

The Journal OF The Scottish Rock Garden Club

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



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Jessamine, 37 Kirkhill Road, Penicuik, Midlothian
PRICE 4/6, post free 5/-



Frontispiece—*Picea abies* 'Ellwangeriana',—Sizergh Castle (see page 131)

The Journal

OF

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Editor's Notes

BY THE time this *Journal* reaches Club members the last of our Shows for 1964, that at North Berwick, will have come and gone. Those members who know this Show know to look forward to seeing some excellent specimens of plants never seen at any other of our Shows. Even though North Berwick is not a large Show it has the advantage of catering for some most attractive rock-plants not in season at the times of any other of our Shows. The display of cyclamen and autumn gentians is usually breath-taking both in quality and quantity, while the classes for heaths, heathers and plants with autumn tinted foliage also provide scope for some very interesting and attractive plants. It has been noticeable, too, over recent years that some of our members generally seem to be able to put on display at North Berwick something outstanding or new to the Show benches. Whether they save up these plants for this Show or are just giving them a try-out before the next season's Shows we cannot say, but it is certainly good to see newcomers to the ranks of plants seen at our Shows. Though there is not the vast inflow of new introductions experienced thirty or forty years ago, the stream is not completely dried up, even though it may now have slowed down to a mere trickle compared with those days.

As was mentioned in the Spring *Journal* the very wet autumn of last year followed by the excessively mild winter had a weird effect on many rock plants. Many of the earliest flowering ones were quite a bit later than usual and then finally came away with a rush along with what one might call the second wave of flowerers. This resulted in increased entries and some wonderful exhibits at our earlier Shows. The Show hall at Dumfries was quite an unforgettable sight. It was absolutely packed with really first class plants, and when we say "packed" we mean exactly that. We feel sure that if put to it Mr. Brown, the Show Secretary of Dumfries, could quite easily find space in the proverbial sardine tin for another sardine or two—and come up smiling. Judging of course under such conditions was certainly a formidable problem and it stretched on into the afternoon; sometimes whole classes of plants had to be set down on the floor so that the judges could reach and see the plants behind. But it was an extremely happy occasion and everyone present seemed to glow with the pleasure—as who could help it—of being surrounded by such an array of excellent plants of every description in the perfection of full bloom.

After this the next two Shows were rather in the nature of an anti-climax. A sudden snap of frost after the earlier mildness checked

plants in their stride and seemed to work havoc with the entries for Glasgow and Edinburgh Shows. Glasgow perhaps got the full brunt of it and entries were low and good plants scarce, and Edinburgh too was below its usual standard. Dundee, on the other hand, exactly three weeks after Dumfries Show, produced another superb Show with a large number of very excellent entries. This Show too must have given great satisfaction both to its officials and all who took part or visited it. The Y.M.C.A. Hall, where Dundee members held this Show for the first time, proved a delightful place for a plant show, and its situation is no distance at all from the city centre. Mr. Roric, the new Show Secretary, must have felt very grateful for the support he received from local members and those from neighbouring Perthshire. How fine it will be if the turn-out in Perth next year is even better still !

Our Shows must often be a matter for very serious thought to many Club members as well as to office-bearers. One wonders what would happen to them if that loyal band of competitors—a small proportion of the Club as a whole—were suddenly to drop out. And as we all each year get a little older, and one after another has to give up active participation, where are the others to step in and follow on ? The loyalty of some, who sacrifice a portion of their holiday time and go to considerable expense in taking their plants the length and breadth of the country to lend their support, is beyond question. But surely out of all our Club members those few who exhibit are not the only ones who can grow plants reasonably well. Surely many more members could at least put in a few entries at the Show nearest their own area. We have had two good examples of this in 1964. Is it too much to hope that other districts will try to do likewise in 1965 ?

Talking of Shows brings us to an interesting proposal contained in the notice sent out by the Group Convener for East Lothian and Berwickshire in connection with North Berwick Show. The suggestion is made that so far as is possible competitors might add to their exhibits brief notes stating country of origin, cultural notes, or anything of a similar nature likely to be of use or interest to fellow competitors or others visiting the Show. If this could be made to work it would obviously make our Shows much more interesting and helpful to all who visit them—members and public alike. But it is not an idea which can be enforced but will have to depend on the co-operation of those exhibiting the plants to which the notes

refer. Exhibitors will most probably say that they find they have more than enough to do in getting their plants together and preparing them for the Show ; and the Show Secretaries cannot be expected to undertake any more than the present onerous duties they are all tackling so well. In theory the idea is excellent, but in practice it remains to be seen if it can possibly be made to work.

Again, talking of Shows brings us to another matter. Two Show Secretaries have already sent in their schedules for their 1965 Shows for inclusion in the January *Year Book* ; for this the editor tenders his most grateful thanks. If all other Show Secretaries—and other office-bearers too—were anything like so prompt in sending in items for inclusion in the Club's publications, the editor's work and worries would be reduced considerably and the postal costs of repeated reminders to some extent reduced.

We would not like it to be thought by Club members as a whole that those groups whose activities are reported in the later pages of this *Journal* are the only ones which have a programme of activities of any sort. We are sure that many more Groups must have a full programme of activities throughout the season too ; in fact we know that some regularly carry through full and interesting programmes even though reports of them do not reach these pages. Very possibly it may be that these very activities themselves take up a Convener's time and energies to an extent which does not allow him sufficient leisure to prepare a report of them. Whatever the real facts may be, we feel that we can confidently assert that a great deal more is constantly going on in the Club than ever appears in our *Journals*.

In this respect all Club members will be very happy to know that two Groups whose local meetings had gradually fallen into abeyance have in the past year made a vigorous and lively revival. Owing to a complexity of reasons the Groups of Perthshire (South) and of Stirlingshire and Clackmannan—both widely scattered areas—had had to suspend their local meetings. During the past winter meetings were held at Perth and Stirling, both excellently well attended, at which committees and office-bearers were elected and a programme of activities discussed. Club members will wish to have passed on to those Groups their congratulations and hearty good wishes for the future, and we feel perfectly safe in assuring them that members of neighbouring Groups will be only too happy to help in whatever way they can.

Not infrequently one hears a suggestion put forward by some that the number of *Journals* each year might be increased from two to four. We sometimes wonder if any of those members have ever paused to think, or have any idea, of the difficulty there is in gathering together material for a *Journal*, or if they themselves have contributed to one. When we are blessed with a good summer, as does happen occasionally, it is particularly difficult to get members to sacrifice the time or thought required to contribute a worthwhile article to the *Journal*.

This seems to have been even more pronounced than usual this year. The long spell of fine summer weather seems to have drawn everyone out-of-doors (as was quite natural) to work in their gardens or to go visiting others till there was left neither time nor inclination to sit down and write. The result of this fine summer is therefore evident in the extreme thinness of the present *Journal*, which would have been even thinner by about twenty pages but for some extremely interesting contributions submitted by non-members. The editor can only hope that, before the next glorious summer is upon us (!!), members will decide to settle down during the autumn and winter evenings—never mind the television—and put all their thoughts and ideas on rock-gardening, and their experiences with the plants they have grown or failed to grow, on paper for a future *Journal*.

We would like, too, to remind our fellow members overseas, several of whom have contributed extremely interesting articles in the past, that anything they may have to say in an article or note is always very much appreciated by home members, especially those enthusiasts (of whom the Club can boast quite a few) who are always keen to try out new plants or other folk's ideas.

St. Andrews, *August* 1964.

Club Christmas Cards

THE NUMBER of colour plates have been increased in this *Journal* from four to six, so that members who desire Christmas Cards now have six from which to choose. Two, figs. 18 and 19, are larger than the other four, but all are available at 9/6 per dozen, post paid.

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 when

ordering to give figure numbers. Orders should be sent **as soon as possible** to the Hon. Treasurer, D. Elder, Esq., Jessamine, 37 Kirkhill Road, Penicuik, Modlothian, enclosing the necessary remittance.

The cost of colour plates is heavy and this cost can be offset to some extent by your active support and participation in this Club Christmas Card scheme. Please place your orders **as EARLY as possible**.

Seed Distribution 1964-65

DONATIONS of Seeds (or lists of seeds "to follow") should reach Miss Joyce A. Halley, 16 Abercrombie Street, Barnhill, Dundee, **not later than 31st October 1964**.

It is hoped that there will again be generous donations on behalf of the distribution, particularly of uncommon alpiners and dwarf shrubs. Clean seed, clearly named, sent as soon as possible, greatly helps the work of the Seed Distribution Manager. The locality of "wild" collected seed should be given. Seeds or lists arriving late may delay the publication of the Seed List.

Seed Lists will be sent to ALL Overseas Members and to Home Members who donate seed. Other Home Members may obtain a Seed List by sending a stamped (2½d) self-addressed envelope to the above address **before 1st December 1964**.

For 2/6 Home Members can obtain 12 packets of seeds. Surely more members should avail themselves of this real bargain !

Information regarding surplus seed will be enclosed with the orders.

Dwarf Conifers

WE WISH to let members know that this book by H. G. Hillier, concerning which Mr. R. S. Corley has contributed a commentary in a later page of this *Journal*, is now fast approaching the state of being in short supply. Members who are interested in this department of rock-gardening should not waste any time in writing the Club's **Hon. Treasurer, Mr. David Elder, Jessamine, 37 Kirkhill Road, Penicuik**, enclosing a remittance of 10/6 if they wish a copy before it is sold out.

A Day on Ben Lui

By WILLIAM T. MORRISON
(late of Glensaugh, Perth)

[*Editor's Note*—The following are the notes of a lecture originally given to a meeting of the Perthshire Society of Natural Science fifty years ago by the late Mr. Morrison and—so far as is known—never previously recorded. Mr. Morrison, in addition to being a very keen naturalist, was also an enthusiastic plantsman and an able rock-gardener.

The editor feels that this story of a day on Ben Lui more than fifty years ago will appeal to many of our members today, and very probably bring back happy memories to quite a number of the older among us.]

I AM HERE to speak to you to-night about a class of plants that require the assistance of neither gardener nor amateur, Nature herself being the sole attendant: namely Alpine Plants and ferns in their native habitats. The habitat that will now have our attention is the famous mountain Ben Laoigh, and the remarks will refer to a day I spent there last Midsummer with a friend.

Ben Laoigh, as the crow flies, is about 53 miles direct west from Perth, and rises 3,708 feet above sea-level. The Baby Tay first sees the light of day in a corrie about half-way up the mountain-side, and the border line between Perthshire and Argyllshire strikes over the top. The larger part lies in Perthshire, and it is to the flora of this part that I shall draw your attention to-night.

