the greatest number of species to be in flower, except perhaps in the valleys. After years of going to the Alps in July, we decided this year to take a chance with an earlier holiday and go in June to see what was in flower then.

We set out on June 20th, accidentally mislaid one of the party in Basle, and were reunited at Wengen in the Bernese Oberland. We chose this as our first centre because we particularly wanted to see primulas, which are usually past their best in July. It is one of the places where *P. auricula* and *P. rubra* meet and hybridise. Wengen has other advantages, not the least of which is a railway up to the heights. This has three stations below the snow-line, before it plunges into tunnels, and by a miracle of engineering arrives eventually and expensively at its final destination, the Jungfraujoch. This seems to be the icy equivalent of Blackpool beach and no place for plant hunters. Each of the lower stations, Wengernalp, Kleine Scheidegg and Eigergletscher, is a gateway to good hunting country. We used the railway nearly every day, and ranging out from its various stations found *Androsace helvetica*,* *Cypripedium calceolus*, *Pulsatilla vernalis** and *Primula auricula*,* all at their best, and many other interesting plants. Their exact locations are left purposely vague, because most of them are 'protected', but not everyone is scrupulous about observing the law. It would be a great pity if they weren't there to delight future generations of plant lovers. They never look as beautiful in a garden as they do with their mountain background. It was a bit early for Eigergletscher. There was still a lot of snow, but *Saxifraga oppositifolia* and *Thlaspi rotundifolium* were in flower on the moraine below the station, and a viola, which looked like *V. cenisia*, was in bud.

Twice we made the rather complicated journey to the Blumenthal above Mürren—train down to Lauterbrunnen, funicular up the precipitous opposite side of the valley, train from the top to Mürren and funicular again to Allmendhubel. Natural hybrids of *Primula auricula* and *P. rubra* are reasonably common round here. We found several,

*Figs. 16, 17 and 18.

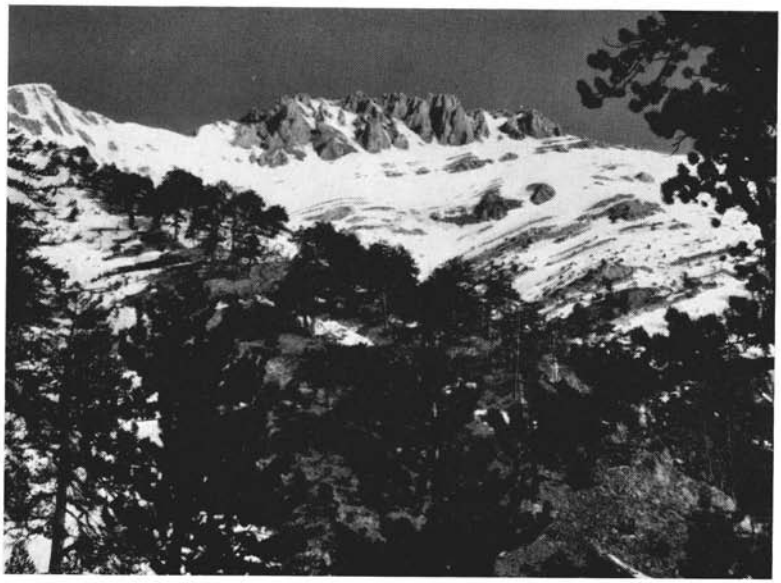
but with a few exceptions they seemed to me rather unattractive in colour and poor in shape. Some of the party crossed over into the Schiltthal and saw very good colour forms of *Primula rubra*. We also toiled up the steep path towards the Engethal until it disappeared under deep untrodden snow. We were quite thrilled to see our first *Primula auricula* and *Androsace helvetica* here, not realising that in our later wanderings round Wengen we should come across much finer auriculas growing like cowslips in a pasture at home, and rocks sprouting androsaces from every crevice, in places where photography could be enjoyed with both feet firmly on the ground. There were sheets of crocuses in the Blumenthal and its own splendid version of *Pulsatilla alpina*, with ice-blue backs to the petals. *Pulsatilla sulphurea* was there too, in defiance of the theory that it needs a different soil. Some of these yellow ones also had the blue shading, but in this case it was an iridescent peacock blue. In July the Blumenthal is an extremely colourful hayfield. When we were there this year the prevailing flower colour was white, and the grass had hardly begun to grow. There were few species in bloom but those few were there in quantity and the valley still lived up to its name. (fig. 19)

One thing that hasn't been mentioned so far is the quality of the scenery at Wengen and Mürren. Both are built on shelves high above the deep trough which is the Lauterbrunnen Valley. They face each other across the gulf. Even truly dedicated plant hunters are forced to raise their eyes occasionally from the ground to look at those magnificent giants, the Eiger, the Mönch and the Jungfrau. The Mönch has no luck, being sandwiched between the other two notabilities. It can't compete in killing people with the north face of the Eiger or in beauty with the Jungfrau, but it is quite a respectable mountain in its own right. Wengen is a better centre for plant hunting than Mürren because of the invaluable railway, to take you up to your chosen starting point with all your energy intact, and bring you home again when it has been expended. Our hotel, the Silberhorn, was delightful, very well run by a pleasant family, excellent food, and with the priceless asset of Fritz, the head porter. Always beaming, never too busy to bother, Fritz knew all the answers and would make all the arrangements. We were sorry to leave, even though our second centre was to be Zermatt with its exciting flora and the Matterhorn.

When we arrived there, the village looked more like a stage set than ever. It was gay with flags in honour of the 'Year of the Alps' and was preparing for the centenary of the first ascent of the Matter-

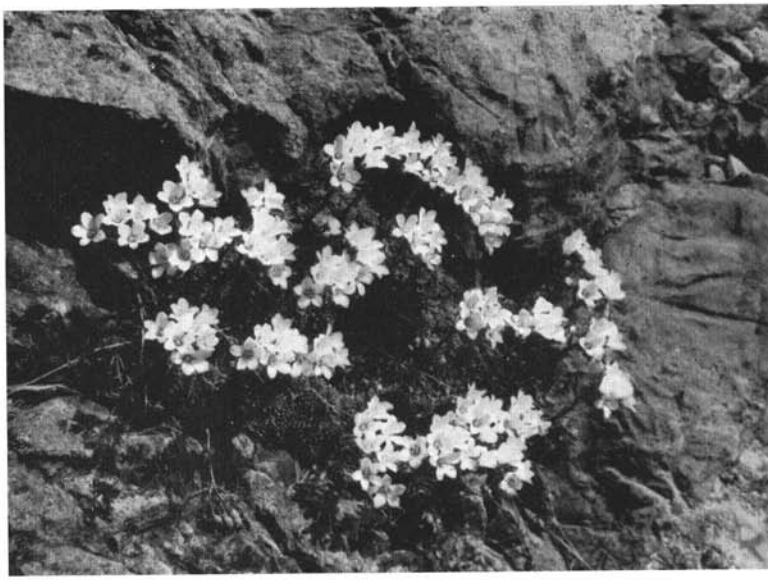
Photo—A. J. Huxley

Fig. 6—Delphi—looking across the valley (See p. 15)



Photo—A. J. Huxley

Fig. 7—Summit of Mt. Olympus (See p. 19)



Photo—A. J. Huxley

Fig. 8—Saxifraga scardica on Mt. Olympus (See p. 19)

Photo—A. J. Huxley

Fig. 9—Saxifraga porophylla thessalica on Olympus
(See p. 19)

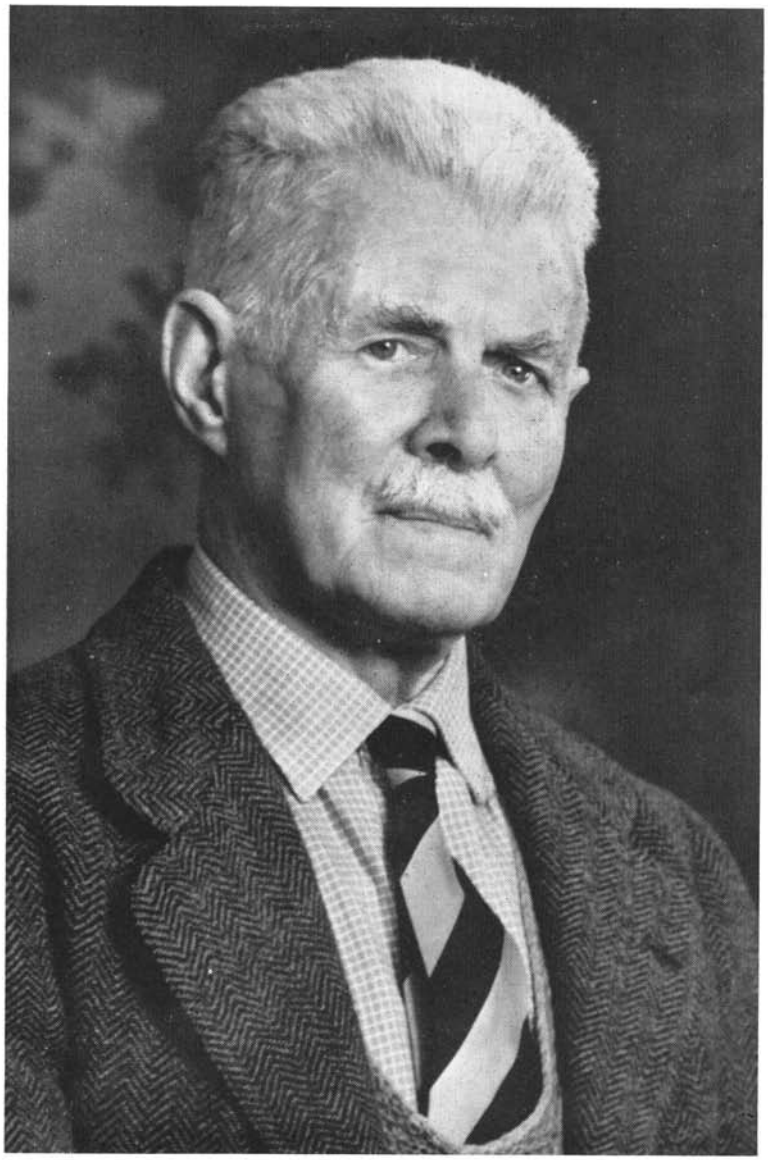


Fig. 10—Major-General D. M. Murray-Lyon, D.S.O., M.C., S.H.M.

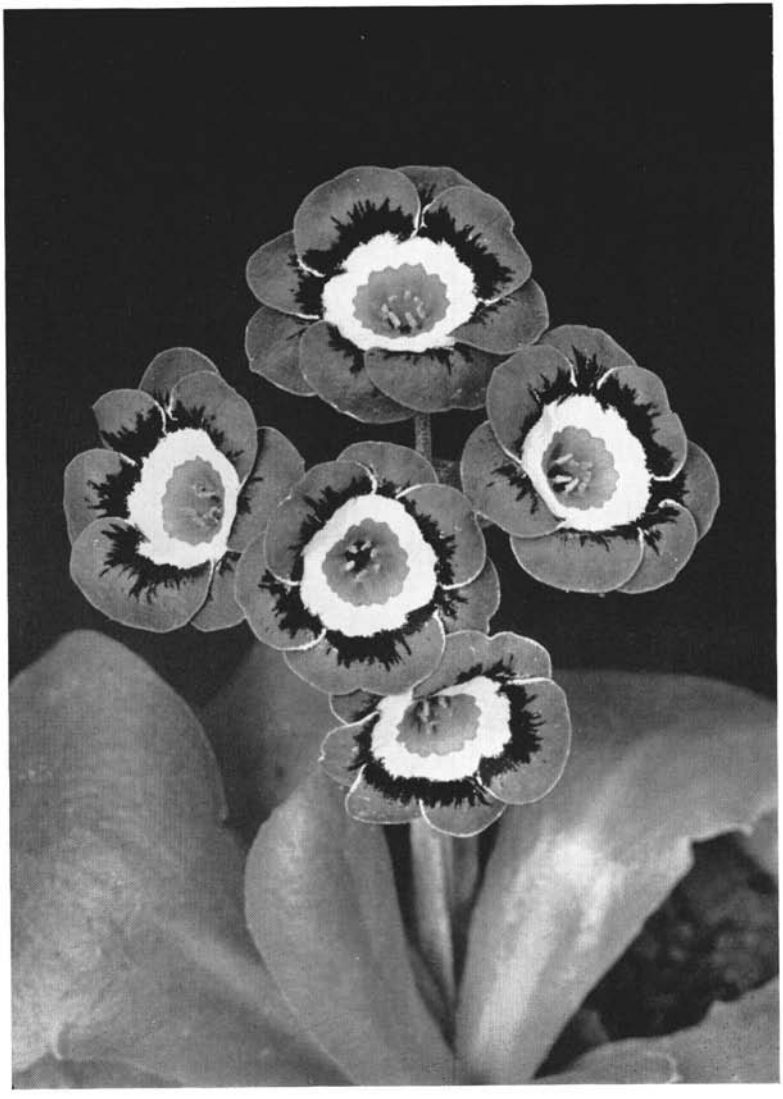


Fig. 11—Show Auricula (Green Edge) Florence M. Meek

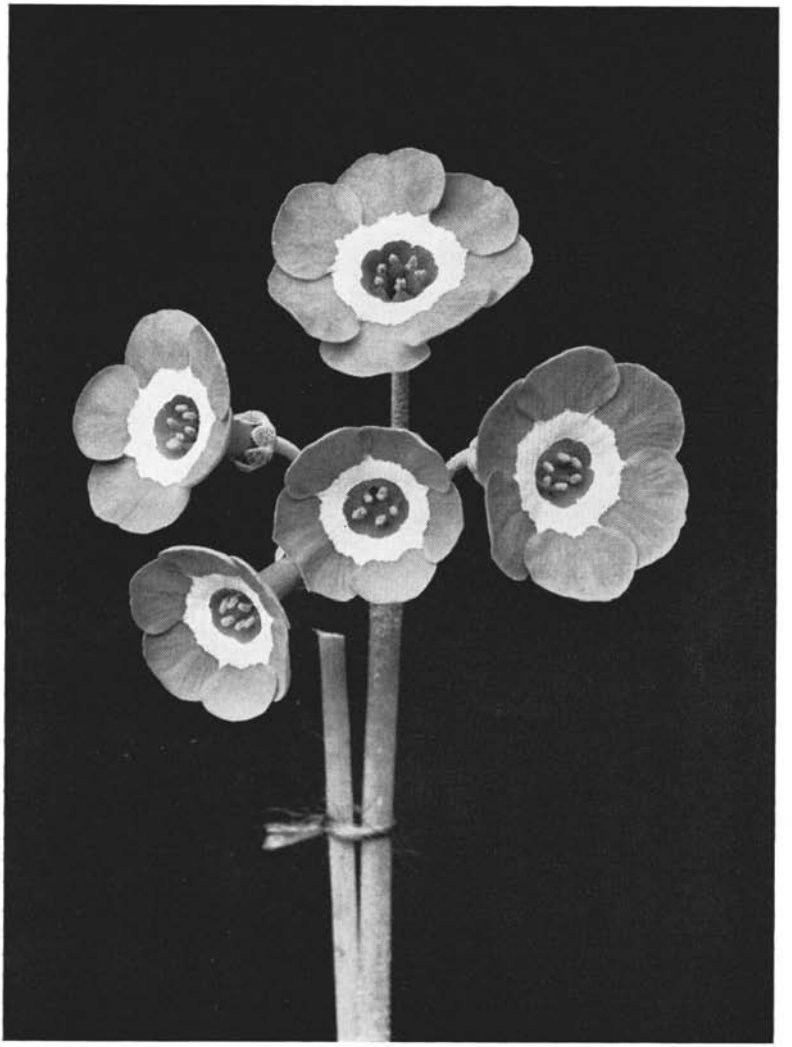


Fig. 12—Show Auricula (Yellow Self) Streamlet

Fig. 13—Show Auricula (Grey Edge) Sea Fret

Photo—W. R. Philipson

Fig. 14—Argyroxiphium sandwicense, Silversword
(See p. 41)

Photo—D. Holford

Fig. 19—Pulsatilla in Blumenthal, Eiger and Monch

Photo—W. R. Philipson

Fig. 15—Kerlingarfjoll, Central Iceland (See p. 46)

Photo—D. Holford

Fig. 16—Androsace helvetica, Lauberhorn, Wengen

horn, which was about ten days ahead. It was a pity that we just missed the celebrations as we had to go home before the great day. However, we had come to look for plants and we were quite successful in that. It was a little early still for the higher stations of the Gornergrat railway and the lovely forms of *Androsace alpina* which grow in that area. We did find some in flower and plenty of a rather small form of *Ranunculus glacialis*, Thlaspi in various colours, *Douglasia vitaliana* and *Viscaria alpina*, but on the whole it looked a trifle barren and wintery up there. The glorious views fully made up for any slight lack of flowers.