The day arranged for our excursion dawned bright and promising. We packed our vascula with sandwiches, dry tea, sugar, etc., spirit-kettle, and a bottle of spirit—of wine. One does not require to be very particular about eatables, so long as there is quantity. I should not like to say what one would not eat at 3,000 feet above sea-level. As for water, it is always in abundance. If there is no water, there are no alpins. Furnished with strong walking-sticks, we left Perth General Station at 7.40 a.m. for Balquidder via Crieff and Comrie. Until past Crieff, the scenery is of little interest, but a few miles out it becomes more attractive by the side of the Earn, until Comrie is past. After this we get the first glimpse of Perthshire alpine scenery, for the rocky slopes reach down to the railway on both sides. Alpins are not plentiful here, for the mountains are far too dry. At St. Fillans, Loch Earn comes into view, and the scenery up to Lochearnhead is all that can be wished for. Our next halt is Balquidder, where we change

to the Oban train. We get a connection in about half-an-hour. In a few minutes we are viewing the steep slopes of eerie Glen Ogle. As we speed along, we catch a glimpse of Loch Tay. All along the scenery is becoming bolder, more rugged, more beautiful. We now view the green slopes of Ben Lawers, leading of Scottish alpine mountains, and the highest in Perthshire. Naturalists visit Ben Lawers for *Sax. cernua*—a plant found nowhere else in the whole of Britain—the Alpine Sandwort, *Alsine rubella*, only known in two other stations in Britain. Ben Lawers has been visited by botanists from almost every part of the world. The lofty grandeur of Ben More then meets the eye, where snow not infrequently lies on the north side during the whole summer. Further on we see Meal Chiurn, another mountain on which my friend and I have collected alpiners. On the last occasion we were there we collected more rain-water than we could carry. The rain was pouring on our heads and shoulders, running down into our boots, and making its exit again through the lace-holes. This is putting it mildly, too. A few minutes later we arrived at Tyndrum station, our destination, so far as the railway was concerned.

We inquired of a porter the way to B. L. “Thro’ the wicket and up the path,” he drawled out indifferently. Following this advice as best we could, we set off, but could find no foot-path. We did not expect to find a concrete pavement all the road, but looked for a foot-path of some description. As it was now 10 a.m., and we had to be back before 6 p.m., time meant everything.

We climbed the mountain for about a quarter of a mile, then stood to get a good look of the surrounding district, trying to fix any prominent object that might be of service to us in the event of our losing our way on the return journey. At this point a gentleman made up on us. He was also bound for B. L., and knew the road well. We all three set out with great enthusiasm, tramping through heather, water, moss and stones. We were fairly covering the ground.

The first plant was collected in stepping over a small water-rill. I noticed a dazzling red object and picked it up. It turned out to be a lichen, and although not of much account it was strikingly beautiful in form, and such a lovely bright red I have never seen equalled in any plant before. In a short time we came in sight of B. L. But it is yet three miles off, although in such a clear light it does not seem a third of this distance. We are now in the valley that holds the Baby Tay, but at this point it is called the Fillan Water. On the hills to our right we see the old workings of the lead-mines which used to be worked in the district. *Asplenium viride* grows in great profusion here. Had

I ever intended to write an account of this visit, I should have taken more particular notice of the plants in this valley. At the best they are but few. On this occasion we were in search of plants that inhabit the high places of the mountain. Plenty of heather in full bloom ; here we notice the bog asphodel—a small grass-like plant, with a flower-head of star-shaped flowers something like the wild orchid, but yellow or straw-coloured : also the grass of Parnassus, or *Parnassia palustris*—fairly common all over the mountains of Perthshire. It has ivy-shaped leaves, flower-stem 6-12 inches, with cup-shaped flowers of pure white. It is found mostly by the sides of ditches, in peaty soil. Here there is also found Sphagnum Moss, well-known to most of you. It is found in wet parts of moor, where lime and nutrient substances are lacking. Amongst this we find that curious and most interesting little plant, *Drosera rotundifolia*, commonly called the Sundew. This is one of our few native carnivorous or flesh-eating plants. The wet acid soil among which it grows is a dry one so far as the plant is concerned. For the presence of acids renders the absorption of water difficult, and the all-essential plant-food, nitrogen, in this soil, is not available for green independent plants. The Sundew gets its nitrogen from the bodies of insects trapped by the leaves. The little Sundew spreads out its red, hairy, spoon-shaped leaves on top of the Sphagnum moss. Its flowers, borne on a stalk 3-6 inches long, are white. The leaves of the plant are shaped like a tea-spoon, hollow side up, but rounder in shape as the name indicates. When the unwary fly comes along, spies the pretty red leaves, the silky, glistening hairs, he thinks this would be a nice place to scratch his back on. He ventures in and the innocent-looking hairs begin to close around him, and he is fixed. In about two or three days the hairs that hold him begin to open out again, and a slight puff of wind blows away the dried remains of what was once a fly, and the plant is ready for another victim.

By this time we have left almost every trace of habitation behind. Not a tree is to be seen in any direction, nothing but heather and hills. About a mile further on we come to what seems to be a farmhouse, but with no signs of life about it. Round about the building large squares of ground were walled in. These were evidently for sheltering sheep in severe wintry weather. We notice the first tree since we left Tyndrum, standing quite by itself in one of these squares. I think the tree must have been dead, for not a leaf nor any vestige of life was to be seen on it, and this was the month of July. In fact, everything about the place seemed dead. Now we cross a small stream by a

bridge. To our right is what seems to be a shepherd's house. Here we see the first spark of life since we left Tyndrum, in the shape of a goodly family washing waving in the breeze.

We are now within a mile of our goal. I can assure you it was a wild-looking country. But the day is all that can be desired—not a cloud on the horizon. The strong sun overhead makes it just rather warm for such hard work. Now we begin to hear the rushing waters pouring down the mountains, full streams owing to the heavy rains of the previous night and early morning. To our right is Ben Chiurn, from the top of which a continuous stream of water is pouring down from a height of 80-100 feet into the depth of a ravine below. Here *Allosorus crispus*, the Parsley Fern, is said to be found. On our left is Ben Oss. This seems to be a dry mountain, with little vegetation other than grass and large tracks of common ferns. Now, straight in front of us, standing between Ben Chiurn and Ben Oss, in all its noble grandeur, is Ben Laoigh.

After an arduous walk of five or six miles we have lunch and make straight for the Alpine region. Descending a gentle slope to the foot of the mountain, we come to the edge of the Baby Tay, which has to be crossed. But believe me it is a very large baby this morning, owing to recent rains. We had great difficulty in getting across. The first point of interest on the upward climb is an old dilapidated building, evidently used in olden days by farmers. In summer they were wont to bring up their cows from the low grounds to graze at the foot of the hill. They made butter and cheese here. By the side of a stream a house or sheiling was built with stones and roofed with branches. But where they got the branches, I do not know, as there are no trees in the neighbourhood. The walls of this old sheiling were covered with *Cystoperis fragilis*, the Brittle Bladder Fern. But, after examination, we found no new varieties.

We now ascend higher up the mountain ; we thought it would be advisable to split partnership—my friend taking the Perth side and I working towards Argyllshire, but never leaving Perthshire. This worked admirably, as both were perfectly familiar with all the plants sought after.

We made a selection among the plants to be found. I shall now describe some of the Alpines and, later, some of the Ferns collected.

With regard to Alpines, dwarfism is a structural feature. I shall give you reasons for that later. The first alpine I take is *Sax. oppositifolia*, or Red Sax. This is a trailing plant with a loose habit. The leaf-stalk is of a bright red colour ; the leaves tiny and dark green,

clustering in rosettes round the stem. The plant is found hanging over rocks from 6-12 inches, with its masses of little bell-shaped bright rose flowers. Often the flowers appear as soon as the snow begins to melt. This plant is difficult to cultivate, the difficulty being to get it to flower freely. There are some varieties sold by nurserymen, much easier of cultivation.

The next plant I refer to is known by at least four names : *Silene acaulis*, Cushion campion, Stemless Alpine and the Moss Campion. It is perhaps our prettiest Alpine plant, and is by no means scarce. In half an hour one could collect as much as could be comfortably carried, and in any size from that of a shilling to a chair-cushion. As the name indicates, this is a cushion-plant, and I do not know any plant that has more right to be called such. Found growing on a flat surface, it forms a perfect circle and is so firmly packed together that one could almost sit on its rounded top without injury to the plant. Again, if found growing in a restricted, irregular area, it will pack every corner and reproduce every curve to the minutest detail. When in flower it is just one mass of rosy pink flowers, about half an inch in diameter, almost covering the beautiful green foliage. This plant is also difficult to cultivate, one of the reasons being the presence, in most cases, of a large tap root. It seems to require the assistance of the wet rocks to fix its long roots. Any party wishing to grow this plant would be advised to select a young specimen.

My next plant is *Sax. aizoides*, the Yellow Mountain Sax. *Sax. aizoides* is a prostrate plant, and is found growing by streams or water-rills—sometimes pretty far down the mountains. Its foliage is of a light green ; the flowers numerous, and of a bright yellow. The first sight of this plant seems to fascinate one. Lift a plant, say, from the top of a wet stone, and it becomes a shapeless, tangled, mass. One is apt to say it is not worth taking, but no sooner have you replaced it than it is looking at you again in all its glory.

Sax. hypnoides is the next alpine, and I think it is the commonest of them all. It grows in almost every garden where dwarf plants are grown, and it will grow in almost any place. It grows in a loose cushion, covered with white, starry, flowers. I have seen plants of it 6 feet in diameter. In fact, there is no limit to its size.

Here also we find *Sax. stellaris*, commonly called the Starry Sax. Its leaves are spread out in a circle flat on the ground. The flower-stalk, 6-8 ins. high, bears white flowers. The plant is not very attractive and is usually found growing on wet lime-stone rocks.

Dryas octopetala, or White Dryas, now claims our attention. This

beautiful alpine plant of trailing habit bears woody stems with rich green leaves—whitish on the underside. The flower-stems, about 4 ins. long, are upright ; and the flowers, large, pure white, with conspicuous yellow stamens, and are very similar to the single dog-rose. This plant is a member of *N. O. rosaceae*, or Rose Family.

The plant inhabits the rocky region, and when seen in long stretches hanging over the rock-face with its carpet of pure white flowers, is a striking sight. *Dryas octopetala* takes a good grip of the soil and its wiry roots descend deeply into the crevices of the rocks. It is a plant difficult of cultivation in a rockery.

A word or two on another small plant—*Thalictrum alpinum*, or Meadow Rue—*N. O. Ranunculaceae*, or Buttercup Family ! The plant is diminutive-looking, and has not much appearance. The leaves, after the character of the order, are divided. The flowers are on a stalk about 6 ins. high, and yellow and purple.

Trollius europaeus. This plant grows about 12 inches high and has cup-shaped flowers of bright yellow, about 2 inches across. As this plant is well-known to most of you, further description is unnecessary.

This exhausts my list of Alpine plants. Although more might have been commented upon, these I have selected for attention are most typical.

With regard to the relation of Alpine plants to their environment, we have to consider chiefly *Low Temperature*, *Keen Drying Winds*, and *Intensity of Light*.

As I said before, dwarfism is a feature of their structure. But, on the other hand, the flowers are specially bright and attractive to insects. Early flowering is another characteristic. Smallness of leaves is a result of the factors of environment, but are essential to stand the drying east winds. Take for example of very small leaves, *Sax. oppositifolia* and *Silene acaulis*. If the leaves are not very diminutive, then they are toughened to prevent evaporation, e.g. *Dryas*.

We often find, too, plants of the same kind growing under conditions quite opposite to each other, e.g. one plant growing in a marsh, and another in a very dry place. Each one thrives to all appearance as well as the other, the difference being that the plant growing in the marsh makes longer and softer foliage, with very few flowers ; while the plant growing in the dry place, not having the same amount of moisture as the wet plant, makes shorter and firmer growths, and in place of a few straggling flowers forms a perfect mass of them.

Allow me to draw your attention to another class of plants, namely, Vascular Cryptogams, or simply Ferns.

The first is *Asplenium trichomanes*, or Common Maidenhair Spleenwort or Blackstem. This fern grows in all parts of the British Isles. It is usually found on old walls, hedge banks and rocky fissures, both in sun and shade. From its root-stalk arise many evergreen fronds, with stiff, smooth stems of a dark purple or brown. The pinnae are of a very dark green, and diminish in size towards the top and bottom of the frond. The fronds are sometimes spreading, but usually erect, and vary in length from 2-6 ins. But when growing in a moist ravine, with water running nearby, and in deep shade, the fronds attain the length of 12 ins. Although common, the fern has every claim to be called pretty.

It has a near neighbour in *Asplenium viride*, or Green-stem. The fronds in this case, however, are of a pretty, delicate green all over, except where the fronds are attached to the roots, where they are of a dark glossy brown colour. The fern is not common at all, and is very local in its distribution. To find it, you must search the mountain rills where, on wet rocks, you will find it growing in every conceivable way. But to see it at its best you must look under a large shelf of dripping rock. Its long pale green fronds just peeping out to catch a glimpse of light. This fern proves itself a lover of abundant moisture and deep shade.

My next is *Polystichum lonchitis*, commonly called the Holly Fern. This is also a mountain fern. It will grow with less moisture than the last, *Asp. vir.*, but must be in deep shade. The fronds are from 6-15 ins. long, very dark green, and narrow, spear-head shaped. The outline is very hard and prickly, pinnae overlapping or imbricate. The Holly Fern is mostly found growing in shady rock cavities, or loose rocks. Once established in a garden in a suitable position, this fern is not very difficult of cultivation.

I now come to *Cystopteris montana*, one of the Bladder Ferns. This is without doubt one of our rarest and most beautiful ferns that inhabits our mountains. It is found growing in very few places. The roots, coming from a rhizome, are thread-like, with black scales. The fronds are triangular in outline and occupy about one-third of the rachis or stalk. The rachis is scaly at the base; the pinnae are alternate, the lower ones much longer than the upper. When the fronds are fully expanded, they are so fine in texture that they are almost transparent. It is almost impossible to describe the beauty of this fern. It is found growing in very wet, loose, lime-stone rock, and its fronds are so brittle and tender as to necessitate absolute protection from wind and sun. I may say that this last plant was the one, above all, I wanted to collect.

A few words now on the source of nourishment of plants in an Alpine habitat may not be out of place.

We all know that soil is just powdered and wasted rock washed down from the higher grounds. Everything mineral and chemical found in rock, with the exception of alumina, is found in plants. Water is continuously running down the rocky slopes, bringing with it soluble wastings of the rocks, and the organic matter from the dead roots of vegetation, combined with the humus from the animal and bird-life that inhabit the mountains. This makes soluble compounds of everything required to nourish plant-life. Ventilation of the soil is another very important point. Oxygen at the roots is absolutely necessary for the absorption of water. Plants growing high up the mountains there, have a longer period of light during the day than we have here. This gives them a longer season to complete their life-cycle, and before winter comes on the foliage is thoroughly ripened. This enables them to stand the severe winter weather they have to pass through. They have another advantage which we on the low ground do not have. I think that much of the damage and death that occurs when we bring them here is caused by wet and moisture, not on the roots, but on the foliage. In their native habitats, the position these plants mostly occupy is hanging over the rock-face. Now, after the heavy mountain rains, the strong, dry atmosphere dries the foliage in this position in a very short space of time.

The reason I think that these plants grow so well in their native habitat is the assistance they derive from the natural rocks, and the cold atmosphere caused by hoar-frosts at night during the growing season. This retards and stunts the growth. Thus, by the time winter comes on, the plants are thoroughly hardened off.

Snow and ice also afford protection to these plants in the winter season. The wet rock-surface is covered with ice, under which fresh water is trickling. With this natural protection on the surface, frost at no time can reach into the tender roots fixed in the deep fissures of the rocks. Snow in the drier parts acts in a like manner.

From a consideration of these plants in their native habitat, it is no wonder that our cultivation of them here is rarely successful. We are very much handicapped in that we cannot transport the atmosphere with the plants.

These plants seem to say, "Stand and admire us ; even pluck a flower ; but, disturb our roots, and transport us to another habitat, and we may frown and die.

As time was getting on, and I had not seen my friend for three hours, I thought it was time to prepare for our return journey. So, coming down the mountain on to a projecting point, I noticed my friend below, taking things easy in the glorious afternoon sun. I was not long in being at his side. Our first words were about our collection of plants, and that was quite satisfactory. We hurriedly packed up and set out for Tyndrum Station, crossing on our way the Baby Tay, very much reduced in size since morning. Our return journey was more laborious than pleasant, with a walk of five or six miles before us, and our vascula and bag, packed with plants in every corner. Even our pockets had to do service in this way. Still, there was worse to come, for we lost our way and had not the least idea in which direction the station lay. After listening, we thought we heard the sound of a train, and set off in that direction. This was by far the roughest footing yet encountered. After nearly an hour of tumbling in and out of deep ditches, now on a height, now out of sight in a hollow, we arrived one mile to the east of Tyndrum Station. We completed the last stretch, scarcely able to drag one leg after the other, ravenously hungry, at fifteen minutes to train time.

We dropped our heavy bags on the seat, a welcome relief, and went in search of water to make tea. A lot had happened since our last meal. By the time the kettle is set agoing, half of our time is gone. A few minutes and the signal drops ; the water is not yet boiling. All our belongings are spread on the seat—a motley collection. We make the tea with the water as it is. Taking the cream bottle, we find that with the jolting about all day in our bag, it has churned into butter, and nothing will come out of it. Just at this minute the train slows down. We drank the tea, such as it was. Time for packing up was out of the question. Banging everything hastily onto the floor of a compartment, we tumbled in ourselves, glad to get a rest to our weary limbs.

All this was not done without some commotion. We had a fair proportion of the inhabitants of Tyndrum as spectators, including the Station-master, Porters, and no less a personage than the village Policeman, McTavish. Curious fact, they were careful to keep themselves at the other end of the station from us. Perhaps they took us for the redoubtable Weary Willie and Tired Tim ! To judge from their faces and gestures, however, they thoroughly enjoyed the fun, and as the train moved out of the station they gave us a right Highland farewell, McTavish uncovering his head.



Photo—J. D. Crossland

Fig. 18—*Gentiana lutea* (at 5,000 ft.) Arosa, Switzerland

Botany and Bogs

By A. JACOT GUILLARMOD

THIS ARTICLE OWES much to my days as a red-gowned student in St. Andrews, when Mr. Mowat, editor of this journal, endeavoured to interest me in South African succulents such as *Doreanthus* : I, being a South African, was singularly uninterested in succulents, preferring blue poppies and primulas from Sikkim ; my lecturers tried to 'put over' ecology and taxonomy : perversely I preferred fiddling with physiology and phytopathology ; my student companions thought I was daft to go from the faculty of arts to science, and, at a guess, still think I am a divergent type to prefer 'ploitering among peat bogs', as one of them wrote to me a while ago, to the more normal occupations of most people.

The spirit of enquiry and wanting to know what was over the next hilltop that was engendered by all this, came to a climax when I went to live in Basutoland, which is a country made up mainly of mountains, with only a narrow strip of lowland country (altitude 5,000-6,000 feet) on the west, where most of the population lives. The first barrier range of mountains was clearly visible, some twenty miles away, snow-decked in winter, and often cloud-capped in summer, the rainy season. It was a constant challenge to me, though most other Europeans in this little country preferred to turn towards the vast open plains of the Orange Free State and the bright lights of towns.

No one could tell me much about the mountain country, and still less could I find out about the plants growing there, so I had to go to find out for myself. I have made many trips, on horseback, or, more often, as a botanist usually does, on foot, with the horse carrying a lighter burden in saddlebags overflowing with plant specimens. The pack animals bear, besides the tents and food, boxes of collecting equipment and packets of drying plants, and camp is set up where one can find a fairly flat place to pitch a tent—not always so easy in these rugged mountains, for often the flat spaces are marshy, and what looks like a smooth green sward turns out to be a bog covered with a short growth of plants that does not support the weight of a sheep, but quivers and shakes till water wells out over the surface of the plants, from the sharply-cut hoof marks.

These bogs, though not like the mires of Britain, provide a reasonable depth of peat in many cases : however, this peat is formed mainly from flowering plants, the typical moss base of most bogs in the northern hemisphere being missing, and *Sphagnum*, the main bog moss

of many of the world's largest mires, is entirely absent. Another peculiarity of the Basutoland bogs is that they are often, or almost always, formed around springs of water welling up through Kimberlite pipes (pipes of diamondiferous gravel cutting up through solid rock strata). The whole mountain system of Basutoland has been formed by erosion, on a gigantic prehistoric scale. The vast peneplains laid down by outpourings of lava from extinct volcanoes have been etched out deeply to give mountain ranges and valleys in the basalt rocks, and all the bogs of the country, except for a few minor lowland ones, are on entirely volcanic soil.

Along the escarpment edge, which forms the mighty Drakensberg mountain range, and which is the boundary between Basutoland and Natal or East Griqualand, these bogs are most common, because this is the area of greatest rainfall. Elsewhere, smaller in extent and fewer in number, they still occur, but diminishing with the diminishing rainfall as one travels west and south in the mountains. Most are to be found on hill-slopes or at the heads of the valleys, seldom in the lower-lying valley bottoms. The bogs are the source of the mighty Orange River and of all the rivers of Basutoland that drain into it, and they form the head of a drainage basin system that starts within a hundred miles of Durban, on the Indian Ocean, and ends by the final flow of the waters of the Orange into the Atlantic, nearly a thousand miles westward. The bogs are therefore very important for much of Southern Africa, as well as being very interesting botanically. The highest mountain in Southern Africa, 11,425 foot Thabana Ntlenyana, is half encircled by bogs two or three hundred feet from its crest, and the lowest altitude for the bogs on volcanic soil is about 6,000 feet, so that they range over five thousand feet—nearly a mile—vertically.