We took the chair lift to Sunegga and saw, among other things, an occasional belated *Pulsatilla halleri* and quantities of *Androsace imbricata*, covered with flowers.* For one of the party this was the highlight of the whole trip. In spite of all our endeavours, the Matterhorn crept into nearly every picture, if 'crept' is not too disrespectful a word to use about something so awe-inspiring and aloof. Only when we were actually on the lower slopes of the mountain, having taken the cable car to the Schwarzsee, did we manage to avoid using it as a background.* The Hörnli ridge was very rich in *Eritrichium nanum*, growing oddly as a turf plant as well as in its more usual rocky habitat. Other interesting plants in the area were *Callianthemum rutifolium*, *Saxifraga biflora* and *Campanula cenisia*. The campanula was in fat bud, but in spite of the number of plants and much diligent searching we only found one flower that was out. There was plenty of colour by the Staffelalp track, dancing multitudes of *Viola calcarata* and brilliant patches of *Silene acaulis* and gentians. The July riot of flowers on the upper pastures was just beginning when we left. On the whole we were very lucky with the weather, though it was rather cold at Zermatt, which is a good deal higher than Wengen. There was so much new snow on the mountains in our last few days there that the BBC television people were worried about conditions for the climb that was planned for the Matterhorn Centenary. One of the cameramen told us that he didn't care for mountains and would much rather be in London ! We did not share his sentiments, and came away reluctantly from one of the best holidays that we have ever had in the Alps.

*Fig. 20.

A Trip to the High Tatras

(From a letter to a member)

By OLGA DUCHACOVA

FIRST I want to describe our trip to Belansky Tatras and think it will be of some interest. Well, I had been dreaming for years about it, but somehow we still had no money and no time to realise it and so it was a great event for me when we decided to go. The only discouraging circumstance was the terrible weather, but we hoped in a corner of our hearts that it would improve suddenly, but nevertheless I was rather depressed and pessimistic. I must mention that a lady friend, Mrs. Subrová—an enthusiastic alpine lover and photographer—made us a guide. She visited High Tatras last year and we thought it would be good to have someone experienced with us.

Well, we left Prague on Monday evening, 2nd August, and the long way to Poprad, our terminus, was rather tiring even when we had comfortable beds in the sleeping-car. But the train was so noisy —or was it only our car ?—and our beds were swinging wildly, so that we couldn't sleep at all. At about 4 a.m. we were coming close to Tatras, but the sky was very unfriendly, full of black heavy clouds and the mountains were hidden in a dense fog. It must have rained very heavily because we could see huge pools everywhere and it was very cold (I was longing for a hot cup of coffee so much !). This all was not too encouraging, you can imagine! But in the next ten minutes the fog disappeared and there was the showy and stately massif of High Tatras towering forcefully from the lowland and we didn't want to believe our eyes—white with a fresh snow from top to bottom ! It was a surprise but not a pleasant one. Well, we had to take it as it was.

In Poprad we had to wait a long time for our train to Tatranská Lomnica, but as everything has its end, so also this ended and about 7 a.m. we were standing in a queue in Lomnica for a bus to Zdiar. At that time the sky was cloudless and a lovely blue, and the white rugged peaks of the Tatras were glimmering in the sun. This was a wonderful sight and it raised our low spirits a lot ! At about 7.30 a.m. we were coming to Zdiar by our bus and there was another magnificent panorama of Belansky Tatras, just as white as High Tatras, but in their appearance resembling the Dolomites in Italy, also composed of limestone, while other parts of High Tatras are of granite. This is why

the Belansky Tatras are so rich in alpines and why we preferred staying in Zdiar rather than Tatranská Lomnica.

Zdiar is a typical wooden house village, about five km. long with a nice silver church and picturesque wooden houses, most of which have no chimneys. On both sides of the village there are long strips of fields and meadows and when you look at it from a distance it is a lovely sight, like a nice coloured mosaic with a beautiful background of the mountains. I could spend hours looking at it and go into raptures over it. We lived in a nice one-storey house with a nice wooden balcony where we had that wonderful view of the mountains and we could see it also directly from our beds. There was running water in our room and central heating. We paid 10 Krs. (crowns) for one night per person. We brought an electric cooker so that we could make some easy meals, but mostly we lived on bread and canned meat. We missed badly potatoes, vegetables and fruit. Every evening Mrs. Subrova brought fresh milk from a neighbour, sometimes also a few eggs or a piece of butter. (We were still terribly hungry !)

Well, our first morning we spent shopping for food and postcards and in the early afternoon we made a short trip to the rocks where there were some interesting plants, as Mrs. Subrova told us. But, I mustn't forget to tell you one funny thing. When we went to see that nice balcony, we saw in a corner tins with alpines on the floor in shade. From this we judged that our neighbours (there were two rooms on the balcony) were also interested in alpines. A moment later, when we saw through the window on our neighbour's table, drawings of the plants, brushes, colours, etc., we were very anxious to know who our neighbours were, so we asked our landlady. To our surprise and pleasure we learned that it was Mr. and Mrs. Zoul from Prague, both artists, and good friends of ours ! Mrs. Zoulová has a nice rock garden and, when I started my rock garden, I got a lot of nice plants from her and now, we had to travel so far to meet them at Zdiar ! We met in the evening and had a lot of fun out of it. Mrs. Zoulová is making drawings of our native alpines and, if she is lucky, it will be published. They came to Zdiar by car and this was already their third week there. They complained of the cold weather, and told us where we could find some plants, etc.

Well, back to our first trip. We walked slowly to so-called Zlebina —it is in the direction of Monkova Dolina. After about half or three-quarters of an hour, we came to a rather steep group of rocks and tried to get up and there we met our first alpines and were very excited

about it. But I must mention that already along the road we walked there were lots of *Gladiolus imbricatus*, *Campanula glomerata* (a beautiful colour !), *Digitalis ambigua* (= *grandiflora*), several kinds of Orchids, *Phyteuma orbiculare*, *Lilium martagon*, *Astrantia major*, *Delphinium oxysepalum*, *Parnassia palustris*, *Veratrum*, *Aconitum* and lots of others. It was a lovely sight, such a coloured mixture.

In the woods there were, of course, Soldanellas, *Moneses uniflora*, etc. On the rocks of Zlebina there were some of the true alpines, such as *Saxifraga caesia*—a lovely little thing of silver clinging to the rock, and such a pleasure to see ! Some were in bloom and some finished.

In the cracks of the rocks there were many plants of *Auricula alpina* and that lovely little fern *Asplenium viride*, and *A. ruta-muraria*, all together so neatly arranged that my eyes were thrilled with them. And then there were whole colonies of *Pinguicula alpina*, some in the narrow cracks, lots of *Gentiana clusii* (but these already over), *Gentianella amarella* (a nice plant too, a pity it is not perennial), *Dianthus superbus* and *D. praecox* on the screes and rocks, together with nice mats of *Minuartia striata* and *Dryas octopetala*. We were so pleased with the plants that we were rather surprised when it began to rain and the sky looked rather hopeless, so that we decided to go home. We became pretty wet and it looked as if it would rain the whole week. But next morning there was an improvement, very welcome, of course, and at 6.25 a.m. we started by bus to Javorina (we went together with the Zouls). There we had our breakfast first because our electric cooker went out of order suddenly, and then went along the marked path to the Javorova Dolina, a very romantic but quite comfortable walk. Three times we got a little rain in the morning, but the afternoon was already half sunny and without rain. It was a pity that we lost a lot of time in the primeval forest admiring the coloured lichens and mosses that were artistically arranged on the large boulders or half decayed stumps, together with little lovely mushrooms, ferns, etc. We took many pictures, of course, but as I said before we lost a lot of time and when we came at last to the end of the path just under the impressive and nearly vertical walls of Javory Stit, we had only one hour to search for the plants in the scree, because we had to be back in Javorina in time to catch our evening bus to Zdiar. We still followed the stream of Javorinka and when we left the forests and the meadows with *Pinus mugo*, where we took pictures of many plants, we enjoyed the wonderful and mysterious small pools overgrown with interesting mosses and plants.

There was one wonderful place—a small wet slope covered with mats of yellow flowers of *Saxifraga aizoides* and white flowers of *Silene quadridentatum*, then there were purple flowers of *Pedicularis verticillata*, and violet flowers of *Pinguicula vulgaris*. It was a wonderful place ! Later on in the scree and in the short grass there were many plants of *Campanula alpina* in flower, *Geum montanum*, big fat yellow flowers of *Hypochoeris uniflora*, *Doronicum clusii*, *Chrysanthemum alpinum*, *Bellidiastrum michelii*, some *Gentiana punctata* (this year was rather bad for this gentian—we saw very few, as people there like to gather this plant, especially its roots, and make a brandy of it—they say it is very healthy—but as High Tatras is a strict Reservation, this is not allowed, but . . . you see, don't you !).

The banks of the small stream of Javorinka were full of beautiful tufts of *Rhodiola rosea*, *Aconitum*, *Delphinium*, etc. There were so many plants all around that we didn't know which to enjoy first. The lovely blue of *Myosotis alpestris*, the yellow flowers of *Potentilla aurea* with orange centres, *Sedum alpestre* on the boulders, *Viola biflora*, *Empetrum nigrum*, *Gnaphalium supinum*—rather more interesting than nice, *Anemone narcissiflora* and *Pulsatilla alba* in bloom just as the Soldanellas are going over. In the scree were dense mats of Salices—we saw two species—*S. herbacea* and *S. reticulata*. It is a real joy to see *Geum reptans* in bloom or *Papaver burseri*, *Saxifraga oppositifolia*, *Saxifraga aizoon* (several species), *Saxifraga bryoides*, species of Pedicularis and also some wonderful specimens of old *Pinus cembra* on the opposite slopes.

Then I spent a little time only observing the quiet and grand peaks of the mountains and the dancing mists and clouds over my head. I felt extremely happy and the world was very, very far from me and with it all troubles as well. I am sure I have forgotten some plants we saw, but the impressions were too many. We had to hurry back to Javorina then, but we managed to be in time for our bus. It was a fine day.

Next morning we started at 7 a.m.—rather late, but we were a little tired and slept not too well, and we walked up through Monkova Dolina to Siroke Sedlo. Quite down in the forest we saw two groups of *Cypripedium calceolus* (finished). This beautiful plant is rather rare now thanks to the tourists. The ascent up the Siroke Sedlo was very steep, but the views were wonderful. The sun got control over the sky again and we were warm and thirsty. There are only a few streams in Belansky Tatry so that water is rather rare. But it happens that you

find so-called dip-streams up the mountains which suddenly appear and just as suddenly disappear. They were very good for our thirsty throats. We walked very slowly because Mrs. Subrova took many pictures and so did Ruda too. First the plants were the same as we saw on previous days—the first new plant was a nice fern in the wood, *Polystichum lonchitis*. At a higher altitude we found the small *Veronica aphylla* and a small but lovely *Gentiana nivalis*, which again is only an annual, unfortunately !

Then I saw for the first time in my life the King of the Mountains —the eagle, floating majestically in the air and being apparently above all and everything ! I nearly envied him ! It was interesting to see two swallows following him closely and stirring him up, but he didn't pay any attention to them, being aware of the fact that they are faster than he is.

Our second meeting with animals was a little later when I suddenly heard a sharp whistle and was quite frightened of it, thinking it was one of the TANAP guards (TANAP = Tatra National Park), so I looked anxiously around and there he was—the funny fat animal sitting near his lair and whistling angrily because we were disturbing his quiet. We call him Svist, but I don't know the English name for it, as I didn't find it in my dictionary, but I am sure you know it (Marmot). Our third meeting was, of course, the chamois, but we saw only two !

Being up the Siroke Sedlo, at last we found both the limestone and the granite flora. These two minerals mix together very often there. There was plenty of *Silene acaulis* (in bloom or finished), *Ranunculus alpestris* in bloom, *Dryas octopetala*, *Viola sudetica*, *Viola biflora*, *Primula elatior* in bloom, Soldanellas, a lot of *Primula minima* (finished), *Campanula alpina*, *Pedicularis oederi* and *P. verticillata*, several species of Astragalus, *Gentiana verna*, *Hedysarum obscurum*—very lovely, *Cerastium latifolium*, Oxytropis (about three species). There were places where we found the spring plants in bloom—it was apparent that the snow must have just disappeared. This was a very nice and interesting place and it was 3.30 p.m. when we came to the top at last and there were the wild ranges of High Tatras before our eyes—a grand view ! We could hardly break off from this spectacle. There was a nice limestone scree near there and so we had a look at it and found nice clumps of *Sax. caesia*, *Sax. androsacea*, *Sax. aizoon*, *Sax. moschata* and one species of Kabschia Sax. which I don't know the name of. It had hard small silver rosettes with lime dots and the

flowers were finished on about 3 cm. tall stems. I am very anxious to know the name of it. I didn't find it in a book on the Tatra flora, so I'll write to Mrs. Pachova at the Tatranska Lomnica Museum to ask her about it.

Then there was a nice small *Minuartia sedoides*, and a species of small arenaria (I don't know the name), and small low cushions of a plant that looked quite like *Draba imbricata*, but this cannot be perhaps possible, as *Draba imbricata* comes from Caucasus. I was thrilled to see the miniature Helianthemums, then *Dianthus glacialis* (lots of it), *Ranunculus thora*, *Senecio carpaticus*, simply every piece of rock or grass was packed with many plants, and we couldn't help stepping on them. As the evening was near, we hurried down to Kezmarska Chalet with a unique view of High Tatras and it could be advantageous to spend a week there because the trips to the peaks, etc., cannot be so long as when we must go from Zdiar. There we had an excellent supper—large beefsteaks with potatoes ! The room was nice and not expensive (12 Krs. for a bed). Next morning was just perfect—the sky was full of ultra-violet shine, and it was apparent the day would be very hot. We wanted to make the so-called 'Crest tour'—you can see it on the map, it is the red marked path from Hlupy to Tatranska Kotlina. It is a beautiful tour that can be made only in good weather. It took us the whole day, but we took many pictures again and searched for plants. New findings were only a lot of *Gentiana frigida* in bloom, *Saxifraga carpatica*, *Erigeron uniflorum*, *Linum extra-axillare* and hundreds of *Leontopodium alpinum*—this was grand ! They grew on a rock a little back from the path and so people didn't know it. We met two Englishmen taking also pictures of plants and I told them about that rock with Edelweiss and they were very glad of it. We met them once more later and they thanked us. It was really very hot, and my nose became red like a carrot and also my right leg and arm.