Bogs are of a few main types—those with a low, close growth of plants seldom more than an inch or two high, forming a dense cover, matted and intermingled : those with clear water standing or running gently through a taller growth of upright plants : those with a tumbled, irregular mass of hummocks and raised ground among pools filled with algae and edged with mosses. In the first two, open, steep-sided pools may occur, often centred on a spring : in the last, the spring is usually covered over by a mound of mosses and algae.

In the first type of bog, one finds generally three species of *Limosella* (*L. longiflora*, *L. capensis* and *L. grandiflora*), all with small white flowers, sometimes tinged with mauve : the small, fine, white-flowered aquatic *Crassula natans*, *Anagallis huttoni*, which has pale pink or cream flowers, large in relation to the size of the leaves, the sky-blue

Lobelia aquatica, which has so many flowers on it at times as to colour the whole bog blue (and the flowers are larger than those of most Lobelias), species of *Rhodohypoxis* (principally *R. rubella*, which has tiny, deep pink, rose pink or white flowers, and is relished more than any other plant by the sheep which nibble their way gingerly across the bogs), *Sebaea marlothii*, with rich yellow flowers up to an inch in diameter, a buttercup, *Ranunculus meyeri*, which, like most of the other plants mentioned, ramifies through the whole mat of vegetation, sending up its star-shaped flowers through the other plants, and, often, clumps of *Eriocaulon baurii*, which has fairly large button heads of greyish-white flowers on thin, wiry stems, raised well above the translucent green leaves. Around the edges of such bogs, or occasionally rising from within the area of low-growing plants, one may find islands of redhot pokers (*Kniphofia caulescens*), tall plants up to one metre high, with blue-green leaves and large, stiffly erect heads of red, shading to yellow, flowers. A tall sedge (*Carex*), with inflorescences of dark brown, may also occur with the redhot pokers, but both these plants are more characteristic of the second type of bog. *Danthonia* species, tall, stiff-leaved grasses, about one and a half metres high, may surround bogs, but do not enter them, being confined to seepage areas and ledges of wet rock, or stream banks. These grasses with spear-pointed leaves making riding or walking through them a painful process for animal and man.

In the second type of bog, the whole of the marshy area is covered with a dense growth of tall sedge and redhot poker : when these are in bloom, the bogs are such a splash of vivid colour and of such a size, that they are visible from a long way off. Nearby, the scene is even more colourful, as malachite sunbirds, brilliant, metallic green-coloured nectar seekers, flit in vast numbers about the redhot pokers. Orchids (*Pterygodium* spp.), with pale greenish-white flowers, hide in the protection of the taller plants, and *Eriocaulon*, mentioned before, but here growing much taller, adds to the beauty.

From a distance, the third type of bog has a yellow-green appearance, but nearby it is seen to be dotted with many flowers of various colours, principally *Athrixia fontana*, which sends up, on a six-inch long stem, from the basal rosette of flat, somewhat hairy leaves, a daisy type of inflorescence, wide open in sunny weather and silvery-white in colour, but closed in cloudy or dull weather and then a soft pink and grey. Shining white heads of *Helichrysum* species add to the colours of the bog, and these, with the *Athrixia*, and often plants of a purple-flowered clover (*Trifolium burchellianum*) and mauve

geranium (*G. incanum*), generally grow on raised hummocks of drier ground found scattered in the marshy area. There is often a small sorrel (*Oxalis depressa*), on these hummocks also, or on the edges of the wet ground, and this is the first invader of any small patch of wet gravelly soil among the stunted bushes surrounding the bogs. *Hesperantha baurii*, a pink-flowered iridaceous plant, favours wet conditions too, and the upright scapes of clear yellow flowers of *Anoiganthus breviflorus* can often be found where the plants grow in sheltered places with their roots almost in clear running water, leading from this or other types of bogs. *Crassula galpinii* also likes to 'get its feet wet', but is generally found in small, saucer-shaped hollows, gravel-filled and water-soaked, on hilltops and flat ledges of rock.

In the clear pools of the bogs at the heads of the valleys near the escarpment edge, and a little way in from it, *Lagarosiphon muscoides* grows profusely, and species of *Utricularia* can also be found. At least one other species of *Utricularia* grows in among other plants in drainage areas, where water trickles out of the marshes: the flowers are deeply hooded and blue-purple in colour. Two species of *Wurmbea* are also found among the wet-ground plants of the mountains, one with large white or creamy flowers, banded with a deep maroon section on each perianth segment, so that from a distance the flowers look like small archery targets; the other has much smaller, yellow flowers. *Geum capense*, with large and attractive single, clear yellow flowers, also likes to have its roots in wet soil, though it would not appear, superficially, to be a plant suited to such conditions. *Ranunculus cooperi*, which has very large, shining yellow flowers, and, depending on the amount of moisture usually present in its habitat, small to large peltate leaves, like fleshy 'nasturtium' leaves, also grows in wet, shaded places, as does a small *Holothrix* (Orchidaceae), with greenish-cream, bearded flowers. *Brownleea macroceras*, another orchid, with large, pale mauve-pink or almost white flowers, also likes moist conditions but not sodden soil. Some of the Senecios also grow well where the soil is moist to wet—*S. concolor* being one, with heads of magenta flowers. Oddly enough, some succulent plants, such as species of *Delosperma*, seem to prefer, and to flourish in, seepage areas.

Each of the Basutoland mountain bogs is full of interesting and attractive material, and when the plants are in full flower provides a feast for the eye, but they are vastly different from the typical bogs of the northern hemisphere in their floral composition. Where northern bogs have cotton grass and mosses in profusion, and, often, in slightly drier places, a dense growth of heather, mixed with sedges, these

southern hemisphere bogs of the Basutoland mountains have very little moss growth, but masses of brightly flowered plants, and the shrubby growth of heath and composite bushes of the higher slopes of the mountains is not mixed with the peat mires, though it may occur near seepage areas.

A danger to which they are now exposed is one, too, which is unlikely to affect northern marshes : because of the presence of Kimberlite pipes in the bogs, many of them are now being dug over, and partially destroyed, in search for diamonds. Fortunately, however, no one has yet thought of digging out the peat and drying it for fuel—this would be a tragedy for all Southern Africa, as it would turn the mountain area into a desert and the Orange River into an intermittent torrent running only after storms, at least in its upper reaches. At present, the Basutoland mountain rivers run clearly and swiftly, and could provide an enormous quantity of cheap, clean water, by gravity feed, as well as electricity, for much of Southern Africa.

Nowadays, getting into the Basutoland mountains is easier in some places, as tracks suitable for four-wheel vehicles have been hacked out of the mountain sides, but travellers still wonder, as they look apprehensively down a drop of some hundreds of feet almost sheer from the side of the truck, if a horse, or one's own two feet, are not safer ! Modern transport by these means may be faster (nine miles of breath-taking ups and downs in two-and-a-half hours, perhaps, and the threatening storm breaking in time to make the last mile or so down into the first mountain valley, a slide with locked wheels), but to a botanist, the slower ways are more rewarding, and within the mountains most travelling is done on horseback. Camp is set up often at the end of a very long day's ride, and appetites grow to enormous proportions when an early breakfast at sunrise is followed by a full day in the field, with lunch a handful of dried fruit and clear stream water to drink. The stew pot may be enriched with a handful of wild mint, and unoccupied members of the party may catch a few fish in the nearby river (trout, both brown and rainbow, have been introduced in the mountain area), but after the welcome evening meal, much work still has to be done, by the light of pressure lamps, in tending to the drying and the live specimens one has collected, before one can tumble into bed, thankfully escaping the often bitter cold of a summer's night.

The abiding impression of utter peacefulness is the strongest memory, and perhaps this is what makes the mountains of Basutoland so attractive—that, and the clear air, wide vistas, and fascinating plants.

Dwarf Conifers

by

H. G. HILLIER

This booklet by H. G. Hillier is a much extended and revised version of a paper read at the Third International Rock Garden Conference of 1961.

The work done by the author in trying to disentangle the chaos existing among dwarf conifers and to bring his references up to date makes this an invaluable booklet for garden lovers, particularly those interested in rock gardening. Its eighty-two pages are well illustrated with twenty-five black and white photographs of individual conifers.

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Dwarf Conifers at Sizergh Castle

a property of the National Trust

written and illustrated by GRAHAM THOMAS

THE ROCK GARDEN at Sizergh Castle, near Kendal, Westmorland, was constructed in 1926 by Messrs. Hayes of Ambleside for the owners, the late Lord and Lady Strickland. In 1950 Mr. Henry and the Honourable Mrs. Hornyold-Strickland, together with their son, Lt.-Cmdr. T. Hornyold-Strickland, gave the estate, house and contents and adjoining lands to the National Trust.

The rock garden lies to the north of the house, in a hollow which used to be an orchard. The attractively laid Westmorland limestone rises up on all sides and has numerous paths around several pools connected by streams which are fed from a lake on higher ground. There are therefore many warm and sunny and also cool and shady slopes, together with good moist beds around the watercourse, with deep soil. The stream beds and pools have recently been repaired and a start has been made to improve the planting, which had suffered during a period when labour was not forthcoming. Ground-covering plants such as hardy geraniums have been added to keep the wide bays and sloping areas under control until choicer plants become available in greater quantity. Re-stocking a rock garden of this size—approximately one-third of an acre—is a costly business, and the Head Gardener, Mr. Philip Carr, would be glad to hear from anyone who has good surplus plants available for exchange.

All around the rock garden are conifers rising to some 15-20 ft., some of them large types, such as *Pinus wallichiana* (*P. excelsa*), but mostly of smaller growth like *Chamaecyparis obtusa* and its forms, *C. lawsoniana thrandtensis*, *Pinus montana uncinata* (22 ft.), and the very charming Japanese species *P. parviflora glauca*. These are all rather large for the average rock garden, but among smaller forms there are some remarkable specimens, particularly of piceas, in fact I have seldom seen better plants. As all of them were planted in 1926 or thereabouts, one can get a very good idea of the relative growth made by the different forms. *Picea abies* (*P. excelsa*) *pseudo-maxwellii* is 8 ft. in diameter by 3 ft. 6 ins. high (fig. 24) ; *P. a. ellwangeriana* 14 ft. by 5 ft. (see frontispiece) ; *P. a. clanbrasiliiana* 7 ft. 6 ins. by 4 ft. 6 ins. ; *P. a. pendula* 8 ft. by 3 ft. 6 ins. All of the above are remarkably uniform 'bun' shapes, while a more upright variety, *P. a. nana compacta crippsii*, has reached about 7 ft. in height and 5 ft. through (fig. 25).

There is a most striking carpet formed by *Abies procera* (*A. nobilis*) *glauca prostrata*, 15 ft. wide ; while the piceas are brilliant green in the spring, this abies is steely blue-grey and retains much of its grey colouring through the year. At one of the entrances one walks under an arch formed of *Pinus mugo mughus* (*P. montana mughus*) and *Juniperus chinensis japonica aurea* (fig. 26), completely different in their dark green and golden-olive colouring respectively. On one of the rocky banks there is a large spreading specimen of *Tsuga canadensis pendula* 14 ft. wide by 3 ft. 6 ins. high. There are numerous specimens of other species and varieties.

To carry on the tradition at Sizergh a number of young conifers have recently been planted, including some dwarf cedars and pines, likewise some Japanese maples have been added to supplement the fine examples of *Acer palmatum atropurpureum* and *A. p. dissectum* varieties. If it were only planted with dwarf conifers and maples the garden would have much interest through the season ; there is, however, a great variety of ferns, including rare forms of *Osmunda regalis*, the Royal fern. After the primulas and rodgersias in the moist beds and the many dwarf heathers and rock plants have all finished flowering, the garden once more becomes colourful when the willow gentian (*Gentiana asclepiadea*) starts into flower in September (fig. 27). It seeds itself and its graceful waving plumes of blue in various tints provide a glorious finish to the year's flowers.

Members of the National Trust and the National Trust for Scotland are admitted free on Wednesdays, April to September, from 2 to 5.45 p.m. Admission to the public 2s. 6d., garden only 1s.

Growing Alpines in the Redwood Region of California

By E. L. NELSON

To most people, I suppose, the mention of California means sunshine and warmth and ideal weather. Along the coastal area of northern California through Humboldt and Del Norte Counties the two most north-west counties of the State, there is much beside sunshine. The climate here, in the home of the mighty redwoods, is anything but dry, and often not too warm and very windy as it is along any sea-coast. While the weather seldom drops to freezing, and then only one year out of three, it seldom ever climbs above 70 or 75 degrees.

While it is perhaps one of the best climates in all the world in which to grow rhododendrons and azaleas, it leaves much to be desired for the raising of alpinists. The frost which they need to put them to sleep, the snow they need for winter cover, and the real heat of the sun in summer which they love and need to complete their cycle are all missing here. Added to this is the constant wind and salt of the ocean that really makes the growing of the tiny plants that love the rocks a real challenge and one that only the true lover of the alpinists will undertake. Surprisingly the ones that do manage to survive stay put remarkably well and seem to retain their true characteristics surprisingly. To me this is truly remarkable in view of the fact that our rainfall ranges above 60 ins. annually.

The lime-encrusted and the mossy saxifrages do well. The dianthus thrive, the tiny shrubs and creepers do well. Most of the choice dwarf rhododendrons are very happy, many of the campanulas thrive and some do not. Even the Lewisias stay, although they must be planted well back under a rock to endure.

Here at coast level there are very few or no alpinists. A few good alliums, some very dwarf and nice ceanothus, creepers really, a few brodiaea and liquorice or grape ferns, the usual run of shade plants, and the choice little *Trillium rivale* that grows on moist rocky banks in light shade seem to make up the lot. There is, however, a very choice wallflower that grows south of us on the coast that should be in every garden. *Erysimum concinnum* is without doubt one of the finest. It makes a mound a foot across and as high, and from late fall until late spring it is covered with fragrant creamy blooms. It takes rain or cold and nothing seems to daunt it once it decides to bloom. I am planting it with *C. linifolius*. It can be trimmed or sheared to keep it to a smaller size.

Just back into the hills over the ridges that are forever moist from the sea are not too many plants, but some good ones. Farther north into south-west Oregon are some real gems. As we travel into the drier, higher regions there are quite a few sedums and ferns that are good. Many of our sedums have pink blooms. The little *Delphinium nudicaule* grows there too, its tiny spike of bright flame perched on top of a rock outcrop makes you happy to just see it there. This is an odd one and it has a companion in a sulphur yellow coloured one which really isn't at all attractive and not worth the bother. The California Fuchsia grows in these rocks too, but it is sure not very common around here. The Pentstemons range from bright blue to

rose to red and there are many kinds. There are many different erythroniums in spring from whites, creams, yellows, pinks and through to lavenders. The gold-back fern is everywhere in the rocks, *Ceropteris triangularis*, and it stays put at sea level, the alpine liquorice fern, *Polypodium hesperum*, the cliff brake or *Pellaea densa*, the precious little lace fern, *Cheilanthes gracillima*, *Cheilanthes californica*, which loves to be squashed between layers of rock, as does its sister, *C. gracillima*, but *californica* has slender little fronds that look like rows of beads, tiny ones, and it likes to hang upside down. One of which I am very fond is a lovely stiff-stemmed one that sends up a single blue-grey frond about three inches high and then goes a little way and sends up another. Occasionally it puts up three or four in a group, and it loves to follow down a crevice. It is *Pellaea brachypteris*. Farther south again grows the coffee fern or *Pellaea andromedifolia*. It is a lovely one about 10 ins. high.

This area is rich in native Iris. *I. douglasiana* varies through many shades and colours, is sturdy and very attractive. *I. macrosiphon* seems to be a large complex group that has the Iris specialist puzzled. (It seems easier to just throw anything that doesn't seem to go anywhere else into the group). There is some justification for the confusion about Iris, because they are crossing and recrossing and doing a fine job of generally misbehaving. There is much confusion that will take a great amount of work to straighten out. *I. innominata*, a tiny one that ranges from blues to creams to oranges in its native habitat, is choice. This spring my friend, who is a member of your group, and I, two zany old ladies in a badly out-dated 'chevvy,' made several trips to see, photograph, and if possible to get some seed of *I. innominata*. I have grown it in my garden for many years, but had never seen native stands of it. It took us two years to find it and then the most amazing thing, on one road all of them were blue, all shades of blue but only blue, pure stands for miles and miles. This was called *I. thompsonii* for a while, but to all intents and purposes it is a blue *innominata*. The following week we hit another road and here for miles they were all shades from cream to deepest orange, pure stands again. Near the Oregon-California border *I. chrysophylla* runs from blue to pinkish and then gets a dirty cream and then turns deep yellow, and before you get adjusted you realise that what has happened is that you have run out of *chrysophylla* and into a cross and finally are seeing the beginning of *I. bracteata*, the pine Iris. This one must have a very acid soil. Its companions are pines, oaks and madrone.

It is lovely, has a fatter bloom and usually two to the stem, stems 6 to 9 ins., the flower with a wide yellow fall streaked from centre to base with a deeper yellow, the standards are paler and frilled with brownish purple pencilling.

By the time we find the pine iris we are into south-west Oregon and in the Siskyou serpentines there are many fine things, mostly all acid lovers. Here we find *Dicentra oregona*, a lovely thing with its broad silver-plaited leaf, the blooms a lovely cream, each petal touched at the tip with a purplish pink spot. Not high, about 9 ins., it is lovely and does surprisingly well after transplanting and in the moisture. In these same serpentines grows a lovely epilobium. It blooms only a couple of inches above the ground, although its stems are long bare roots wound through the rocks and tough to transplant. Seed is best. Its convolvulus shaped large rose-coloured bloom begins in late September and lasts till snow covers it. It has tiny, fat, red seed pods, inch-high cylinders. Little half-inch blue-grey leaves complete the picture. Lester Rowntree calls it *Epilobium obcordatum*. In this same area grows a foot-high lily suitable for rockery. It is *L. bolanderi*, choice and scarce. It grows almost on a knife ridge in the debris of the talus or comes up through some low shrub where the leaf-mould is deep and the drainage is sharp and deep. It is brickish red in colour, trumpet-like in shape, and has brown or black polka dot markings.

There are several good violets here too, among them the pine violet, *V. lobata*, *V. hallii*, a saucy little treasure, *V. cuneata*, and several more.

In trying to grow many plants I have known and loved, I have found that if I grow them from seed they seem to do better and it is really not much slower. They seem to adjust better than a collected plant or one I buy from a grower in a different climate. Those of us who try to grow alpiners in this climate find that the only way we can have them at all is to observe a few rules. First, we must give them perfect drainage. We must give them as nearly the same soil elements that they had as we can, and we must bring in shale from the mountains for a spring and fall topping, for it helps to drain away the water without washing the plant away. Some we must grow from seed so they can acclimatise and the shock of a different climate is lessened.

Then we pray a little and trust to luck. It's a challenge ; it's not easy, but it's worth it !

Random Notes on Plant Collecting

By DAVID LIVINGSTONE

DURING THE past few years my wife and I have spent our summer holiday on the Continent. We always leave this country by air around the 9th or 10th June and return some sixteen days later. The first half of the holiday we spend at a place of her choice and the second at a mountain village of my choosing. Our main intention is to have a restful holiday and even in the mountains plant collecting is secondary. The arrangement works beautifully and I recommend it to those who have not tried it.

In 1963 we spent eight days at Riva on Lake Garda and then moved on to Selva in the South Tyrol, where a party of members made their headquarters three weeks later. A report of their sojourn there appeared in *Journal No. 34*.

Selva is a delightful village at a height of just over 5,000 ft., with many reasonably easy walks and wonderful scenery all around. There is a considerable amount of building construction being carried on, as is the case in many of these mountain villages, but the architecture is varied and of pleasing design. In June the main tourist season has not begun and for this reason the teleferiques were not in operation. This was a limiting factor on the heights to which we could ascend, but on the other hand I think the alpine meadows were at their best and in any event there were many interesting plants to be found within fifteen to thirty minutes' walk from the hotel.

I will make no attempt to describe all the plants we found, but confine myself to those I liked particularly. It was obvious from the leaf evidence that in the spring the meadows in the village had been a mass of crocus flowers, presumably *C. vernus*, and that in the previous autumn the whole area had been ablaze with *Colchicum autumnale*. It was an easy matter to collect bulbs of both, as all one had to do was to go to a site where foundations were being prepared for building and there they were lying exposed. I suppose the builders thought I was a 'head' case. One crocus flowered this spring. It had a white flower with purple staining at the bottom of the petals. As I write towards the end of August four of the colchicums are in bloom. They are much smaller than purchased *C. autumnale*, but this is perhaps because they have not yet attained their full strength.

Behind our hotel, Posta al Cervo, there was a pleasant walk along an ascending footpath at the edge of a wood. Along it there were

numerous *Clematis alpina* with beautiful blue nodding flowers. Its stems twined about in small trees or shrubs usually only to a height of a foot or two, but one specimen we saw must have been about five feet high. This clematis is difficult to collect with a decent root, but it can be brought back and established with care. The smaller the plant the more easily it can be collected and established. At the edge of this path too there were many of the intriguing *Pyrola uniflora* with little white flowers. It appeared to be growing in little else than spongy moss and decayed pine or spruce needles. It has very fine white hair-like roots and it too is difficult to collect and even more difficult to establish. I have succeeded in keeping one alive for just over two years, but even now it has only one stem and is but one inch high. This one was collected at Seefeldt in Austria, another delightful mountain village. At the end of the path there is an open meadow and in the short turf sloping down to the south from the wood there were many very dwarf specimens of *Daphne cneorum* covered with the most beautiful clear pink flowers which scented the warm air. They could not have been more than two inches high, including the flower clusters. The fleshy roots are long and therefore difficult to extract without injury. Despite the care with which I lifted two or three, they died after two months or so at home.