In the afternoon we found an interesting place with beautiful tufts of *Aster alpinus* in bloom, Edelweiss, *Gypsophila repens*, *Dianthus praecox* and many others. This was all on the steep rocks. We were already very tired at that time and were glad when we came to the end of our tour at Tatranska Kotlina where the bus took us to Zdiar.

Next day we had a rest—it was necessary—and the Zoulls took us by car to Tatranska Lomnica where we did some shopping and wanted to visit the Museum. But this was not open on Saturday and Mrs. Pachova had her holiday, so it was bad luck ! There were many many people in Tatranska Lomnica and we were glad to be again in

Zdiar. I spent the afternoon reading that Agatha Christie you gave me and in the morning I took a nice slow walk near Zdiar.

On Sunday we had a big programme again. We made a very tiring climb up the mountain Havran (2.157m. high). There is no path, but our landlord made us a guide and showed us how to get there. We had to be very quiet and careful not to attract the attention of a gamekeeper, who would certainly send us back. But everything was all right. We saw and heard a gamekeeper send back a noisy group of tourists, but we were hidden in the wood. The climbing was very unpleasant because there was a very tall and dense grass, together with tall plants up to the peak. It was very strange ! On the rocks we found only two species of *Draba* (*aizoides* and *dubia*), *Hutchinsia alpina*, and along a stream, beautiful *Trollius europaeus* in bloom. The other plants here we had already seen. This mountain, Havran, is the highest peak of Belansky Tatras. The descent was still worse than the ascent and we had to go down in a stony bed of a dip-river. Progress was very slow and some parts of the way down we had to make on our backs ! We were very glad to be down again. We then found an interesting white Gentian in the meadow, but it also is not perennial. This day was also very hot and views from the mountain were wonderful, of course. We didn't meet or see a man and there was a grand quiet all round. Only one thing was very unpleasant and it was the flies. A whole cloud of them followed each of us and the higher we were the worse ! We returned home quite exhausted ; only Mrs. Subrova—the oldest of all—was as fresh as the morning dew ! She was like a living 'perpetuum mobile' and I had to admire her !

The last day of our stay in Zdiar we spent resting and mailing the boxes of collected 'material' home. It was a sack of black first class humus—oh, dear me !—most of all I was thrilled with the many kinds of Tatra humus ! It was wonderful—it was an experience to hold it in my hands, to touch it ! If only I could get a whole wagon of it ! Then we sent home a few lime stones and only a few plants. I myself didn't take a single plant because, when I saw them so happy and so well-looking there, I was sorry to kill them or risk their death taking them with me. But Ruda couldn't resist and collected some, also seeds. Yes, we saw *Cortusa mathiolii* in many places—some still in bloom and some finished, and we collected seeds too. I mustn't forget to enclose some for you. We didn't see any other Pulsatilla except *Pulsatilla alba* ! It was still in bloom in some places. I am sorry

we didn't see *Ranunculus glacialis*, as it grows only on granite—perhaps next time ?

I should much like to see the photo-herbarium in the Museum in Lomnica that could help us to identify some plants we didn't know, or to show us which other plants we could find in Tatras. And it would be important to get a guide or permission to enter the strict floral reservations—this could be highly interesting !

The way back to Prague by train was better than from Prague to Tatras—we had good seats and in the afternoon we 'landed' in Prague and at about 7 p.m. we were at Mnichovice, very tired, but with many wonderful experiences from our short holiday.

Col du Lautaret and Mont Cenis

By S. MITCHELL

THE COLOURED illustrations in this issue of the *Journal* were taken during a holiday in the French Alps at the end of June and beginning of July 1965. The holiday was based on the details published in Miss Holford's letter in *Journal No.* 32.

One's desire to visit these more southerly mountains, after exploring to some extent the Swiss Alps and the Dolomites, is prompted by the chance of seeing some of the endemics of this neighbourhood. It is unfortunate, therefore, that only one of these plants which are rare in other parts of the Alps, has been selected by the blockmakers. *Campanulas allionii* and *cenisia*, and *Ononis cenisia* and some others, did not match up properly for the blockmakers' requirements, although the slides all project quite well. There was also a slide of the white *Daphne striata*, mentioned by most visitors to Lautaret, and two slides of *Silene acaulis var. exscapa* in the normal pink and an albino form. The latter I had first seen at Saas Fee, this tiny form of *S. acaulis* being locally rare in the Alps.

Dryas octopetala, Fig. No. 2, at Lautaret was as perfect in form and condition as I have ever seen it. We get it, of course, every bit as good in the N.W. of Scotland, in the Inchnadamph area. Every time I see and admire it, I also admire the wise choice of this lovely native alpine as our Club badge. For photographers I would add that the lighting conditions would be described as "cloudy bright", which restricted the contrast between the pure white of the flowers

and the dark green shiny leaves, the usual trouble when photographing Dryas in bright sunshine.

Rhododendron ferrugineum, Fig. No. 3, is another old friend found at Lautaret, and again in search of perfect condition, the attraction was its big, perfectly shaped flowers of rich colour, and its compact growth.

Sempervivum arachnoideum, Fig. No. 4, is yet another old acquaintance in very fine form. I had seen equally as good at Pontresina, but never got to it with the light in the best direction. On sunny slopes at Lautaret it was still in bud at 7000 ft., but at the lower elevation at Mont Cenis, where this picture was taken, it was in full flower near the southern end of the lake. *Sempervivum arachnoideum* flowers are the richest for colour of our rock garden "Semps."; usually of a more crimson tint, this form is a brilliant brick-red. The rosettes, although quite small, expand and throw up the normal size of flower-spike.

Viola cenisia, Fig. No. 5, is named after the Mont Cenis area, although also found in some of the more southerly Alps. M. Rouffier-Lanche had a pale pink form growing in the Botanic Garden at Lautaret, which he had collected in Greece. It inhabits the shaly, rough scree at high elevations, the photograph being taken on Mont Lamet at about 8000-9000 ft. It has a tremendous root system, yards of it. I found that some I collected with lots of root which I could not cover well enough in my sand frame, started to grow leaves at joints which had previously been covered in the scree from which it was taken. This power to make new growth like this will be its salvation in shifting screes. The reproduction is from one of the smaller groups of flowers photographed, the best groups higher up, taken later, had all strong shadows. Even at only 5 p.m., the sun peeping over the big mountains to the West, made shadows which would only have been like this later in the day at home.

"FAME IS A FLEETING STORY"

Triumphantly they stand, in colours soft or gay,
Uncaring whether skies be blue or grey ;
Lightly we praise them, lightly speak a name
Illustrious once and known perchance to Fame,
Prestige or Power, in picture or in story,
Surviving now, recalled in a tulip's glory.

JEAN ARRÉ

The Flowers of the Northern Part of Mount Yatsugatakes

By A. MASUYAMA, Tokyo

MT. YATSUGATAKES is a high mountain near Tokyo. It is not so high as Mt. Fuje-san (3776 m.) and not so large as the Japanese Alps. However, it is very familiar to us because of being within easy reach of Tokyo.

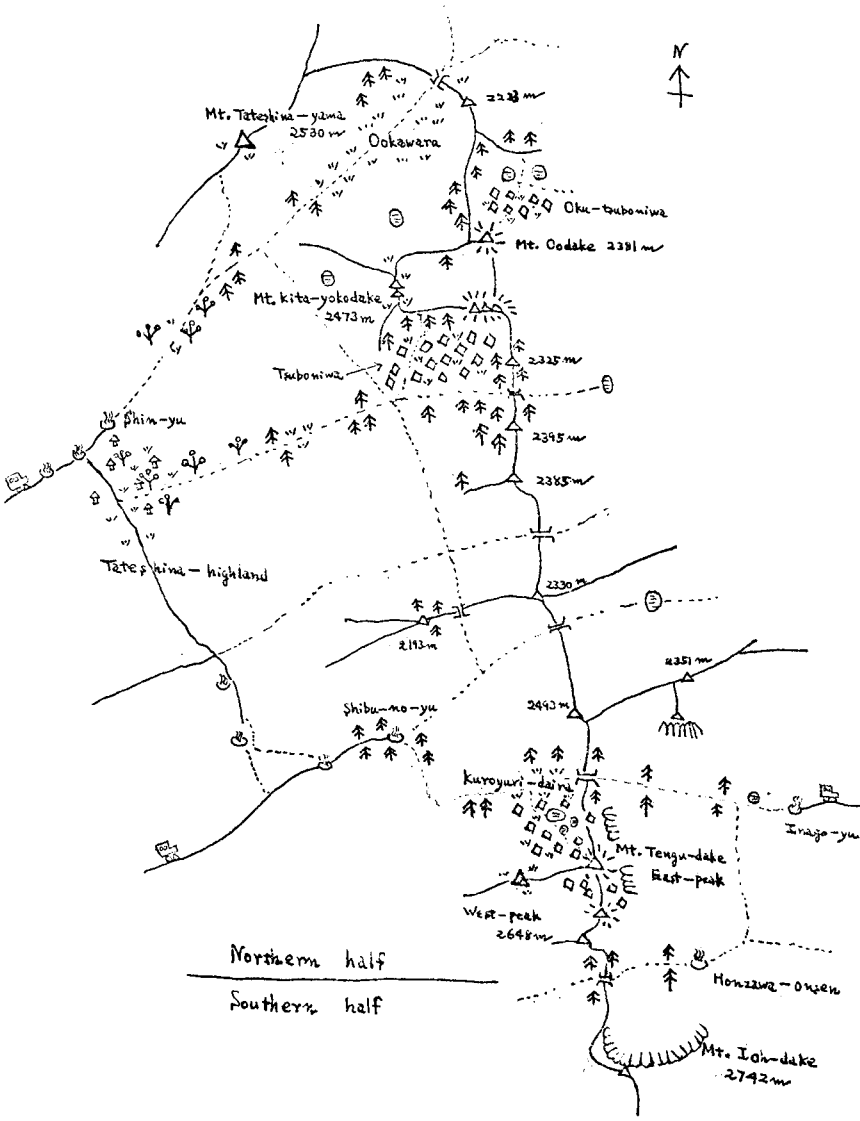
The southern half is rather rugged and fierce, but the northern half is calm and quiet. Many high peaks (the highest, Mt. Akadaki, is 2899 m.—9660 feet) are situated in the southern part and some rare plants are found on the precipitous cliffs near their peaks—*Taraxacum yatsugatakensis*, *Ranunculus yatsugatakensis*, etc. But I am writing about the northern part of it where I made excursions this year.

The northern part of Mt. Yatsugatakes is lower than the southern part and not so steep. It has not got many rough rocks, knife ridges, nor sharp peaks. It has many pretty ponds, a calm and quiet air, and produces some plants which are moisture-lovers and which are not found in the southern part. Near the base there are hot springs at Takino-yu, Shin-yu, Shibo-no-yu, Inago-yu, etc. Many artists have villas there and go to them in summer to enjoy the cool and still air. The high land around this region is called Tateshina-Highland. The principal high mountains are three in number—Mt. Tateshima-yama (2530 m.), Mt. Kita-yokodake (2473 m.), and Mt. Tengu-dake (2648 m.).

The most northerly peak, Mt. Tateshina-yama, is a beautiful conical volcano and is often known as "Suwa-fuji" ; Fuji means Mt. Fuji-yama. By reason of its beautiful shape and the religious associations of this mountain it has been climbed by many people from ancient times and as a result I am sorry to have to write that most of the alpine plants on this mountain have been trampled down and have disappeared from sight.

Mount Kita-yokodake is an interesting volcano. It has three tops ; Kita-yokodake, Ohdake (2381 m.), and Mitsudake. The central area between these three peaks forms a sunken part where there are several ponds. After large quantities of its lava were poured to north and south they made two lava plateaux, Oku-tsuboniwa and Tsuboniwa.

Tsuboniwa and Oku-tsuboniwa have a height of no more than 2250 m. and belong to the sub-alpine zone. But *Pinus pumila* and



The Northern Part of Yatsugatakes

various alpine plants are found while tall trees are very few. Because of most violent west winds flowing off the snow on to the lava in the winter tall trees cannot live under the conditions of severe coldness. Consequently a curious landscape is found, where alpine plants are spread underfoot to the extent of about a square mile while the higher peaks, covered with dark-green forests, look down on one. In this false alpine zone one will find *Pinus pumila*, *Rhododendron fauriae*, *Arcterica nana*, *Vaccineum vitis-idaea*, *V. axillare* var. *membrenaceum*, and *Empetrum nigrum* var. *japonicum*. These are among the most common plants of the alpine zone in Japan and are not so very showy ; but there is a lot of *Schizocodon ilicifolius* on the lava. If you come in June after the snow is melted away you will find many groups of the pretty, soldanella-like, fringed pink flowers. The tops of the peaks are covered by carpets of *Pinus pumila*, *Rhododendron fauriae* and lava : other alpine plants are few.

Under the sub-alpine forest (1750-2450 m.), composed of *Tsuga diversifolia* and a small amount of old specimens of *Betula ermanii* var. *subcordata*, numbers of *Pteridophyllum racemosum* raise many small white flowers over their curious pteris-like, pinnate leaves. *Cornus canadensis*, *Oxalis acetosella* and *Clintonia udensis* are also to be found. In a rather lighter position *Schizocodon ilicifolius* is found on the bog moss (*Sphagnum*).

The col between Mt. Tateshina-yama and Mt. Kita-yokodake called Oh-kawara is a sub alpine flower garden (1900-2200 m.). *Orchis aristata* var. *immaculata*, *Viola biflora*, *Gentiana makinoi*, pink-flowered *Geranium yezoense* var. *nipponicum* and a small amount of *Hypericum asahinae* produce their flowers. *Larix leptolepis* grows and some hill-plants also flower here. Sky-lavender *Scabiosa japonica*, golden *Trollius asiatica* var. *ledebourii*, white *Parnassia palustris* var. *vulgaris* and creamy *Halenia corniculata* are found to a height of 2100 m. At a higher position *Vaccinium vitis-idaea* var. *minus* and empetrum are found on the rocks, scattered here and there. *Gaultheria miqueliana* produces pretty white false fruits in half shady and rocky positions. At the mid-slope of Mt. Kita-yokodake *Epilobium angustifolium*, Scabiosa, and orange-yellow *Hemerocallis middendorffii* grow where the ground is not covered with tsuga, abies, or larix.

Tateshina Highland (1400-1600 m.), at the foot of Mt. Kitayo-todake, Mt. Tateshinayama and other lower mountains, have many wild flowers. *Rhododendron japonicum*'s brownish-red flowers make a blaze in June and *Iris orientalis*'s blue-purple flowers look up at the blaze.

From July to August people come here to avoid the heat of Tokyo (we have a hotter summer than Rome or than Hawaii). *Iris kaempferi* var. *spontanea*, *Aquilegia buergeriana*, *Scabiosa japonica*, scented-flowered *Hemerocallis thunbergii*, *Platycodon grandiflora*, *Hypericum ascyron*, *Patrinia scabiosaefolia*, and *Senecio flammeus* var. *glabrifolius* come into flower. I did not find *Gentiana scabra* var. *buergeriana*, which is easily seen at the foot of the southern part of Mt. Yatsugatakes. And there is *Betula tauschii* (fig. 22) ; the white trunk of this Betula is regarded as the symbol of a Highland by most Japanese. These plants grow in the gardens of villas with semi-natural gardens at Tateshina.

Mt. Tengu-dake is another interesting mountain. It is one of the easiest high mountains to climb in Japan. Many young people climb this, while few people do Kitayokodake (I saw no man during the trip in June except a hut-keeper). The 'bus service ascends up to Shibu-no-yu, a hot spring 1800 m. above sea level. The position where we got off the 'bus is surrounded by sub-alpine forest. The well-kept pass goes up in dark forest to Kuroyuri-daira, the col between Mt. Tengu-dake and Mt. Nakayama. Kuroyuri-daira is a small rather moist plain and produces many flowers of *Fritillaria camtschatcensis* ; Kuroyuri means this fritillaria. By many Japanese this flower is regarded as being one of Japan's most typical alpine plants, and it is well-known as "Black Lily" because of the traditions surrounding it.

From Kuroyuri-daira we entered into an alpine zone and climbed among the rocks and *Pinus pumila*. I saw many tiny *Schizocodon soldanelloides* var. *alpina* but no *Schizocodon ilicifolius*. (While Kitayokodake has not any *S. soldanelloides* var. *alpina*). Also seen were *Gentiana algida* var. *sibirica*, *Saxifraga fortunei* var. *alpina*, *Empetrum nigrum* v. *japonicum*, and *Rhododendron fauriei*. As the mountain is higher than Mt. Kitayodake the carpet of *Pinus pumila* is spread more widely and is more beautiful.

After we had gone along through a small, moist, grass-grown area containing tiny ponds and *Veratrum stamineum* we climbed a steep, rocky slope on our hands and knees. Among the rocks and gravel the alpine *Rhododendron aureum* (which is very short-lived in Tokyo) appeared along with golden *Acomastylis calthifolia* var. *nipponica*, yellow *Viola crassa* and succulent *Rhodiola tashiroei*. After going over a rock tower I saw *Diapensia lapponica* ssp. *obovata* and *Cassiope lycopodioides*. They fasten themselves on to the vertical walls of the large rocks. When we climbed the pass along the last rock tower we arrived at the top of the narrow east-peak of Mt. Tengudake.

The terrible crater of Mt. Iô-dake spread out to 180° wide under our eyes and around stood the steep peaks of the Southern Part. To the right was the broad West Peak of Mt. Tengudake covered with its carpet of *Pinus pumila*. Going down along the south route the green of *Pinus* diminishes. The south side of Mt. Tengudake resembles the southern part and has red-brown rocks and gravel, with not a pond or moist patch. Among the slopes of gravel pretty *Dicentra peregrina* var. *pusilla* bears pink flowers above silvery-green rosettes. Many Japanese think that the most beautiful alpine in Japan is this *Dicentra*, not *Glaucidium*. Small groups of *Dryas octopetala* var. *asiatica* and other alpines which like dry positions are also found, but this *Dicentra* is never mixed with other alpine plants. It may be the queen who loves solitude.

Soon after the rocks and gravel disappeared and we entered into the conifer forest again. We started on our return journey, overlooking the crater of Mt. Iôdake, to Honzawa-onsen and Inago-yu hot springs. The 'bus service comes to Inago-yu so once there the day's hiking is finished.

The series of peaks of Yatsugatake and the declining sun saw off those of us who were to ride in the 'bus.

The Maritime Alps, 1965

IN SEARCH OF THE 'ANCIENT KING'

By C. E. DAVIDSON

CRITICS OF Reginald Farrer have referred to certain passages in his books as "clotted romance", "hysterical babbling" and other such disparaging terms. Nevertheless, it can hardly be denied that, where the gentle art of rock gardening is concerned, Farrer has probably more converts to his credit than any other author, living or dead. His enthusiasm is infectious ; his descriptions of the plants which he visited in their native habitats must surely inspire all but the least imaginative of mortals with an urge to go and see those plants for themselves.

For years J. and I had been haunted by the following passage in "My Rock Garden" : "*Saxifraga florulenta* takes precedence by right of age. In all probability it is a very ancient species. . . . There is only one district in the world where it dwells, and among the other

Saxifrages there is none that stands near it. This strange, lonely plant, making its last stand against time and evolution, lingers high up . . . in the Maritime Alps''.

Last summer, we decided that a visit to the Maritime Alps was long overdue ; and that a few days at Lautaret, en route, would be very pleasant. We were delighted to discover that Stewart and Kathleen Mitchell planned to visit Lautaret at the same time. As arranged, we made contact with them crossing the Channel, ferried our cars down to Lyon by night train, and arrived at Lautaret during the afternoon of 26th June.

27th-30th June : Spend four enjoyable days here. Flowers as plentiful as ever ; weather brilliantly sunny, and unusually warm. On one occasion, S., overheated by scrambling about on a sun-baked scree, photographing *Campanula allionii* and *Ononis cenisia*, remarks reproachfully he had understood from us that Lautaret was a nice, cool place. Reply that he should revel in the sun while he has the chance —once home, the probabilities are that we shall never see it again for the rest of the summer. (This turns out to be a true prophesy).

1st July : The Mitchells leave for the Mont Cenis district, and we head south for the Maritimes via Briancon and Col de Vars. Stop for the night at Col de Larches (2000 m.), which might be described as one of the northern gateways of the Maritimes. The little hotel (Italian side) is not very comfortable ; moreover, a penetrating juke-box is played far into the night.

2nd July : Juke-box still in action. Decide to move on after a quick look-round. The grassy slopes on either side of the pass support a very rich flora, including *Delphinium elatum*, *Tulipa australis*, and several endemics. (Hope to explore this area more thoroughly on the return journey). The road continues in a south-easterly direction down a long valley. Enjoy magnificent views of the Maritime range, dominated by the giant peak, Argentera, until, at Pontebernardo, we swing east and, following the Stura river ; arrive at the town of Borgo San Dalmazzo.

3rd July : Make for Terme di Valdieri, which lies S.W. of S. Dalmazzo at the foot of the north slopes of Argentera. Driving up a sunlit valley, we recall Farrer's nightmare journey by victoria up this same valley in the dark, with snow on the ground, and how, on arriving at the hotel in the small hours, he found it had not yet opened for the season. Reflect that as this occurred in mid-July, the climate must have changed since his day ; there is no snow, excepting a few patches

Photo—D. Holford

Fig. 17—Pulsatilla vernalis, Nr. Eigergletscher, Wengen

Photo—D. Holford

Fig. 18—Primula auricula, Wengen area

Photo—D. Holford

Fig. 20—Androsace imbricata, Fluhalp, Zermatt

Photo—D. Holford

Fig. 21—Matterhorn, Rifflesee

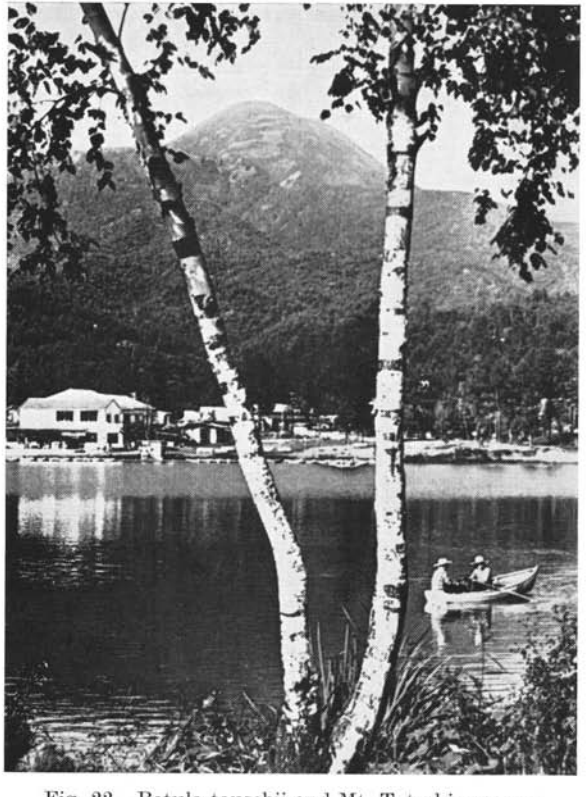
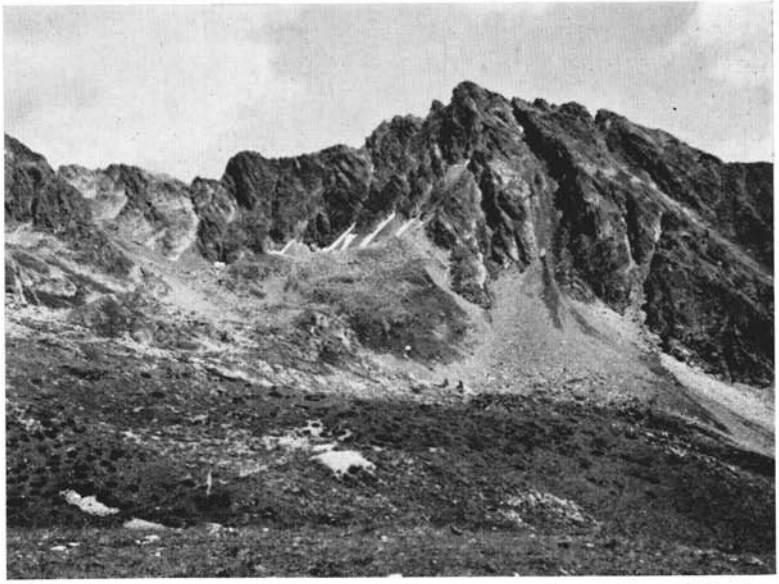


Fig. 22—Betula tauschii and Mt. Tateshina-yama

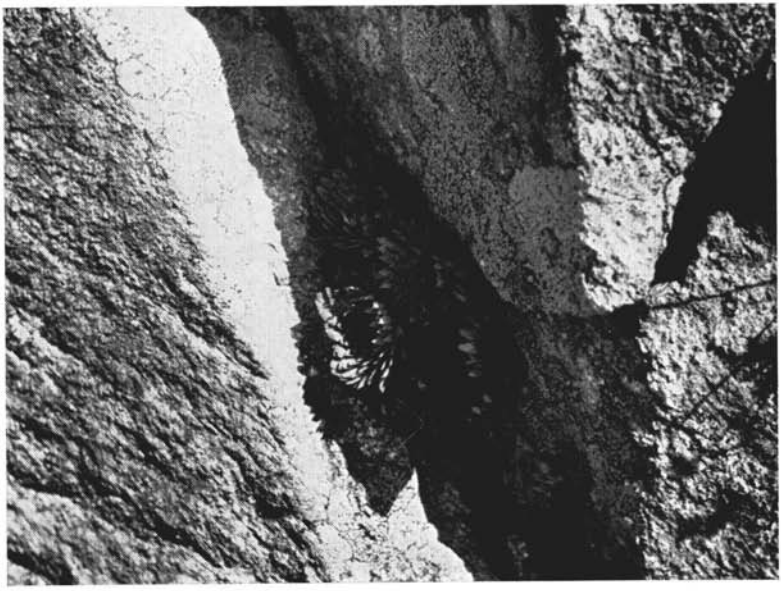
Photo—W. R. Cairns

Fig. 33—Liriope muscari, Forrest Medal, North Berwick Show (See p. 90)



Photo—J. Davidson

Fig. 23—Col de Lombarde. Sax. florulenta on spurs above slide
(See p. 67)



Photo—Jas. Davidson

Fig 24—Saxifraga florulenta (See p. 67)

Photo—H. Esslemont

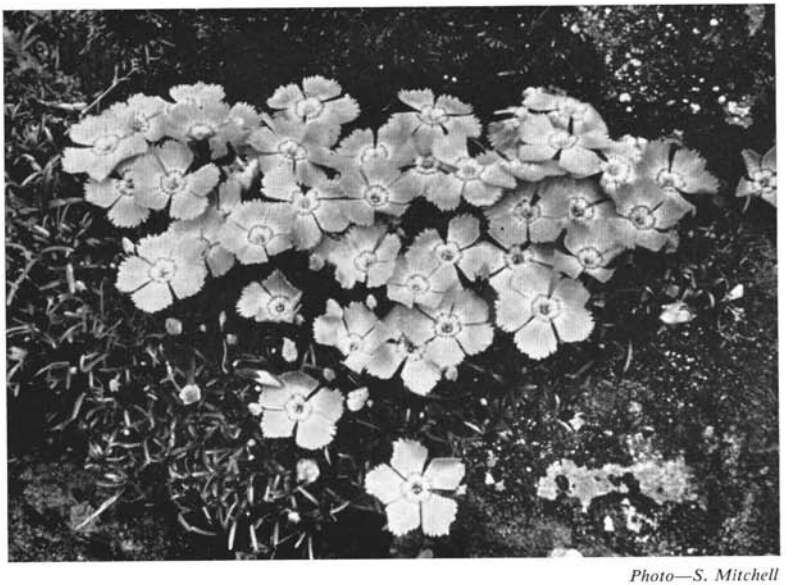
Fig. 25—Campanula morettiana (See p. 79)

Photo—H. Esslemont

Fig. 26—Campanula morettiana ' Alba ' (See p. 79)

Photo—S. Mitchell

Fig. 27—Androsace lactea (See p. 84)



Photo—S. Mitchell

Fig. 28—Dianthus alpinus, Correvon's form at Ardeuil
(See p. 85)

Photo—S. Mitchell

Fig. 29—Geranium napuliferum (syn. G. farreri)
(See p. 86)

Photo—S. Mitchell

Fig. 30—Kalmia polifolia microphylla at Ardcuil
(See p. 87)

Photo—S. Mitchell

Fig. 31—Lilium formosanum pricei, at Boonslie
(See p. 88)

Photo—S. Mitchell

Fig. 32—Oxalis laciniata at Ardcuil (See p. 89)

on the high peaks. Passing "Farrer's hotel", we go on to the smaller hotel further up the valley. It is excellent, and we are disappointed to learn that a room is available for only two nights, as we had hoped to stay for some days. Many Italian families come here every year.

4th July : We are at last in the vicinity of the "Ancient King". Set off in high hopes up the valley to the west, with instructions to drive the car some five or six miles to Casa di Caccia, where the steep climb begins. Unfortunately, less than a mile from the hotel, we encounter a formidable land-slide, which our Mini refuses to cross. Waste nearly an hour turning it inch by inch on the narrow track, and proceed on foot. Eventually reach the high corrie and lakes where we expect to find *Saxifraga florulenta*. There are alpines in plenty—*Primula rubra, Veronica allionii,* Gentians of the *acaulis* type, *Sax. pedemontana* and a lovely Phyteuma, three inches high with flowers of deep pure blue (? *P. pedemontanum*)—but in spite of an exhaustive search, we fail to find *Sax. florulenta*. On the way home we are caught in a shocking thunderstorm. Not a lucky day! After dinner, feeling weary and rather disgruntled, go to bed. Not so J.—attracted by sounds of revelry in the lounge, he disappears within and fails to reappear. At 2 a.m., he limps up to bed and tells me he has been made very welcome and had a most entertaining time at the traditional Sunday night dance. Although considered too elderly to be a suitable partner for the daughters, he has been encouraged to chat with the grandmothers, and dance with the wives. Feel annoyed with myself for missing this evening.

5th July : Retrace our route and find accommodation at an hotel in the Pontebernardo district, which lies between S. Dalmazzo and Col de Larches ; then go to meet M. Robert Ruffier-Lanche of the Botanic Garden, Lautaret, who is arriving by bus to join us for the last few days.