This *Daphne* was to be found in several other places near the village, always in much the same conditions, but the taller *D. striata*, which I do not find nearly so attractive, seemed happier in sparse woodland off the Val Lunga. I regret to say I had no success with this either. However, I shall never forget finding a patch of this *daphne* in the Val Kedul (I hope the spelling is correct). It was about nine feet long and three feet wide and in full flower. The morning had been wet and the air was warm and heavy with the scent from the many flowers. This was an earthly paradise and to add to my joy *Soldanella minima* with countless little white bells, deeply fringed, was everywhere. It was easily collected and established, but it does not bloom for me with the same abandon as it does amongst its native moss. In this same area I saw the most beautiful *Primula auricula* growing in a chalky pocket in a cliff face, not high but almost perpendicular. I reached it quite easily, put one in my jacket pocket and settled the others back into the cliff. Then I looked to see how I was going to get back down and my heart came into my mouth. With much care and not a few slips and scares I made it safely. My *primula* was well worth the trouble, because it turned out to be not *P. auricula* itself

but a strictly local form *balbisii* which has no farina on its leaves and stem, and the flowers have no scent. What it lacks in those respects is more than made up by the intensity of its yellow flowers. This plant proved not difficult to establish and it had two trusses of flowers this spring.

Not far away on a large boulder, subsisting on chalk dust, or so it seemed, and decayed vegetable matter in little hollows in the rock, were two saxifrages which flowered after I brought them home and which flowered again this spring. They were *S. caesia*, which looks like a small silver saxifrage but is in fact a *kabschia*, and the hybrid *S. tyrolensis*, which has *caesia* as one of its parents. Search as I could, I was unable to find the other parent, *S. squarrosa*, but it must have been somewhere around. These saxifrages are not so showy as some of their better known brethren, but they are dainty and have a quiet charm which I find attractive.

In the Val Lunga within fifteen minutes walk from our hotel and only twenty or thirty yards from the path we found *Rhodothamnus chamaecistus* with much bigger flowers than it has produced for me in cultivation. It was growing in sparse woodland in a peaty substance over-laying pretty rough limestone. As seen there in the wild, this is indeed a magnificent shrub. It is of course a fine shrub for the rock garden or alpine house, but it has proved a bit temperamental with me. I have never tried limestone in the compost and I now wonder what the result might be.

We went by public bus one day to the Selva Pass for an hour or two, but it was cold and wet most of the time. Still, we found some interesting plants which we had not seen elsewhere. *Draba aizoides* and *D. tomentosa* were both growing in very rough limestone scree and both were in full flower. The former has yellow blossoms and the latter white. They survived the journey home, but they slowly pined away. Perhaps I was too kind to them after the barren desolation of their habitat! *Primula longiflora* was growing in the same area in small quantities, as was *Anemone vernalis* which, I think, looks so dowdy and unattractive in the wild.

Growing out of cracks in the huge rocks which were everywhere, just as though tossed down by some giant, was a phyteuma which I have been unable to identify. I tried for a time to pry one from its crack with a stout pen-knife, but nothing short of splitting the rock would have got it out whole. However, my wife found one growing in rough scree and by dint of lifting off successive layers of stone I

got it out with the root more or less intact. It has established and flowered but as yet no name. Were that it had been *P. comosum*, which of course grows in the area but which I did not find although I was looking for it particularly. Nor was I any more successful in my search for *Eritrichium nanum*. Neither plant would be in flower in the third week of June or I might have been luckier.

My luck was not out completely, however. We sought shelter from the rain on the leeward side of one of the huge rocks already referred to and there at our feet was a white *Soldanella* growing amongst *S. alpina*. The habit and size indicated a white form of *alpina*. *S. minima* were also in flower here and among them was what appeared to be a hybrid between *alpina* and *minima*. It was slightly larger in leaf and in height than *minima* and its flower, larger than *minima*'s, was white with a blue band inside the flower. Both plants are alive, but the second described has not made much growth nor has it flowered. This is a pity, because I am most anxious to see what the flower is like in cultivation. These, then, are a few of the plants seen at Selva and district in the third week of June 1963.

This year the first part of our holiday was spent at Baveno on Lake Maggiore, and the second at Verbier in the Valais Switzerland. We were indebted to Professor Pontecorvo for recommending Verbier which is at a height of 4,600 ft. On a clear day it is possible from the village to see the mountain ranges of Mont Blanc and Grand Combin with their snow-capped tops. Again there were easy walks among the alpine meadows, which were ablaze with colour, but so far as I could find there were none of the rarer plants in the immediate vicinity of the village. One of the meadow plants I had not seen before and it is well worth noting. It is the so-called alpine lily, *Paradisica liliastrum*, with glorious snow-white cups.

Again we were too early for the chair-lifts, which were not in operation until about the middle of our stay at Verbier, Sunday 21st June. As noted earlier plant collecting is secondary on our holiday and we made no attempt to scale the heights on foot. Monday 22nd June was warm and bright and we decided to ascend to Les Attelas (height 8,800 ft.) by chair-lift and telecabine after lunch, giving ourselves about 2½ hours at the summit. Within minutes of arriving at the summit we had found clumps of primulas growing in the crevices of the rocks. I think they were *P. rubra*, but I had never before seen this species growing in such large clumps with such tiny leaf rosettes. They were covered with small reddish-purple flowers with comparatively

large tubes. So small indeed were the flowers that they resembled more than anything in shape and size the blossoms of *Dionysia curviflora*. One of the clumps has established and while it is bigger than it was in the wild, it is still much smaller than *P. rubra* collected at Kleine Schiedegg some years before. Another primula near at hand had large reddish flowers and I think it may be a variant of *P. rubra*. It too has established and should flower with me next spring. Perhaps then Dr. H. R. Fletcher may be able to tell me definitely what I have got.

While I was investigating the primulas my wife had wandered on out of sight. When I eventually found her she had seated herself on a rock because she said she had found something she had never seen before and she was afraid she would not have been able to find it again had she gone on. Nor had I ever seen it wild before. There at her feet was a whole colony of *Androsace glacialis (alpina)*. Each little plant, tight in growth and only about half an inch high, was absolutely covered by its clear pink flowers. Here was a find indeed. No wonder Farrer and Clarence Elliot waxed eloquent about this species! Greater joy still I found a white form of it nearby. Both forms are alive in my garden now and each has a few blossoms, but the growth is more lax and the pink is not so good. Hope springs eternal and I shall reserve judgment until next spring. In the same area was *Gentiana imbricata*, which was in bud and which obligingly gave me ten of its dark blue, white-eyed flowers a fortnight or so after coming home. The small mossy saxifrages *S. moschata* and *S. aspera* were collected here too, and again they flowered after being potted up. I doubt whether they have any place in the rock garden but they are interesting little plants. Another saxifrage, *S. androsacea*, was in full flower. Pure milky white blossoms borne singly on two-inch stems above rosettes of tongue-shaped leaves gave this species a rare charm in my eyes. I was told that it was biennial or at best monocarpic, but I am glad to say that both my plants are growing on beautifully after flowering. *Androsace obtusifolia* was also in full flower, but as I had it already I did not collect any. Yet another white flower, *Chrysanthemum alpinum*, looked wonderful on the mountain top with its large daisy-like flowers on four- or five-inch stems. I find it disappointing in the garden: it grows lax and looks quite ordinary. These then were some of the plants on the exposed summit. They were growing amongst short grass in peat which was full of small pieces of mica schist. At home I have no schist, so I have given them a compost of peat, soil and granite chips. Time will tell whether this is right for them.



Photo—Betty W. Ritchie

Fig. 19—*Dryas octopetala* on Stock-gemmi, Kandersteg

We intended to walk to the Lac Des Veaux some four or five hundred feet below the summit, but we could not find a path. However, we slithered down as best we could, tramping through melting snow and running water in the general direction of the lake, but small cliffs which we thought too perilous to descend prevented us from reaching it. We were then faced with the task of climbing back up this north-facing slope which was wet, sopping wet, from the melting snow which was still much in evidence in hollows. Panting and peching, two steps forward, one step back, we stopped to draw breath. And there was magnificent reward for our labour. Hundreds of *Ranunculus glacialis* in full flower and vigour were all around us. The big white buttercups were about the size of half-a-crown. What a glorious sight ! I took two, which are alive and well, but whether I shall be able to flower them is another matter. Even if I do, I doubt whether I shall match the splendour of Mother Nature.

These are some of the plants seen and collected during my last two summer holidays on which, may I remind you, plant collecting was a secondary matter, but which was nevertheless enjoyable and satisfying.

For those who are interested, our hotel at Verbier was the Grand Combin. It is situated in the village in its own grounds. It is very comfortable, has good public rooms and the food was excellent.

May I remind readers that plants may not be brought into this country except under licence. Those resident in Scotland should apply to the Department of Agriculture & Fisheries, Broomhouse Drive, Edinburgh, giving a note of the country to be visited, dates of departure and return, and the name of the airport or seaport at which you will land on return.

Automatic Watering

(ii) THE ALPINE FRAME

By HENRY TOD, Ph.D., F.R.S.E.

IN THE first part of this investigation, the method used was based on the N.I.A.E. capillary watering bench and it was employed in seed-raising (1). At about the same time as the N.I.A.E. method was introduced, or slightly later, an alternative method was introduced by L. C. Chilcott, Parks Manager for the Borough of Wembley, and produced commercially by the Key-Lutor Company, Ltd. This equipment depends on the use of control valves which regulate the water flow into sand held in trays or on benches, using capillary contact between the sand on the bench, sand in the outside sleeve of the valve, and the water in the inner sleeve. The water-level is controlled by a float, the position of which can be adjusted by a screw which can be seen in fig. 32. The water is supplied at a constant head by a small cistern situated above the level of the sand-tray (fig. 33).

The trial was carried out first in a Pluie Major frame, one end of which was left permanently open. The frame was supported on a brick base for convenience, the trays resting on angle iron set into the brickwork. A small supporting "tower" was added to hold the cistern, the feed to the latter being from the mains through a ball-cock. Subsequently a similar set of equipment was installed in a small greenhouse and used as an alpine house, Humex "Ventmaster" controls being fitted to the ventilators (top and side).

The sand used was the same, Grant's Levenseat No. 13, as described in the first part of this study. The plants were grown in plastic "Polypots." The use of plastic pots was recommended by Chilcott (2) in his circular issued at the 1963 Chelsea Show, where the writer first saw this technique and had the opportunity of discussing it with Mr. Chilcott. The pots used in the demonstration and recommended in the circular were "Leda" pots, but as the writer was already using Polypots these were used instead. As the trial in the alpine house has only been running for several months, this report is confined to the results obtained in the frame. The findings for the alpine house will be given in a later communication.