6th July : Spend two days exploring the Vallone di Pontebernardo which, just below the town of that name, cuts deeply into the range in a south-westerly direction. This time we are more fortunate and manage to coax the car up the track for some miles. On alighting, the first thing we see is a large colony of *Digitalis ambigua* in full flower, a lovely sight. The track—a derelict military road—zig-zags steeply up to the high peaks, and there is something of interest all the way. Orange lilies grow on the lower slopes, many popping up through dwarf juniper. R. tells us they are *L. croceum* (*L. bulbiferum* occurs further east). A species of *Euphorbia*, *Centaurea rhaponticum* and

Eryngium alpinum also attract us. Higher up, we see many old favourites of the Central Alps, which need not be recorded here, but *Chrysanthemum alpinum* with distinctly pink flowers causes a mild sensation. R. suggests that, in some plants, the petals may become coloured after fertilisation, as in *Ranunculus glacialis.* At last we draw near the forbidding granite precipices at the head of the valley, and gaze up at them. Yes, there at their feet are the pill-boxes we have been told to look out for ! Up we go at an accelerated pace, heedlessly passing *Thlaspi* and *Viola cenisia,* over a tiresome steep slope of insecure boulders, and at last reach the level of the pill-boxes. All around them, seaming crevices in the rocks, are quantities of *Sax. florulenta.* They look strangely unconvincing, as if "some botanist must have put the rosettes there as a practical joke"). My second impression is that if *S. florulenta* is making its last stand against time and evolution, it is putting up a remarkably good fight. We note that it prefers a shady situation, and is almost always protected by an overhang. Higher up, *Eritrichium nanum* has taken possession—the 'King of the Alps' looking down on the ancient, dethroned king !

8th July : Decide to explore the impressive lime-stone cliffs on the road-side above Pontebernardo. Here, of course, we find a totally different flora. The north-facing cliffs are white with the waving plumes of *Saxifraga lingulata bellardii,* and *Primula marginata* is everywhere. On the other side of the road, near the river, is a south-facing stony slope. Here, we see two new and interesting plants, which are confined to S. Europe : *Paronychia serpyllifolia*—in effect a miniature *P. nivea,* and *Scabiosa graminifolia*—a showy and really lovely plant, the grassy leaves being silvery-white, and the flowers, on eight-inch stems, of bright rose-pink. Growing nearby is a fine purple form of *Aster alpinus.* R. and J. spend much time trying to photograph *S. lingulata.* Although the weather remains fine, there is a strong north wind blowing through the gorge—very frustrating for cameramen.

9th July : Learn that there is a recently reconstructed road which runs over the centre of the Maritimes via the Col de Lombarde, and down into France. Drive to Vinadio and turn south on to a superbly engineered road (made by Italians, no doubt). We climb thousands of feet with great rapidity, and reach the Col in a surprisingly short time. Park the car, and make for the mountain on our left—no great distance, but over ground strewn with the inevitable granite boulders. *Sax. florulenta* is fairly plentiful on spurs running down from the

main peak (see fig. 23) and it is possible to examine the plants at close quarters. The rosettes are lustrous, spiny and "incurved like an angry, dark green sea-anemone". Many are three or four inches in diameter.* As at Pontebernardo, there are numerous withered flower spikes—the result of a phenomenal flowering last year—but we are very disappointed to see no plant in bloom. The tall pink-flowered spires are quite sensational, we are told. (Plant-hunters who prefer the help of chair-lifts and telerifiques, please note that, so far as we know, the Col de Lombarde is the only station where *S. florulenta* can be seen without a long climb on foot.) On the way home, we stop at the monastery of St. Anna, which is some thousand feet below the pass. Here we find *Sax. bryoides*, *S. exarata* and, best of all, *Silene cordifolia*, a beautiful endemic. The flowers are white or pale pink, the habit strictly saxatile.

10th July : Driving back to Lautaret, we agree that we have had a very enjoyable time, and we record a vote of thanks to Professor Pontecorvo, who, from his knowledge of this district, kindly gave us much helpful information. Stewart and Kathleen arrive back at Lautaret about the same time, and we spend an interesting evening comparing notes. They have not been so fortunate in the weather, and were actually snowed up when crossing a high col.

12th July : Start on our homeward journey, carrying happy recollections of these southern alps—of blue skies, mediaeval towns, and towering, red granite peaks.

*Fig. 24.

Home to a Scottish Garden

By "E"

ABOUT THE middle of May our boat docked at Tilbury and we had a leisurely journey home by car. The thing which impressed us most was the greenness of England compared with the brown sun-baked New Zealand countryside which we had left in March. When South Scotland—and home—was at last reached, what an unforgettable experience it was to greet our family and friends again—and to walk around the garden and enjoy it all.

Along the edge of the herbaceous border—first pausing to examine the old sandstone troughs and eagerly scan their contents !

The peaty one had *Rhododendron myrtilloides* in full bloom—a

mass of delicate peachy blossom beside *Abies hudsonia* 'Nana'. Next to this another trough with a clump of pink *Dianthus* 'La Bourbrille' nestling beside *Sempervivum arachnoideum*, while a prostrate *Salix* was creeping over the edge and spilling down the side.

On now to the pool with clumps of *Rhodo. ponticum* making a colourful background. There is a raised peat bed at one side—and a plum-coloured bush on closer inspection proved to be another version of *Rhodo. myrtilloides* covered with bells the colour of port wine. A nice contrast was its neighbour *Rhododendron cremastum*'s quieter beauty and *Rhododendron williamsianum* was just finishing blooming—there was still one pink bell ! *Rhododendron lepidostylum* was flowering for the first time—primrose-coloured flowers and blue-green hairy new leaves !

In the dry wall *Campanula muralis* was a hanging curtain of blue entangled with *Genista pilosa*, yellow and prolific. All this a background to the peaceful pool with its floating water-lily leaves.

On down the steps beside the granite scree in which *Wahlenbergia pumila* was a blue cushion under the scented pink shrubby *Daphne cneorum* 'Eximia'. Next to this *Hebe pageana** bloomed grey-leaved and white flowered. The scent of the daphne followed us down the slope to where *Cytisus purpureus* flaunted its purple pea flowers backed by a few yellow *Iris innominata*.

At this stage a view of the bottom rock garden and peat beds was disclosed with meconopsis, ericas and other peat-loving plants. Nothing much had died during our absence and the ground was very weed free and tidy—thanks to two kind friends who, armed with garden forks, thermos flasks, and food—had worked for two days to tidy up. That is real friendship !

A new wall bed made the previous year was doing well—*Iris gracilipes* with its dainty blue butterfly blooms sat beside a native *Salix* covered with yellow catkins and purple *Phlox caespitosa* ' J. A. Hibberson' made a colourful carpet of bloom. *Saponaria rubra* 'Compacta' on the rock garden proper was covered with bright red flowers. It is easily grown and has to be trimmed back after flowering to keep it within bounds.

Euryops evansii was well worth seeing—a silvery shrub covered with bright yellow daisy flowers—and *Pieris forrestii* looked lovely with its new growth of bright red-coloured leaves.

Dusk was beginning to fall and it had been a full day—one never to be forgotten—the return to our Scottish garden.

**H. linguifolia* ' Pagei '

Garden Stock-taking

By I. M. LIMONT

WHEN I came from Perthshire to live in Surrey it meant starting on quite a different type of gardening. Formerly it was chiefly the primula family and gentians that I grew, with only a few rock plants, on well-fed, acid soil.

My present garden is a complete contrast, and consists of an arid, neutral soil which fairly eats compost and gravel. Now after nine years it is looking better and the plants grow quite happily, though the present occupants of the rock beds are different from what I started out with—except for two saxifrages and a house-leek.

In the first bed, which is long and narrow, early spring bulbs do well and so there are clumps of iris, crocus species, and scillas. Saxifrages like the soil conditions, so I have several types and varieties, with alliums for later on ; *A. moly* looks well against the green of the grass. Sisyrinchiums seem very happy in a damp spot.

In the second bed, which is rectangular, dianthus varieties do well ; the smaller types are best. Roscoeas grow at the foot of the wall which edges both beds and they do well, looking so exotic yet not seeming out of place. *Campanula tridentata* and others of the family make nice clumps, but they seem hard to please ; perhaps they like a firmer soil than they have. *Penstemon pinifolius* grows happily and has to be kept within bounds ; as did *Spiraea* 'Nyewood's Variety', until it grew so big that I had to banish it to the vegetable garden, where it ramps. *Albuca sp.* is perfectly at home here. This seems rather odd, as it looks highly unsuitable for a damp area, but it needs no protection and comes up in mid May. These, then, are a few of the present inhabitants ; of the past ones, the winter wet and fogs took toll of aquilegias and delphiniums and also of *Potentilla villosa*, which has very hairy leaves. Covers are not a great help as the damp and fog still seep in.

The heat of the soil in summer killed some plants, notably the double primroses I brought with me and also *Hypochoeris lanata*. What happened to *Phlox brittonii* 'Rosea' and *Aphyllanthes monspeliensis* I do not know ; both should have done perfectly well. The phlox did flower and then dwindled away, and the aphyllanthus just sat in the soil and sulked. I would like to know what suits them.

Past inhabitants included a pair one would not have expected to

grow in the south, but they did. One was *Saussurea stella*, which lived its life cycle quite happily in a sunny spot in the first bed. The other was *Gentiana tubiflora*, which also lived in the same bed. Planted one April, it grew, flowered, and set seed, and then died off by early October. The speed of the plant's development was amazing. Each flower lived one day, opening in the sun and then closing. It had fourteen flowers, and I was gathering the seed from the first flowers as the last ones were opening. Gentians grow perfectly well in a sunken bed, *G. sino-ornata* making a lovely patch of blue in August and September.

One has plenty of pests with which to do battle. In particular ants are very bad, and also greenfly, which will go for anything not in the best of health. As for moles, well ! One morning when I went to look at the gentian bed there was a string of mole-heaps right across it.

Rock gardening never has a dull moment.

The Hills of Home

By A. DUGUID

IN SCOTLAND we have quite a number of plants fit to be classed as alpines, and yet in the shows where there is a class for "alpines native to Scotland" there is on the average a very poor entry, and what is shown is hardly worthy of the many lovely things that grow within the bounds of Scotland. I had the good fortune to be reared in a Highland glen, famous for its wild flowers and within easy distance of the high Cairngorms and the schistose hills of Angus.

A little way down the riverside from our farmhouse was a wood mainly of birch and hazel, tasselled with their lambstail catkins in March and April ; with a fair sprinkling of Goat willow and wild Cherry (*Prunus avium*), 'Geans' we called them, like clouds of snow in blossom time, and most years in July and August burdened with their juicy black fruit. This wood in spring was a carpet of Cowslip (*Primula veris*) and Wood Anemone, eagerly looked forward to as a sign that spring had really come after the long bitter winter. Early in the year, too, were to be found clumps of the snowdrop, *Galanthus nivalis*, this being an obvious escape from the Manse garden. Bentham and Hooker give this as a British plant and here in Berwickshire it is to be found all along the burn between the village and sea. Here it must have been

the old monks of Coldingham who cultivated it and over the centuries it has established itself firmly. Cowslips were not confined to the wood only, but were to be found growing high on a nearby limestone hill under junipers where the flowers were larger and more golden than the woodland ones.

On the lower moors grew many plants of a quiet beauty—the mountain everlasting (*Antennaria dioica*), a well-known alpine garden plant in the predominant white, and also in shades of pink and red, while the Petty Whin (*Genista anglica*) with soft yellow blossoms was a dainty moorland plant. Along the burns numerous plants grew : *Saxifraga stellaris*, a modest plant with white, red-speckled flowers having a touch of yellow in the throat. *Saxifraga aizoides* too was here, a conspicuous plant in late summer with masses of yellow flowers, while *Sedum villosum* gave bright sparks of pink in damp corners, usually along old moorland cart tracks. Orchis too were abundant, many of them rare and uncommon. *Goodyera repens* flourished in pinewoods, where also were colonies of that quaint plant *Corallorhiza trifida*. Common everywhere was *Orchis mascula* with fine bold spikes of flowers in late spring, being particularly fine in old vegetable soil on the edge of bogs. There too was *Orchis maculata*, variable in colour, white, pale pink, and deep pink flowers on short trusses. Best of all to me was *Habenaria conopsea*, the fragrant Orchis, and how truly it deserved its name ! Imagine a wide moorland, with many small streams along which grew the Bog Asphodel (*Narthecium ossifragum*) in massed array, clumps of *Erica tetralix* in contrasting shades of pink and rose, and growing through them in wild abandon, masses of the orchis. Their sweet sharp scent is a happy boyhood memory of early days wanderings amongst them.

Two worth-while shrubby plants deserving of more attention grew here—the Bearberry (*Arctostaphylos uva-ursi*) and *Vaccinium vitis-idaea*—our cranberry. The Bearberry has a fine creeping habit, with glossy evergreen leaves. Early in spring it covers itself with drooping racemes of white flowers faintly flushed with carmine, followed in autumn with bright red unpalatable fruits, which in favoured sites can persist into the following spring. I remember once in the month of April finding a dipper's domed nest, built on a streamside rock ledge, draped by the bearberry covered with red berries, making a beautiful and unusual picture. *Arctostaphylos alpina*, a much rarer species, was to be found high up on the hills around 2500 and 3000 feet.

The vaccinium grew everywhere on the moors and also as a wood-

land plant, covered in spring with its clusters of white faintly flushed flowers, followed in autumn by quantities of red fruit borne in clusters. We had to spend many an hour picking these same fruits to be made into delicious jam. Higher up were to be found more truly alpine plants, which although rare were abundant locally. *Cornus* suecica*, the dwarf cornel, one of the mountain plants that is really a dwarf shrub with its stem buried in the ground, while the leaves push up under the shelter of the heathers six inches in height. The flowers are small, of a purple almost black colour surrounded by four large bracts white in colour which are very striking. The flowers are followed with quite large scarlet berries, edible but rather insipid, known as Lus-a chraois (''the herb of gluttony'') to Gaelic speakers, who before a feast ate of the fruit to give themselves a hearty appetite.

In the same sort of habitat was to be found the Wintergreen (*Pyrola rotundifolia*), an outstandingly beautiful flower of ivory whiteness, with a delightful fragrance. 'Wild lily of the valley' was the name we knew them by. High on the tops were the two outstanding cushion plants, *Silene acaulis*, the 'cushion pink', and *Loiseleuria procumbens*, the mountain azalea. The silene flowered just ahead of loiseleuria, and in good years was a marvellous sight, sheets of soft pink all over the hillside. The mountain azalea generally came into full glory just as the silene was beginning to fade—some years they coincided, making a wonderful picture. The azalea flowered profusely : if only it would do the same in cultivation ! Altitude, I think, has much to do with it, as even on the hills plants growing below 1500 feet scarcely flower at all. The azalea is considered poisonous to horses, and the ghillies had to be careful not to allow their charges to graze on the plants in the stalking season. Other plants were *Armeria maritima*, which in places was locally abundant but never appearing below 3000 feet, and that relative of the edelweiss, the dwarf cudweed (*Gnaphalium supinum*) with short tufted greyish green leaves. On the cliffs were colonies of the roseroot (*Sedum roseum*),* a pleasing plant with slightly glaucous green leaves which turn vivid colours in autumn.

All over our district was to be found the mountain pansy (*Viola lutea*), varying widely in colour. In one area purple shades would predominate, in others shades of cream and yellow only were to be found. There is a quiet charm about these plants ; their elusive scent, with the faint pencilling on the lower petal, give them a foremost place amongst our mountain plants.

**Chamaepericlymenum*

**Rhodiola rosea*, L., Webb, syn. Sedum rhodiola, D.C.

Over the hill in the next valley was an ancient right of way, leading to the upper Angus glens, where grew a wealth of native alpine plants. The way led through an ancient pine wood, where grew quantities of *Goodyera repens*, carpeting the ground, creeping along among the pine needles, sending up 6 in. stems, with flowers in a one-sided spike of not very striking yellowish-green blooms. About a mile further down the valley was a station of *Linnaea borealis*, in one restricted area, but very abundant in that area, creeping about amongst the roots of the pines, and carrying in summer its twin flowers on delicate stems. During the 1939-45 War, this wood was cut down, and since this upheaval *Linnaea* has no longer grown here. The woods have been replanted, and I have made repeated visits to see if it has regenerated, but, alas, no sign of this. But somewhere in the area there may be still a patch left ; or, failing this, seed may be dormant in the soil, waiting for favourable conditions to germinate and grow.

Beyond the pinewoods there was a long and difficult walk, but the toil of the journey was lightened by seeing many of our rarer birds, along the burnsides, or crossing the higher moors. Many fine ferns have their station on those hills ; under slabs of rock grew the Holly fern (*Polystichum lonchitis*) and in many of the higher rocks quantities of the Parsley fern (*Cryptogramma crispa*) with its soft green, finely-divided leaves. Bog plants too were of interest—fine stands of 'Grass of Parnassus' (*Parnassia palustris*) flowering late in the year when their pure white flowers were a feature. 'Sundews' (*Drosera*) and 'Butterworts' (*Pinguicula*) too were common amongst the sphagnum peat. Fascinating plants, these, by their ability to catch and digest small insects on their leaves !

Along the margins of some of the high tarns and small lochs grew that curious plant, the Water Lobelia (*Lobelia dortmanna*) growing completely under water, the flowering stem rising approximately 9 inches above the surface of the water, with a loose spike of soft blue flowers. Plants in shallow water do not seem to flower, and again those growing deeper than 6-9 inches do not flower either, for no apparent reason as far as I could see.

After a long walk one comes to the area where grow the special plants of the district and one of the first to appear is *Sibbaldia procumbens*, not a very desirable plant with an abundance of leaves and a sparse scattering of white flowers. In this area is *Lychnis alpina*, a common enough plant in the European Alps, but only recorded in this one station in Britain.* When I last saw it—some 40 years ago—

*Also in the Lake District — Editor

it was locally quite abundant, but only in this very restricted area. It is very puzzling why this should be so, as there is no apparent difference in the soil of the surrounding hills, but only on this spot does it grow and as yet I know no logical explanation why this should be so. As one walks along, we suddenly arrive at a point where the whole hillside is a mass of the 'Least Willow' (*Salix herbacea*), acres of them growing amongst the grasses and 'Bog Cotton'. This is another plant that does not appear to descend much below 2000 feet in nature, at least I personally have never seen it on the lower levels. Along the streamsides leading down through rocks grows that tiny gem, *Thalictrum alpinum*, a real miniature with finely cut leaves and a 4 inch spike of tiny yellowish flowers. In similar situations are to be found many of our native saxifrages—chief among them for wealth of colour being *Saxifraga oppositifolia* whose wine-coloured flowers brighten the spring days. In autumn too the burn-sides all the way down to the lower levels are golden with the flowers of the yellow 'Mountain Saxifrage' (*Saxifraga aizoides*). *Sax. granulata* with pure white blossom is here on the shelf of the rocks, along with *Sax. nivalis* with its densely crowded spike of blossom. *Dryas octopetala* is fairly common, growing along ledges and crannies filled with soil. This is one of the oldest plants in our hills, as records of it have been found in pre-glacial deposits and it is wonderful to think that the plant that is our Club badge has been growing in this land of ours all those ages of time : probably before any of our forebears lived there. I have by no means exhausted all the plants of these hills, but what I have mentioned will give some idea of the lovely things that do grow in Scotland. Many of the plants I have mentioned are rare and may be admired, photographed, yes, but on NO ACCOUNT DUG UP. Most are obtainable from other sources, and those that can be cultivated should be fairly easy to obtain.

I hope my stroll with you through my boyhood byways has been of interest : to me it has been very real, enabling me to re-live in retrospect those happy carefree days, as it is seldom now that I can spend much time there, and hardly ever when most of the plants are in flower.

Frae a' the Airts

By CARLINA

OUR EDITOR, always a busy man, has been faced in the past year with a stupendous task, that of moving the older part of the University Botanic Garden at St. Andrews to a new site ; a move which includes all the glass and a number of trees that have stood in the garden for over 50 years.

Some of us have had experience of moving our own modest collection of plants from one garden to another and we shudder at the thought of the Herculean task he has undertaken.

A project of this magnitude is not one which can be completed in a season, and it is not easy for the Editor to find the time to reply to the many questions which reach him through the post from members of the Club. The *Journal* is the natural link between members from all parts of the world, and the Editor, with his long experience, has been able to help many rock-gardeners with their problems. In order to ease his work, and also to provide an opportunity to bring some of these problems and their solutions to a wider public, a new series is being started.

Whether it be from California, New Zealand, Japan or merely Scotland, we look forward to receiving your letters. It is not always easy for members, especially those in isolated places, to lay their hands on a particular bit of information, but we hope, with the co-operation of some of the experts in the Club, to be able to help. Possibly from two experts we shall get two quite different solutions, but if your letter leads to controversy so much the better . . . at any rate the Censor's pen will be able to keep the arguments on an amicable level.

The intention is to answer the letters as soon as possible and to discuss those questions which are likely to have a more general appeal in a subsequent number of the *Journal.* Address them, please, to :

"Carlina", c/o the Editor

Why 'Carlina' ? Well, the thistle is proverbially Scottish, it is composite, and its seeds are blown on every wind to take root far and wide.

'A Rose by any other name ! . . .' Probably Shakespeare was right in his day, but botany was a simpler matter then. A century was to elapse before Linnaeus took the naming of plants in hand, and the

introductions of the last hundred years were still nestling, undreamed of and undisturbed, in their native mountains.

To the gardener of today, even to one with some knowledge of botany, the frequent changes of name cause some confusion. A recent article in the *Journal* (Vol. IX, part 1, 'What's in a name ?' by A. C. Small) helped to explain the mysteries of nomenclature, but it is often difficult for members to keep up with the changes.

Naturally, in older books plants are described under names which may now be obsolete, but even today the same plant may be found in nurserymen's catalogues under different names. Let us admit that we don't blame the nurserymen, for we gardeners grow fond of the old, well established names, but it makes the situation still more chaotic. Even the authorities do not always agree as to the correct name, and although we list below some of the plants whose names, either generic or specific, have been changed in recent years, we offer them only as synonyms and leave you to take your choice.

Newer Name	*Older Name*
Allium amabile	Allium yunnanense
Asarina procumbens	Antirrhinum asarina
Campanula cochlearifolia	Campanula pusilla
— portenschlagiana	— muralis
Harrimanella hypnoides	Cassiope hypnoides
— stelleriana	— stelleriana
Hebe bidwillii	Veronica bidwillii
— pinguifolia 'Pagei'	— 'Pageana'
— buchananii 'Minor'	— buchananii 'Minor'
Helichrysum milfordiae	Helichrysum marginatum
Helleborus lividus var. corsicus	Helleborus corsicus *or* H. argutifolius
Ipheion uniflorum	Tritelia *or* Milla *or* Brodiaea uniflora
Iris unguicularis	Iris stylosa
Lapeirousia cruenta	Anomatheca *or* Lapeyrousia cruenta
Moneses uniflora	Pyrola uniflora
Petrocallis pyrenaica	Draba pyrenaica
Phyllodoce empetriformis	Bryanthus empetriformis
Plagiorhegma diphylla	Jeffersonia diphylla
— dubia	— dubia
Pulsatilla alpina	Anemone alpina
— vernalis	— vernalis
— vulgaris	— pulsatilla
Ramonda myconi	Ramondia pyrenaica

Semiaquilegia ecalcarata	Aquilegia ecalcarata
Sisyrinchium douglasii	Sisyrinchium grandiflorum
Tulipa tarda	Tulipa dasystemon
Viola saxatilis v. aetolica	Viola aetolica
Edraianthus pumilio	Wahlenbergia pumilio
— serpyllifolius	— serpyllifolia

OF MICE AND MEN. Much as we admire Robert Burns there are moments when we can think of some quite different epithets for his "Wee, sleekit, cow'rin', tim'rous beastie", and, to judge by the enquiries we have had, there is many another gardener who would be anything but "laith to rin and chase thee, wi' murdering pattle."

Each autumn we are tempted by catalogues into buying choice species of crocus, *sieberi, zonatus* and *chrysanthus* in its many lovely forms. Eagerly we wait for the delicate shoots to push through the winter soil, but as the first green tips appear the marauders creep out. Overnight the corms are dug up and devoured, and a few weeks later our rarest tulips suffer the same fate.

Last autumn we waged war. In one famous Scottish garden we were advised to plant napthalene moth-balls as a deterrent with each group of crocus. This we tried, but our mice are made of sterner stuff; they didn't eat the moth-balls, but they still ate the crocuses.

"Warfarin" was certainly effective. It is said to be harmless to birds and domestic animals, but we prefer to cover it, both to keep it dry and to prevent birds from eating it. Set out in little dishes in a frame, we find that it is consumed in preference to the bulbs growing there. As it takes several days to kill the mice, it is important to replenish the supply until it is obvious that no more is being eaten.

Traps are still probably the surest way of dealing with mice and voles, but they too must be carefully enclosed. We have had more than one tragedy when a Robin or Blue Tit has been lured by the bait, and we finally stopped using traps in the alpine house after catching several shrews. Quarrelsome, even vicious though they are among themselves, they do nothing but good in the garden where they satisfy their vast appetites with slugs.

As a final experiment we made boxes of ½ inch wire netting which were sunk just below ground level and filled with sandy soil. In these the corms were planted before closing the lid. We cannot claim that the war has been won, but the roots are growing down and the shoots are growing up, while the corms remain secure in their fortress in a state of siege.

Campanula Morettiana

By H. ESSLEMONT

I HAD NEVER seen alpines growing in the wild until in 1958 I joined an Alpine Garden Society Tour, led by Mr. Gerard Parker. This proved such an enjoyable and stimulating experience that I repeated it for the next seven years. That summer the Alpine Garden Society visited the Dolomites and their rugged grandeur made a profound impression upon me. Farrer found "that these strange mountains had a fascination beyond all other ranges".

The first week was spent at Selva and my garden still contains plants of *Primula balbisii*, *Phyteuma comosum* and *Gentiana terglouensis*, collected seven years ago in Val Lunga, that home of good alpines. The gentian pined at first and it was not until I realised that it was a lime lover and transferred it to a tufa mixture that it began to thrive. Fortunately most alpines have a strong will to live. They need it to survive the treatment that is so often meted out to them ! San Martino di Castrozza was our headquarters for the second week. The imposing peaks of the Cimon della Pala and the Rosetta tower up behind it. The ascent of the latter, with its snow-capped summit of around 8500 feet, is made easy for travellers. Transport to the top is in two stages, first by chair lift and then by funicular. There is a magnificent view of the surrounding country from the summit on a clear day.

Our leader advised us that *Campanula morettiana* was to be found on the rock faces in the middle reaches of the mountain and this was one of the plants that I particularly wished to collect. Unfortunately I had never seen *Campanula morettiana* and consequently I had not the slightest idea what it looked like. My quest was not made easier by the fact that the plant was not in flower in July. I accordingly turned to our leader for guidance. Many of you will know of Mr. Parker's skill as a draughtsman and in a few moments he had sketched some leaves of the campanula on the back of an envelope. He added, casually, "if you do find it, you may need a hammer and chisel." How right he proved to be !

I had taken his advice and soon I was on my way to the mountain with a hammer in my rucksack and the sketch in my pocket. I slipped into the chair lift and the treetops and the valleys began to glide away beneath me. At the half way stage I alighted and proceeded to work my way along the rocky face, searching as I went for leaves which

resembled my illustration. Eventually I found them, a little green tuft growing out of a thread-like crack on the solid rock face. It was obvious that nothing short of dynamite would shift that one. Further search revealed others in more promising situations and, selecting a likely specimen, I got to work on it with hammer and chisel. A few inches of thread-like root were gradually uncovered, closely adpressed to the rock face and quickly disappearing into inaccessible crannies. The source of their nourishment was a mystery. Several small pieces of root were carefully detached and packed in damp sphagnum moss and polythene.

By this time it was past mid-day and as the sky was darkening ominously, I thought it prudent to retrace my steps. I had barely reached the hotel when one of the most severe thunderstorms that I have ever witnessed broke. For half an hour or more the thunder crashed and the lightning flashed in the sky immediately overhead. The rain was torrential. At the height of the storm two ladies of the party, who had visited the summit, were caught while descending the chair lift. The operator, perhaps on account of the severe electrical storm, had temporarily switched off the current and the two unfortunate passengers found themselves suspended in mid-air while the storm beat down on them. Eventually the chairs started moving again and the two ladies stepped back on dry land. I thought they took the whole affair in a most sporting manner, for after a hot bath they related the incident as a good joke.

On returning home, the campanula was planted as follows. Two holes were bored right through a large lump of tufa. The lump was sunk in a gritty alpine mixture, over good drainage, in an 8 in. three-quarter pot. The small pieces of the campanula were then planted in the tufa holes. They took some time and care to establish and after seven years have made a good plant as the illustration shows. This spartan treatment is not necessary for *Campanula morettiana.* It will grow equally well in an open, gritty, limey mixture (see fig. 25). A small cutting of a fine white form, a gift from a friend, is now well on its way, after four years, to filling a nine-inch pan (see fig. 26).

It is my opinion, however, that tufa planting, which more closely corresponds to nature, produces longer-lived and more robust plants. These saxatile campanulas never seem to be found in nature growing in the screes at the base of the cliffs. Similar crevice treatment might be worth trying with *Campanula zoysii*, a plant which so often flowers itself to death in a scree mixture. If any members have already experi-

mented in this direction, it would be interesting to hear from them. With both these plants one should try to obtain a good form, as the flowers vary enormously.

On another Alpine Garden Society Tour in 1961 to Seis, *Campanula morettiana* was collected in the Schlern Klamn, a deep rift in the mountains immediately above the hotel.

Farrer in "The Dolomites" writes of the Klamn : "This walk has the advantage of being too steep and arduous and hot for the Feathers : in the depth of the Klamn you may be sure of a solitude unattainable elsewhere in the country of Seis. And here I have no scruples in telling you that among other marvels you will find *Campanula morettiana* and *Phyteuma comosum* and *Saxifraga burseriana* and *Asplenium seelosii*. I have no scruple because all this grows always and only in the hardest rock of these sheer walls and are absolutely inextricable by the utmost craft and violence of man". It was a hot day and although a few turned back, several of us reached the delectable cliffs referred to.

There, as Farrer predicted, we duly found plants of *Campanula morettiana, Phyteuma comosum* and *Saxifraga burseriana*, and we succeeded with some difficulty in extracting a few small pieces. Although Mr. Parker searched assiduously for the asplenium, he was unable to find it. The saxifrage was invariably found growing in half shade and my collected plant never thrived until it was transferred to a North-facing frame. It appears to be content there and this year produced a few flowers. The campanula has also established and has proved to be a good form.