In the first part (1) of this study mention was made of the use of fibre-glass pads over the drainage holes of the boxes; this turned out to be rather unsatisfactory as the roots of the seedlings penetrated the fibre-glass pad and tended to be torn on pricking out. The modification

recommended is to use a pad of chopped sphagnum moss, made by placing the damp chopped sphagnum on perforated zinc under a light weight and allowing it to dry. This gives a thin, compact pad of sphagnum which can then be cut with scissors to the required size to prevent the compost from blocking the drainage holes. This has proved to be much more satisfactory for the seed-boxes and will be used in future for potting—the initial potting done for this study was with fibre-glass pads, which may well lead to difficulties when potting-on is required.

The plants were potted up in the plastic pots using John Innes composts, in some cases with the addition of coarse sand to improve aeration. The pots were then “screwed down” into the sand so that the base was about half-an-inch below the level of the sand surface. The pots were then watered freely from the top to establish capillary contact with the damp sand, and thereafter the moisture required to keep the compost suitably moist (at approximately field-capacity) was absorbed from the sand by the capillary fringe.

All the bulbs, corms and tubers from the Bowles Expedition were potted up in J.I. No. 1 with added sand as recommended by Matthew, and kept in the frame. They grew on well and many of them flowered freely very early in the spring. On a number of occasions the pots were frozen hard onto the sand.

The remaining plants of the writer's own collecting in the Rocky Mountains were potted up and grown on in the frame. These ranged from *Aquilegia jonesii* through Saxifrages and bulbs to a shrubby *Potentilla* and all have grown well. Some young plants of *Anarthrophyllum desideratum* have formed tough, extremely spiny bushes and are growing beside *Sisyrinchium depauperatum* (which is flowering freely at the time of writing) and *Perezia megalantha*. These plants were raised from seed collected by Mrs. Tweedie in Patagonia. Seedling *Dionysias* and *Primulas* from the Furse Expedition are also growing strongly and looking very healthy.

The only serious problem seems to be the very free growth of mosses on the soil surface, this being a major problem with any plants in pots in this garden, under whatever regime they are grown. A heavy dressing of fine, sharp gravel on the surface of the compost seems to minimise this, however.

To summarise, the method of sub-irrigation or capillary watering has proved, so far, to be successful in seed-raising and growing a fairly wide range of rock-garden plants in pots in the alpine frame.

The valve equipment, cisterns, etc., were obtained from the Key-Lutor Co., Ltd., the trays from Young & Eild, Ltd., the sand from Grant of West Calder, and the Polypots from Horticultural Research, Ltd.

References :

- (1) Tod, Henry. Journal, S.R.G. Club.
- (2) Chilcott, L. C. Burgh of Wembley Parks Department Circular, Chelsea Show, 1963, and personal communication.

A Commentary on "Dwarf Conifers"

By R. S. CORLEY

"DWARF CONIFERS." by H. G. Hillier, F.L.S., V.M.H., with sections by E. E. Kemp, M.B.E., N.D.H., published jointly by the A.G.S. and S.R.G.C.

This admirable little book, a development of the author's paper given at the Edinburgh session of the Third International Rock Garden Conference in April 1961, is a most welcome addition to the sparse authoritative literature on those confused and regrettably unknown and neglected plants, the dwarf conifers. Its eighty-three pages are packed with interesting, if sometimes controversial information on some 300 different plants, a number of which are newcomers not mentioned in the only standard work on the subject of English origin, Hornibrook's "Dwarf and Slow-growing Conifers." The heavy art paper used shows up well the 25 black and white illustrations, and these include a number of plants seldom or never so far illustrated. Though the author has not attempted detailed botanical descriptions, the data he gives on each individual plant is highly informative, with particular attention to age and height and the location of existing specimens.

The additional sections on propagation, cultural requirements and siting, by Mr. E. E. Kemp of the Edinburgh Botanic Garden are also most useful.

As ever with these woefully confused plants we come to the errors and controversial points, some of which we have come to regard as inevitable owing to apathy, the slipshod use of names by the nursery trade, and the lack of help from the botanists. The definite errors are few and of little discredit to the author, whose knowledge of the vast

conifer family is most certainly greater than that of any other nurseryman in Great Britain. In a few cases where new plants are mentioned, Mr. Hillier gives Latin varietal names, which not having been recorded before 1st January 1959, are according to the new Code of Horticultural Nomenclature, not valid, such as *Cupressus macrocarpa* 'Minima', *Libocedrus decurrens* 'Intricata', and *Taxus baccata* 'Argentea Minor'. Names like these will have to be superseded by fancy ones to comply with the new Code.

In some cases the author rather unaccountably uses different names from those already recorded in Hornibrook and widely accepted, for example some of the well-known miniature forms of *Chamaecyparis obtusa*, in that he inserts 'Nana' before the words 'Caespitosa', 'Flabelliformis', 'Intermedia', 'Juniperoides', 'Juniperoides Compacta', 'Minima' and 'Spiralis'. This addition makes these names unwieldy and they should remain as they were previously, as excessive use of plurinomials is condemned by the new Code. Again, the name *Cedrus libani* 'Pendula Sargentii' is more correctly shown without the 'Pendula'. Another incorrect addition is in *Juniperus communis saxatilis* 'Hornibrookii', which should be without the "saxatilis".

Another discrepancy occurs in the description of *Cupressus macrocarpa* 'Pygmaea'. This is actually dimorphic, becoming entirely adult in foliage when mature. Actually the plant possessed by Mr. Hillier under this name is *C. m.* 'Woking', which became confused with var. 'Pygmaea'. The full story concerning these two plants is told in the A.G.S. Bulletin, Vol. 30, p. 45, and in Gardeners' Chronicle dated 5/5/62, p. 326.

The controversial points in the book will vary somewhat with different experts. Mr. Hillier has followed an American writer, P. J. van Melle, in his proposed regrouping of the *Juniperus chinensis* tangle, which Hornibrook attempted to unravel. Some such revision was undoubtedly necessary, but the rather involved details cannot be dealt with here. Some *Thuja occidentalis* forms have been treated on a new basis with which some will disagree, and it may be difficult to arrive at the truth owing to the non-existence or rarity of specimens known to be authentic.

This book has been published at a most awkward time, for the dwarf conifer sphere is at long last receiving the attention it deserves and the whole subject is, so to speak, at the cross-roads. Nevertheless, Mr. Hillier's work will be extremely useful to those of us who find these little trees so indispensable on our rock gardens.

A Nurseryman's M/S Catalogues of the 1930s

By R. J. R. MEASHAM

IN THE summer of 1931 I began to make my first Scottish garden beside a new-built house at North Berwick. When it was possible to think about planting I found it not nearly so easy to obtain plants locally as it had been in the English Midlands, and so took to studying press advertisements of plants for sale. In one of the gardening weeklies (more numerous then than now) I came upon a small advertisement which tempted me to enquire further.

The address was—"Brookman, Lhanbryde, Morayshire"—and I wrote there for a catalogue. In answer, Mr. Brookman wrote a short note of thanks for my enquiry and went on: "As I issue no printed list, most business being done by quotation, the enclosed list may interest you." The enclosure consisted of three foolscap sheets closely hand-written on both sides and listing 194 items, most of them with a short but pointed description, followed by prices for single plants and for three plants. There were two pages of flowering shrubs, fourteen dwarf conifers and three and a half pages of rock garden plants, with a few taller things. Even for those days, when 6d would buy at least as much as 2/6 today, the prices marked were low, and those not for rubbish but for worthwhile plants, including some recent introductions and some very difficult to obtain through trade channels today.

Here are a few specimen entries :—

| | |
|---|-----------------|
| <i>Androsace helvetica</i> : very rare, grey leaved, only $\frac{1}{2}$ in. | 3/- and 8/6 |
| — <i>lanuginosa</i> : rosy pink, yellow eye, 3 ins. | 6d and 1/3 |
| <i>Calceolaria biflora</i> : rare, new, introduced from | |
| Andes | 6d, 1/3 and 3/- |
| <i>Dianthus neglectus</i> : rare and choice little fellow, | |
| 2-3 ins. | 7d and 1/6 |
| <i>Gentiana farreri</i> : sky blue, white throat, flowered | |
| plants | 1/3 and 3/3 |
| <i>Geranium napuligerum</i> (<i>farreri</i>) : 2-4 ins., very rare | 1/8 and 4/3 |
| <i>Lewisia howellii</i> , or <i>L. columbiana</i> , at 2/6 each | |
| — <i>finchii</i> at 3/6 each. One of each for 7/6. | |
| <i>Meconopsis quintuplinervia</i> : very rare and beautiful | 4/6 and 12/- |
| <i>Narthecium ossifragum</i> : yellow, 6 ins., for wet peat | 4d and 10d |
| <i>Pyrola rotundifolia</i> : pink, rare plant for shade .. | 6d and 1/3 |

| | | |
|---|-------|------------|
| <i>Saxifraga cuneifolia</i> : pink, 3 ins. | | 4d and 10d |
| — <i>stellaris</i> : hairy-leaved, pink flowers, 2-3 ins. | | 6d and 1/3 |
| <i>Veronica repens</i> : carpeter, 1 in., blue | | 5d and 1/1 |

This was a December list. Points of interest to me are :—

- (1) Mr. Brookman had no trouble in maintaining a stock of *Androsace helvetica* through the winter.
- (2) Changes in degrees of rarity. The *Calceolaria* and *Geranium* were then comparatively new introductions and the *Lewisia* reckoned difficult. All are now relatively cheaper, whereas *Meconopsis quintuplinervia*, though not difficult, is not often offered, and *Androsace lanuginosa*, *Saxifraga cuneata*, and *Veronica repens*, though among the easiest of rock plants, seem to have disappeared from catalogues ; so has *Gentiana farreri*.
- (3) It is to be feared that Mr. Brookman may have maintained a stock of native 'alpines' by collecting locally. Does anyone now cultivate *Saxifraga stellaris* ? Farrer, I think, reckons it impossible.

There were no primulas in this list, but in August 1932 I received another list of 104 items, including forty-four primulas, fourteen saxifrages (not 'mossies'), and five meconopses, including *M. regia* for 3/- and *M. simplicifolia* 'Bailey's Var.' for 1/6. Mr. Brookman specialised in primulas, and I remember reading an article (or more) by him in, I think, 'The Garden' on growing them from seed : in which he must have been very successful. Among those he listed in 1932 were four muscarioids, viz. *conica* at 1/3, *giraldiana* at 9d, *lepta*—"new, large, 3 years old"—at 2/-, and *littoniana*, 3 years, at 1/6. The last named (now *P. vialii*) is probably the only one of the four commonly cultivated. I can find no reference to *P. lepta* except in Mr. Clay's "Present Day Rock Garden." *Primula chionantha* was 6d (flowered plants 1/-), *P. chionantha purpurea*—"very rare, two years old" 2/6, and *P. sino-plantaginea* also 2/6. Other entries that strike me are *P. frondosa* at 6d, another easy plant practically unobtainable now, *P. elatior pallasii* for 1/-, and *P. winteri* (now *P. edgeworthii*)—"large, from division," at 2/6.