Campanula morettiana is never seen at its best at S.R.G.C. shows, although a few late blooms sometimes appear at North Berwick. As an exhibitor, I often think that it is unfortunate that our Club shows are so closely bunched together. A more widely spaced schedule would enable members to see a greater variety of interesting plants on the show benches and to have the opportunity of bringing them to the attention of the R.H.S. Joint Rock Garden Committee. At present, for the greater part of the year, plants grown in Scotland have to be transported and submitted at London.

Letters to Members and Editor

CAMPANULA PLANIFLORA (C. NITIDA)

THE INTERESTING article on *Campanula planiflora* stated that it is propagated from seed, and that its place of origin was North America.

In the "Gardeners' Chronicle" of 24th July 1965, Will Ingwersen refers to it, and claims that if seed from *C. nitida* is saved and sown, ninety per cent. of the resulting plants will be pure *C. persicifolia*. He writes that he has propagated it vegetatively for many years. My own experience is that 100% of the resulting seedlings were *C. persicifolia*, but Mr. Ingwersen is a practical grower and a very reliable writer.

H. Clifford Crook in his book "Campanulas" interpolates a very brief note about *C. nitida* under his reference to *C. persicifolia*, and calls it a "Mendelian recessive" derived from *C. persicifolia*. He goes on in the next paragraph to deal with propagation, which I take it refers to *C. persicifolia* and need not refer to *C. nitida*. The placing of the paragraphs, however, might mean that *C. nitida* could be raised from its own seed. Mr. Crook clarifies this position in his later book "Campanulas and Bellflowers in Cultivation", and states there that propagation of *C. nitida* from its own seed is possible provided the plants are fertilised by hand, the pollen and seed parents being both *C. nitida*.

Mr. Crook mentions that *C. persicifolia* is widely distributed in Southern Europe and has been in cultivation since 1596. One wonders how long *C. nitida* has been known, and if some observant gardener of long ago knew it was derived from *C. persicifolia* ?

Certainly, the late T. W. Anderson, Guardbridge, Fife, a member of our Club, respected in a circle much wider than his own County Group, knew all about it. He grew several rows of *C. persicifolia* on an unwanted garden next his own, which he allowed to self-seed on the sandy soil. This produced many seedlings, from which he was able to pick out *C. nitida* at a very young stage. The percentage of *C. nitida* to *C. persicifolia* seedlings was quite small. He did have plants of *C. nitida* growing nearby, but I understand he did no hand pollination.

Reginald Farrer knew it well in 1913 when he wrote his "English Rock Garden" and his description is good. He gives its place of origin as North America, and obviously did not know how or whence it came. It is interesting, however, that he likens it in his description to a condensed and blank faced form of *C. persicifolia*, and as a Farrer fan, I admired this shrewd comparison.

Dundee. STEWART MITCHELL

Extract from letter enclosed with donation of seeds

Dear Sir,

Rhododendron mucronulatum v. *ciliatum*, Nakai.

The difference between *R. mucronulatum* and this variety of it is rather valueless. *R. mucronulatum* v. *ciliatum* has many small hairs on the upper surface of its leaves, while *R. mucronulatum* has not.

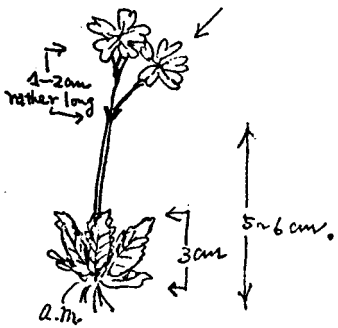
R. wadanum, Makino.

R. kiyosumense, Makino.

R. dilatatum, Miq. I cannot give a reliable name to this seed because a friend of mine collected it. The place where he obtained the seed is in the position where *R. dilatatum* is found in quantity. However, along with *R. dilatatum* are mixed a very few *R. wadanum* and *R. reticulatum*. The differences between the three are few from the gardener's point of view. *R. kiyosumense* is found in the warm temperate zone, *R. dilatatum* in the upper or lower temperate zone, and *R. wadanum* in the temperate zone in the central part of Honshû.

Primula yuparensis, Takeda.

(This is not my own seed but has been given to me). This primula is found only among the gravels of the temperate zone of Mt. Yubaridake in Hokkaido. It resembles *Primula modesta* but is smaller in all its parts. It produces only two to three purple crimson flowers on flower stems only five to six centimetres tall, and the upper half of the stem is covered with white farina. This primula is one of the rarest plants of Japan. Compared with other Japanese primulas such as *P. hakusakensis*, *P. nipponica*, etc., its cultivation in Tokyo is rather easy.



Primula yuparensis, Takeda

5197 Minami-tanaka,
Nerima-ku, Tokyo, Japan.

Sincerely yours,
A. MASUYAMA

Letter from a New Zealand Member

The Secretary,
Scottish Rock Garden Club.

Thank you for your greeting to us as new members of the Club. We would like to send our greetings to you all for the coming year. We feel that the connection will be of great interest to us all.

This area is 1000 to 1300 ft. in altitude, and around us are mountains rising up to 8000 feet. This does give a very wide range of plant life, and one we have to explore much more fully. We do hope to collect some seeds and have them classified this year so that we can join in with your exchange of seeds.

Yours sincerely,

"Thurlby",
R.D.1, Queenstown,
New Zealand.

NAINE WILSON,
Secretary,
Arrowtown District Gardening Club.

Letter from Olga Duchacova, Prague 10, *Czechoslovakia*

Dear Mr. ————,

I and my husband are friends of Professor Philipson from New Zealand and his wife who in July visited us and were our guests for a fortnight. We spent a pleasant time together, made several interesting trips in to the mountains to hunt some plants (*Primula minima*), visited some nice rock-gardens of our friends, collected all seeds possible everywhere (also for you !) and learnt a lot about England, New Zealand, saw many wonderful slides of English gardens, rock gardens, nurseries, outstanding plants, Rhododendrons, etc., etc. All this was very thrilling for us and if we are ever able in the future to visit England and see all that beauty with our own eyes, oh, then we shall be the happiest people in the world ! Mrs. Philipson told me that you would be perhaps interested in our mutual seed exchange and promised to send you some seed that she collected here, as none were left then.

I have two good friends, Mrs. Stéphánicova and Mr. Janouch, who have very nice rock gardens and fine plant collections and we all make a 'triumvirate' or 'alpine lovers company' and exchange experiences, plants, and seeds. Mrs. Philipson was enchanted with my friends' plants and gardens and collected lots of seeds there. When we heard about all these possibilities English alpine lovers had, we were very sad and tend to envy you a little. We have no A.G.S. or Scottish R.G. Club and their wonderful Bulletins or Journals, we have no shows, no literature, no special nurseries where all rare plants are to be had, simply we have nothing, only our big love for the little children of the hills and rocks, and this only is common to you and to us as well. Worst of all is that our Czech money has no value in the Western countries so that we cannot order seeds, bulbs, plants,

or literature from abroad. How painful and how impossible in the 20th Century !

Our highest mountain range, The High Tatras in Slovakia is very rich in alpines, perhaps richer than the Alps. I could put down a very long list of plants growing there. But there is not only High Tatras here, many other mountain ranges are here with interesting flora. (In High Tatras on the hill called Murán there is a native place of its endemist *Daphne arbuscula*. It is just flowering for the third time in my rockery and I wonder if it is going to flower next year at all ?) If you or some of your friends would be interested in visiting Czechoslovakia then we should be glad to offer you our house that is large enough. Please could you tell me if you are interested in all seeds of any kind or in some special ones only ? I have also one private wish and perhaps you could fulfil it. I should be so happy if I could correspond with somebody interested in rock gardening and to exchange experiences, ideas, pictures, etc., etc. I have a lot of pen friends all over the world, but none interested in alpines ! A part of my rockgarden is now just blue with flowering *Gentiana sino-ornata*, *farreri*, and *macaulayi*, this one is perhaps the most beautiful of all !

Does *Gentiana farreri* set seeds with you ? We shall have lots of seeds of *Gentiana asclepiadea*, are you also interested in them ? Before I close my letter I should like to ask you if it would be possible to get your catalogue ? Please !

Yours sincerely,

OLGA DUCHACOVA

(Members may be interested to know that since this letter was written Mrs. Duchacova has made several friends in the Club and been visited by at least two members — *Editor*)

Plant Notes

ANDROSACE LACTEA and A. CARNEA var. BRIGANTIACA

THESE Androsaces of the Chamaejasme Section were referred to in Plant Notes some time ago, and I thought the enclosed black and white print from a colour transparency of *A. lactea* might be of interest. (Fig. No. 27).

It grows with me very easily in scree and produces a few self-sown seedlings each year. The over-all height when in bloom is no more

than three inches, so that while it is not so choice as the Aretian Androsaces with their almost sessile flowers, it is a very lovely little plant. The pink buds are a delight themselves, three or four in a small umbel, which do not all open at the same time.

That is my experience, but then, I have been accused of starving my plants. To this I reply the usual about keeping plants "in character". I think I am right with this one, for seedlings from my plants, in friends' gardens, which have had a richer diet, have been disappointingly "rougher", as "H.T." puts it.

Regarding *Androsace carnea v brigantiaca*, it is a form of *A. carnea*, and more commonly white. This was collected in the French Alps last summer, where on the old Galibier Road it was a very squinny form. I looked for something more worth while to photograph, but just had to take a shot for the record. Why I collected some plants of this form I know not, but there was plenty of it dotted around. Perhaps it was because I could not climb to the heights above where *A. pubescens* lives, and had to make do with its poorer relation.

The story about *A. c. v brigantiaca* is the reverse of the one about *A. lactea*. The poor little rosettes actually thrived and expanded to reasonable size, even before I took them out of the frame to which they had been consigned on my return from holiday.

There is a moral to the two chapters of this tale somewhere. It would appear that the condition of some plants under cultivation in the garden or the alpine house is superior to those found in the wild, but as I suggest, some whose charm is daintiness, are not improved by rich feeding.

Dundee. S. M.

DIANTHUS ALPINUS

THIS Dianthus is, I think, one of the best of the alpine species in the family. It is found in the Eastern Alps and in the Carpathians, usually, if not always, on limestone. Here, however, it grows perfectly happily in my very definitely acid soil. It is very variable, or at least the plants grown under the name in gardens are. Many of these, I suspect, are hybrids, but are most attractive in spite of that. The form illustrated is one raised many years ago from seed from Correvon's famous nursery above Geneva. It is dwarf and compact and only about two inches high. The smooth dark green leaves are short and narrow. The flowers, usually at their best in June, are a really good deep rosy red, although in the illustration they may look rather pale.

They are over an inch in diameter, and are borne just above the rosette of leaves (see fig. 28).

Other forms have flowers of varying shades of red and pink. There is also a very good albino, some of the whites can, however, be rather squinny. It grows very well in a wall or in scree. Some books say it requires part shade, but that is certainly not essential here. Cuttings strike quite easily in June or July, or it may be raised from seed in Spring. It may not come true from seed, but I find that Correvon's form comes nearly 100% true, but then there are no other dianthus species or cultivars within 30 or 40 yards.

Perthshire. M-L.

GERANIUM NAPULIGERUM (Syn. *G. farreri*)

THIS DELIGHTFUL little Cranesbill should be in every rock garden. I still refer to it and have it labelled as *G. Farreri*. After all, it was Farrer who re-discovered it during his 1914-15 Expedition in Kansu, Szechwan, China. The plants in cultivation today are the result of this Expedition. Apparently it was originally described by Delavay and given the name *G. napuligerum*, which refers to its turnip-like root. By this name, therefore, according to the rules, it *should* be known. (Fig. 29).

Farrer's description in his field note is as follows: ". . . a very beautiful little plant, exactly in the way of a small, large-flowered, unsilvered *G. argenteum* of palest pink running about in only the highest Thibetan shingle-slopes of limestone or red shale at 13-14,000."

So far, so good, but it does not run; its fleshy root stays put. This is an advantage in scree amongst other choice plants. *G. dalmaticum*, planted as a choice new introduction some years ago, about three feet from *G. Farreri*, has continually to be watched and cut back, so that its next victim will not be its neighbouring relative.

G. Farreri is neat and compact, only 5-6 inches in height overall, and it is herbaceous. The large flowers sit well above the foliage. The leaves, quite attractive in themselves, are kidney-shaped, about 1 inch across, cleft into five three-lobed sections, which have indented veinings. The flowers are a soft pale pink, 1½ inches across, with well-rounded, wavy-edged petals delicately veined with darker lines. The anthers are black and form a striking contrast against the pale petals. The reddish-tinted flower stems branch about half-way up their length and carry two flowers, which do not open at the same time. Its bloom-

ing period can sometimes extend from May to August. In contrast, its neighbour *G. dalmaticum* gives a generous burst of bloom for about a month and closes down for the season. *G. argenteum*, referred to by Farrer in his field note, also flowers over a long period.

My first plant of *G. farreri* was planted in ordinary gritty soil in a raised pocket in the rock garden, where it thrives without any special care. Its self-sown seedlings have cleverly selected a slightly raised scree bed, where they are doing better than their parent. This scree position seems therefore the place to recommend, as it will give protection from rot of its fleshy root in a wet winter. I give no overhead protection (which some recommend), neither is there any lime in my garden soil or screes.

Propagation from seed would seem to be easy. This seed when ripe springs quite a few feet away, and needs careful collection. It sits round the "cranesbill" in the centre of the dead flower. It is said to be possible to increase by cuttings with old wood at their base in August in a normal cutting frame, but I have never needed to try this method.

As a final remark, I would recommend a collection of Geranium species to light up the rock garden in late Summer.

Dundee. S. M.

KALMIA POLIFOLIA var. MICROPHYLLA

THIS MEMBER of the Ericaceae is a native of the Mountains of Western North America. As its name implies, its leaves are small, so indeed is the whole plant. It is a creeping shrub, more or less prostrate, and not more than three inches high. The leaves, carried on wiry stems, are bright green and elliptical in shape. The flowers are out in May and are a good size for the size of the plant. They are borne on thread-like stalks and are a good pink with a rayed white central zone (fig. 30).

This is a most attractive shrub for a peat bank or wall, and it appreciates the same conditions as do dwarf rhododendrons.

The plant illustrated is growing in a small vertical wall of peat blocks. It gets full sun except for an hour or two around mid-day, when it gets dappled shade from a tall birch some way off. Layering is probably the easiest way to propagate, in fact it sometimes layers itself. No doubt it could be raised from cuttings or from seed, although I have not done so myself.

Perthshire. M-L.

LILIUM FORMOSANUM var. PRICEI

IT IS STRANGE that *Lilium formosanum* var. *pricei* receives so little mention in books which list and recommend suitable plants for the rock garden and alpine house. It is undoubtedly a true alpine, growing at an altitude of 8000-12,000 feet on Mount Morrison in Formosa. It was introduced as seeds by W. R. Price as long ago as 1912. From these, bulbs were raised in large numbers and distributed widely by A. Grove. It is easy to raise and easy to grow, so it ought not to be one of those "here-today, gone-tomorrow" introductions. Its stature of one foot or less does not disqualify it for a position in the smallest rock garden. It is utterly hardy, and so it ought to be, coming from so great an altitude.

Its flowers are most elegant, a slim trumpet much longer than *L. regale*, but with the same crimson line down the outside of each perianth segment. Some flowers do not have this and, to me, the pure ivory form is even more beautiful. It is sweetly scented, and without the overpowering sickliness of some other lilies.

I can only account for its scarcity in rock gardens by the fact that it flowers in August, a time of year too late for most of the shows and too early for North Berwick Show. It is therefore never seen on the show benches nor on the trade stands. Besides this, its seed capsule is slow in ripening and does not split until late in the winter, which makes it too late to send to the Club Seed Distribution. Any which I have sent in the past have been kept over from the previous winter, and this may have affected their viability.

I have been growing the tall *Lilium formosanum* since about 1952. When Mr. Alex. Duguid visited here, he criticised its stature as unsuitable for the place where I had it and gave me one bulb of the dwarf var. *pricei*. It is from the seeds of this plant that my other plants have been raised, and they are even more dwarf than the parent. Seed sown outdoors in March will germinate in May and then a proportion of the plants will flower in 15 months. Others will wait another 12 months before doing so.

Patrick M. Synge in Collins' "Guide to Bulbs" says that they should be planted among low shrubs. This does not apply to Scotland, where they need full sun, or as much full sun as is obtainable. The small bed where I have the lilies has been encroached over by some low-growing penstemons, and those bulbs have turned sulky and come up blind. The penstemons have now been cut back.

The soil is just "ordinary", with a pH about neutral. When the

bulbs are dormant they are top-dressed with an assortment of "this-and-that"—peat, coarse sand, dead fern leaves, sifted rubbish heap, and wood ash. This last ingredient should be mixed well with the other things so that it does not beat down into an impenetrable pudding. Green chopped bracken is supposed to be good for this and other lilies but there is none growing round here. Labelling of the site is very necessary because the bulbs are so slow in showing signs of life in the spring.

In her book "Lilies in their Homes" Mrs. Maxwell described how she planted some *Lilium formosanum* var. *pricei* bulbs on both sides of a path. They all turned south to the sun, so that on one side of the path the flowers displayed themselves, and on the other side only their backs could be seen.

I planted mine on the wrong side of the path, so that when Mr. Stewart Mitchell took the photograph (see fig. 31) he had to walk about on the rock garden in order to find a good vantage point for his camera.

Dirleton, East Lothian. L. C. B-H.

OXALIS LACINIATA

Oxalis laciniata is comparatively new to gardens, as it was only introduced from Patagonia about 10 years ago by Mrs. Ruth Tweedie (see fig. 32).

It is a most attractive little plant with typical oxalis palmate leaves. Each leaf is sub-divided into up to ten leaflets with wavy margins tinged with pinky purple. The petioles are pink and about an inch long. The flowers, held clear of the leaves, are also typical of the family, and quite large for the size of the plant, being a good inch in diameter. The colour of the flowers is very variable. The colours most often seen are shades of blue, mauve and violet. There are also, however, white, pink and red forms, and some of the flowers have a green throat. The veining of the corolla in a darker shade of the flower colour adds to the attraction of the flowers.

Here it flowers in May or June, and soon afterwards it dies down and disappears till the following Spring. In its native habitat it grows in stony, sandy soil, and here it has settled down happily in scree in full sun. It is perfectly hardy out of doors, but if you wish to grow it in pots, it is quite easy in a sandy gritty mixture. If grown in pots, the tubers are probably best repotted annually in September or October, and kept dryish during the winter. The flowers and leaves all come

from the pink "growing point", and the tubers are best planted horizontally, this of course applies also when planting outside. They do not require deep planting, about an inch of soil over them is sufficient. A layer of gravel on top helps to prevent the tubers becoming exposed and possibly scattered by birds. Propagation is by division or seed.

Perthshire. M-L.

Note : For further particulars see page 242 of *Journal* No. 28.

North Berwick Show 1965

BECAUSE this was Mr. Sanderson's last year as Show Secretary, we had been determined to express our appreciation of all he has done for us for many years by making this the best North Berwick Show ever to be held. Unfortunately, month after month passed without summer appearing, and when September arrived the organisers were resigned to expecting the worst, and to being thankful for small mercies and a small entry. All the reports on horticultural shows in the press had stated "Although entries were down, the standard was high". As a slight variation on these time-honoured words, these notes will say instead "The entries were slightly down on last year, but never before have so many unusual new plants been seen on our show benches". It has to be confessed that a high proportion of these came from outside the county, notably from the alpine houses of Aberdeen.

The Forrest Medal went to Mrs. Richard Baillie for a fine large pan of *Liriope muscari*, a plant quite new to this show. She also won the Logan Home Trophy for her large old tufa garden, encrusted all over with saxifrages and sempervivums which provide coloured foliage interest throughout the year. If medals were also given for unobtrusive, behind-the-scenes help to the Show Secretary over a long period of years, Mrs. Baillie would have received one. It is difficult to know how she found time to lift so large an entry and present her plants in such perfect show condition (see fig. 33).

The East Lothian Trophy was awarded to Mr. Harold Esslemont for *Anchusa caespitosa*, *Campanula morettiana alba*, and *Helichrysum confertum*, an interesting and diverse collection of three different genera. Mr. Esslemont also received the Mary Bowe Trophy for the

highest aggregate of points. This just goes to show how much we owe him, not only for widening the interest, but also for augmenting the number of entries.

Mrs. Maule's entry in this same three-pan class included *Erpetion reniforme*, a pretty pansy not previously seen at this show.

In the class for three of the same family, Mr. Crosland's entry demonstrated the perfect way to present three small pots. His *Raoulia buchananii*, *R. mamillaris* and *R. eximia* had not a single rosette without the pale green eye which indicates life and health.

In the class for two of one family, a first went to Mrs. Boyd-Harvey for the pink and white forms of *Cyclamen neapolitanum*, well flowered with many buds still to open, but not yet in leaf. In the same class Mr. Esslemont had a couple of umbellifers from New Zealand, *Aciphylla crosby-smithii* and *A. dobsonii*.

The entries for fruiting plants and autumn foliage were small, but the pink fruits of Mrs. Cormack's *Pernettya tasmanica* were most attractive.

There was a large entry of good cushion plants, probably because these are often grown under cover and therefore less affected by non-stop summer deluge. The prizes went to Mrs. Boyd-Harvey for *Dionysia demavendica* grown from Admiral Furse's seed, to General Murray-Lyon for a large *Celmisia argentea*, and to Mrs. Cormack for her velvet-like *Pygmaea pulvinaris*.

In the gentian classes a very fine entry from Mrs. Simson Hall of *Gentiana* 'Drake's strain', *Gentiana* x 'Inverleith' and *Gentiana x* bernardii was rewarded by the Peel Trophy. In the class for species, General Murray-Lyon won a first with *G. saxosa*, and in the class for hybrids Miss Nisbet's *G. x stevenagensis* came first.

The Composites might all have been entered equally well in the silver-grey class. Mrs. Baillie's *Helichrysum coralloides* took a first, followed by Mr. Esslemont's large *Raoulia eximia*. This was awarded the Forrest Medal twelve months ago, but it appeared to be less full of life than it was then.

The novice section was well supported, and among other nice plants Mrs. Ainger's *Artemisia pedemontana* and Mrs. Mutch's *Crassula sarcocaulis* were noted. The outstanding entry was a pot of three *Saussurea stella* shown by Mr. Duncan, which received the East Lothian Cup. Mr. Duncan had intended to cancel this entry, because a vole had nibbled a few leaf-tips, but fortunately another member had demonstrated to him the reason why nail-scissors were invented. Mr.

Duncan also received the Bronze Medal for the highest aggregate in the section.

The Wellstanlaw Cup was awarded to Miss Nancy Bowe for a very beautiful arrangement of cut rock garden flowers and foliage. The Group's only junior member, Lucinda Tweedie, received a prize for her microscopic pink and silver flower arrangement.

A Gold Medal was awarded to Messrs. Edrom Nursery for their trade stand, which included as a centrepiece one of Admiral Furse's yellow dionysias, actually in flower in September.

Mrs. Barbara Mencel once again had a stand for her china and pottery, hand-painted with designs based on alpine flowers.

Group Report

EDINBURGH and MIDLOTHIAN

ONCE AGAIN the Committee has tried to make a balanced programme, combining illustrated talks with practical demonstrations.

We were fortunate in being able to start the session with a talk by Mr. Joe Elliott about his plant-hunting expedition to the Pyrenees in 1964. Mr. Elliott's slides, whether of plants, scenery or animals, are a joy to look at, and his descriptions of the trip have inspired at least two members to visit the Pyrenees this year.

Another travelogue was given by Dr. Henry Tod, who had made his second expedition to Nevada and Wyoming in 1965. The Spring had come unusually late and many of the areas he hoped to explore were still deep in snow, but he showed us some excellent pictures of American alpines as well as of snow-covered mountains.

Mr. J. Grant Roger of the Nature Conservancy brought travel within the reach of most of us with a fascinating talk on our native mountain flowers on Ben Lawers. He showed us some very fine slides and invited those members who felt sufficiently energetic to join one of the National Trust climbs in July, to see the flowers growing in the Nature Reserve.

A practical demonstration of Rock Garden Construction was given by three members of the Group and led to a good deal of discussion. This type of meeting, and the annual "Members' Slide Night", are of great value in that members can take an active part instead of just listening. A further practical evening will take place in April, when a

Miniature Show will be held, at which Mrs. C. Boyd-Harvey will demonstrate how to prepare plants for the Show bench.

One more talk will be given in March, by Miss E. M. H. King. This time the subject is "The growing and propagation of Rhododendrons and other Ericaceae", a subject on which she is very expert and has some interesting theories.

The "Garden Coffee Evening" held last May raised, in spite of an unseasonable snowstorm in the morning, more than enough for an amplifier and two loudspeakers. These have now been made and are in use. Another Coffee Evening, with a plant stall, will be held this Spring on Thursday 26th May, at the home of Mr. and Mrs. Maule, Hannaford Quarry, Balerno. Members of other Groups will be welcome.

A further series of classes for beginners is also planned for the Spring.

KATHLEEN S. HALL (G.C. Edinburgh)
HENRY TOD (G.C. Midlothian)

Book Reviews

"HOW TO PLAN, ESTABLISH AND MAINTAIN ROCK GARDENS," by George Schenk. The Lane Book Company, Menlo Park, California, 1964. $1.95.

This is a most interesting book by one who is a landscape architect, a constructor and a genuine plantsman—a rather unusual combination. Many landscape architects consider the plants mainly for the effects that they produce, but Mr. Schenk quite obviously knows and loves his plants. Further, he not only designs rock gardens, but he makes and plants them as is shown by a number of the illustrations.

Rock gardening in the United States has, as this book shows, absorbed a certain amount of the Japanese "Stone Garden" philosophy and incorporated in it what the author refers to as the "English" concept. This seems to have had the effect of reducing the somewhat esoteric ideas of the Japanese School to a more practical level, nearer the mental approach of the average (but informed) rock gardener.

We, in Britain, tend to consider that we have to deal with fairly widely differing climatic conditions, e.g. East (dry) and West (wet), but in the United States the variations are almost illimitable. The writer heard this summer a talk on "Gardening in the High Plains" which showed how these conditions varied from those of the "Great Plains", from the "Mountain Area" and from the "West Coast"—and *all* of these were totally different from conditions in the "East". Mr. Schenk points out that a study of local plants will give an indication of what type or group of rock plants will most probably prosper and form the "stable background" of the rock garden—more exotic plants can then receive their needed and different treatments, but he stresses that it is wiser to work *with* Nature rather than *against* her. Being a plantsman, however, he admits that this is what the keen rock gardener most usually does *not* do !

The book covers Rock Gardens, Woodland Gardens, Bog Gardens, Scree Gardens and—a topic rarely considered here—Desert Gardens. It also deals with wall and terrace or paving gardening. Probably because of the wide variety of conditions he is bearing in mind, the author has produced a book which is of much more general value in this country than others which relate to more rigidly restricted climates, for example, the South Western States.

There is a section on the use of rock gardens for landscape effects, which includes dry walls and terraced rock gardens. Once more this is a very sensible level-headed treatment with none of the " airy-fairy " about it, and the pages on construction give some useful advice on planning and the use of stone. Here the difference in approach is quite evident, for the author lays less stress on accuracy of " strata-design " than do our classic writers such as Symons-Jeune.

The section on propagation covers division, cuttings and seeds—and also a topic not often dealt with, raising ferns from spores. The notes are concise, clear and well-illustrated, and they are followed by a section on dwarf conifers and their use in the rock garden.

The book ends with about forty pages of " Plant Biographies ", a descriptive list with cultural notes that appears to embrace almost all but the least common plants. A useful detail is the approximate temperature at which each plant " winter-kills ", i.e. to which it is frost-hardy.

Altogether this is an extremely interesting and instructive book, with points for all from the beginner to the most experienced—and it is quite surprisingly relevant to rock gardening in Britain, considering it has been written for the American Rock Gardener.

The illustrations, in black-and-white, by Don Normark are good and extremely apt to the text, and the book, though a " paper-back ", is in stiff card covers and is very well produced in good clear print on good paper.

H. T.

" Rock Garden Plants," by Will Ingwersen. Ilford Colour Book, 1965. 12s. 6d. Ebury Press & George Rainbird.

This little book continues the good quality of its predecessors in this series. Will Ingwersen contributes notes on the ninety-six plants illustrated—these are concise and what one would expect from one who is a really practical expert. There is a short section on construction and cultivation with useful lists of suitable plants for various conditions. Mr. J. E. Downward supplies a note on photographing plants in colour which will be useful to beginners.

In general the colour reproduction is good but, as usual, some of the paler shades hover rather indeterminately between the actual colour and " adjacent hues "—for example, some pale blues appear more as pinks. The " register " of the colour printing is good, though something odd seems to have happened to *Gentiana septemfida* and *Shortia uniflora*; in the latter case the green of the leaf seems to have invaded the flower. The illustrations to texts 91 and 92 (Tulips) are transposed.

H. T.

" Flowers of the Mediterranean," by Oleg Polunin and Anthony Huxley. Pp. 320, with 311 colour plates and 128 line drawings and a large number of small drawings of plant parts. Published by Chatto & Windus, London, W.C.2. Price 42s.

This book is exactly what the introduction describes it to be—a selection, albeit a most extensive one, describing over 700 plants, of the vast

number of interesting, and often very beautiful, plants native to the Mediterranean regions. As such, to use a trite but very applicable phrase, it fills a long-felt want. Though perhaps covering too wide a field to appeal in its whole to those who confine their interest in plants to the strictly limited field of ' alpines ' only, it cannot fail to be of immense interest and value to all whose love of plants embraces the wider range of all plants rare, interesting, or beautiful. Without claiming to be a botanical *Flora*, it comes so near to it as to be extremely helpful to all who have a general interest in the great range of plants of this particular region.

There are 311 close-up colour illustrations ranging from conifers, anemones, shrubby and herbaceous legumes, rock roses and various attractive annuals, to monocotyledons such as arums, fritillarias, scillas, muscari, iris, and orchids (there are 38 colour plates of orchids alone). Added to these are a further 128 very excellent line drawings, and in addition there are many more drawings of botanical details throughout the text of the book to help one in identification by way of leaves or fruits where this may be more sure than by flowers alone.

After the introduction and a general explanation of the Mediterranean flora, aided by temperature and rainfall maps, etc., the authors give a very full and useful ' Glossary of Terms,' illustrating their meanings with 123 finely executed drawings of the parts of plants listed. From pages 51 to 243 we are given detailed but easily understood descriptions of the plants themselves, arranged in their families from *Gnetaceae* to *Orchidaceae*, and then follows a page of very useful bibliography and the index. The descriptions though so detailed are very concise.

The format, needless to say, is excellent, as is the photography of the flowers illustrated, and the line-drawings are of an equally high standard. The registration of the colour plates is very good throughout, but in certain cases the actual colour is not quite accurate, some of the greens showing up rather too blue. Speaking for myself, I have found this a delightfully interesting book as well as very useful.