In this list *Calceolaria biflora* had dropped to 1/- and *Lewisia howellii*—"strong young stuff"—to 1/6. In March 1933 I got the last of these M/S lists from Mr. Brookman, a list of 47 plants "at low rates for quick clearance as I am overstocked." The prices ranged from 2d for *Sax. granulata* and *S. trifurcata* to 9d for *Meconopsis simplicifolia* 'Bailey's Variety.' *Gentiana sino-ornata* was quoted at 100 for £1, *Meconopsis wallichii* 3/- per dozen, *Primula pulverulenta* at 3d each, "extra large, but have hundreds spare."

Unfortunately my garden was much too small to give Mr. Brookman much relief, and that was the last list I had from him. Nor did I ever succeed in visiting his nursery. But I wish I could have seen a nursery overstocked with *Meconopsis simplicifolia* 'Bailey's Variety' in flower, and overflowing with hundreds of *Primula pulverulenta*.

I did get several plants from Mr. Brookman, and very good they were. In 1932 I had two little plants of *Gentiana verna angulosa* whose descendents carried on with me till I left North Berwick in 1951, when I also left behind *Aquilegia reuteri* which I had from him and have never been able to get since. It was the best of the European aquilegias I have grown (I might about say of all aquilegias). I still have *Androsace primuloides*, *Geranium sanguineum lancastricense*, *Oxalis adenophylla*, and *Saxifraga* Faldonside and *S. jenkinsae* raised from his plants, also the double form of *Geranium pratense* which I got from him, and perhaps other things.

But it is above all the man I wish I had known, and perhaps these notes may elicit some information about him. I am afraid that he cannot have been a good business man by any commercial standards. To spend winter evenings writing pages of m/s on the odd chance of getting an order for a few shillings was behaviour that no economist or sociologist could approve. But I have no doubt myself that he loved his plants, enjoyed writing their names and descriptions, and hoped to find good homes for them and at the same time to encourage an obvious beginner. And perhaps in 'conducting his business by quotation' (whatever that may mean) he more than made up for lost time. I hope so. But obviously he was an expert plantsman, and I recall his name with respect and a sort of affection.

Dolomite Symposium

ERRATA

- P. 42, l. 5 for Nadin read Ladin.
 P. 44, l. 7 for Artisei read Ortisei.
 P. 46, l. 22 for *C. caesia* read *S. caesia*.
 P. 47, l. 7 for Pardion read Pordoi.
 P. 47, l. 11 for Pardoï read Pordoi.
 P. 48, l. 21 for Bolyano read Bolzano.

An Alpine House in Scotland

By H. ESSLEMONT

THE ALPINE HOUSE described in a former article was quite an ambitious one, but exhibition plants can be grown successfully in a much more modest structure. For many years my plants were housed in a small 10 ft. greenhouse with improvised shading, in conjunction with a Crittal frame. Members will have noticed with interest that the majority of the Forrest Medals this year have gone to open-ground plants, and intending exhibitors may ask, why have an alpine house? I suggest that the answer is that an alpine house enables a wider and more interesting range of plants to be grown. If you acquire an alpine house—and I am sure you will not regret it—the question is what to grow in it. Don't be in a hurry to fill it, as I must warn you the question will soon be what to exclude.

The cushion androsaces always seem to fascinate, whether they are first seen growing in a rock crevice or on the show benches. A beginning might be made with *Aa. imbricata*, *helvetica* and *pyrenaica*. Small plants of these are sometimes obtainable from specialist growers, but the ideal method is to grow them from seed. The variation which will be found in quite a small batch of seedlings is surprising. As it takes at least five years to build up an exhibition plant, it is important to select a good form. If you cannot obtain seed from the Exchange or from a friend, you may find it on the seed list of Correvon & Co. of Geneva. Seed of the *Eritrichium nanum* is sometimes obtainable from this source.

Seed should be sown in December or January and a good freezing will aid germination. Pot on the seedlings in long toms in a gritty mixture. I use a quarter grit, some increase this to a half; the time one can devote to watering is a factor here. All my pots are plunged in sand. Pot on one size larger as required. I believe long pots are to be preferred to pans. A little tufa or grit around the neck of the plant will help to protect this vulnerable part. Beware of over-potting or over-watering. These two faults between them have been the cause of many of my failures.

The use of long pots plunged in sand will enable the more difficult plants to be watered by placing them in a soak tray. Once a week in summer and say once a month in winter will probably be found sufficient. In winter, only the bottom inch or so of the pot should be submerged in the water. The pots should be kept fairly dry in winter,

but they must not be allowed to dry out completely. An occasional fumigation of the house will keep the plants free from pests. The rest is patience ; if you lack this, leave these little cushions to others.

Other suggestions for the "bunnery" are *Drabas* and *Pygmaeas*, and if you want something more difficult, try some of the *Dionysias* or *Veronica pulvinaris*. What else should be grown ? Tastes vary as well as the time that can be devoted to the garden. One can only suggest a few personal favourites. Among the spring bulbs, *Iris histrioides*, *Iris histrioides major*, and *Iris winogradowii* (fig. 28) provide a welcome splash of colour in the dull days of February or March. These are all easy plants. Give them a little gentle feeding after flowering, a summer baking, and re-pot annually and they should increase satisfactorily.

Anemone vernalis, "Our Lady of the Snows" in a good form is one of the glories of both the alpine meadow and the alpine house.* Give it a rich gritty mixture, plunge the pot out of doors in summer, bring it into the alpine house or frame in October, and over the years the number of its flowers should increase. *Pulsatilla vulgaris* "Alba superba" makes another good pan plant. The Moroccan buttercup, *Ranunculus calindrinoides* with its white, rose-tinted chalice and grey foliage makes an interesting addition to the spring flowers. It is perfectly hardy and should be given a deep pot, a rich gritty mixture and a summer baking.

I have never had much success with saxifrages. I recently consulted a successful grower and was advised that my plants had been given too much sun in the summer months and allowed to become too dry. They are now being transferred to a North frame for the months of June, July and August. A very fine collection of saxifrages is grown at The Royal Botanic Garden, Edinburgh, and I am informed that the potting mixture is half lime chips, half leaf-mould. My one success to date has been with *Saxifrage lilacina* (fig. 30). This reputedly calcifuge plant has been grown on tufa in a gritty ericaceous mixture. It is housed in a North frame which is open in summer and has flowered well for a number of years.

A few primulas will be found useful for the spring shows. I grow mine in a shady North border and pan a few plants up in October for wintering in a North frame. Primulas *whitei*, *boothii*, *aureata* and "Pandora" will all respond to this treatment. I continue to struggle unsuccessfully with *Primula reptans* in an effort to emulate the wonderful pan shown by Mr. Drake at Dundee some years ago. As it is so

*See fig. 22.

seldom seen on the show benches, it would appear others are having the same problem. *Primula allionii* and its varieties make excellent subjects for the alpine house. I do not find them unduly difficult if planted on a raised bed of tufa and kept free from dead and decaying leaves. They are slow-growing and one must be prepared to wait several years to build up a reasonable flowering plant.

The following alpine will add interest to any collection, although some of them may not be easily obtainable. The true *Anchusa caespitosa* from Crete, with its bright gentian blue flowers, quickly exhausts the soil and should be re-potted annually. It will appreciate some stones or tufa for its woody stems to lie on. *Phlox triovulata* is another striking plant when well flowered (fig. 34). It too seems to enjoy frequent re-potting in a leafy, gritty mixture. Propagation is by root cuttings or by non-flowering shoots pulled off with a heel. The Greek *Asperula arcadiensis*, when well grown, will froth over the side of the pan. It may be tried in soft tufa on top of a gritty mixture and watered from below. The trick is to give it adequate moisture without damping off the close fluffy growth.

Paraquilegia grandiflora in its blue or white forms is another plant of quality. It can be seen at its best growing outdoors at Branklyn, where aged plants bear some fifty or more flowers. Try it in a deep pan in a gritty, leafy mixture and cover the surface of the soil with small tufa lumps to conserve moisture. *Diosphaera asperuloides* from the Stynx valley is not often seen. It propagates readily from cuttings of unflowered shoots and an attractive cushion can be obtained by planting it in a hole in a lump of tufa. Cut it well back after flowering. *Thymus cilicicus* was described in a recent plant note. A well flowered plant of this is really sensational. *Dicentra pusilla* from Japan with its delicate foliage and dainty flowers is another charmer. I saw a wonderful pan of seedlings of this recently in a fellow member's garden. He tells me the secret is to sow the seed fresh from the pod. Stale seed is useless. Among the many campanulas, I would include *C.C. morettiana* and its form *alba*, *carpatha*, *atlantis* and a good form of *zoysii*. Most of these campanulas appreciate soft tufa in the mixture and they can also be grown as crevice plants in a tufa block.

Finally, one or two dwarf shrubs, excluding rhododendrons. The latter are generally grown out of doors and panned up for exhibition and put into a cold frame at a date determined by the severity of one's climate. Pride of place among dwarf shrubs should, I think, be given to *Daphne petraea* (fig. 31). This is a long-term project ; it will take at

least ten years to produce a really good plant, but it is well worth waiting for. *Rhodothamnus chamaecistus* is another good shrub not often seen on the show benches. Opinion seems to differ as to whether it should be grown in a lime-free soil or not. I have found it does not object to some soft tufa in the mixture. *Spiraea hendersonii*, with its cream bottle brush flowers, I find attractive. The problem is to get sufficient of the brushes evenly spaced over the plant, otherwise it is easy. The dwarf leptospermums from New Zealand are at their best in July and in a well flowered specimen the leaves will be almost hidden. The dwarf variety, *L. nicholsii nanum*, with a growth of about half an inch a year, is a little gem. The leptospermums will only stand a limited degree of frost, although plunging the pots helps considerably.

Kelseia uniflora hails from America. It is one of the dwarfiest of shrubs and is not difficult to grow, although it is generally considered shy flowering. Try it in a hole in a lump of tufa and if you are patient, in six or seven years it may surprise you and your friends by covering itself with flowers.

A concluding article will suggest some plants for summer baking and for the shade frame.

Notes for Novices (contd.)

K. S. HALL

THE MORE one sees of gardens the more one wonders if there can be any hard and fast rules about growing alpine plants. Plants may flourish in the most unlikely situations and fail where conditions would seem to be ideal.

Quite recently there was an article in a magazine which attempted to cover the whole subject of making a rock garden, from choice of site to choice of plants, in one page of around 700 words. Most books on Rock Gardening are more generous and devote a chapter or more to the actual methods of construction, the preparation of the site, the choice and placing of rocks, and the building of walls, outcrops and screes. The information is there to be gleaned, but for the beginner, faced with bare or weed-ridden soil, the question arises: "How do I fit all this into my garden?"

During the Spring of this year the Beginners' Class of the Edinburgh Group visited several gardens belonging to Club members, in addition to the Royal Botanic Garden. It was interesting to see that each garden presented different problems and that no one set of rules would have suited them all.

DRAINAGE

Since good drainage is, literally as well as metaphorically, the basis of a successful rock garden, it might be helpful to compare how the owners of some of these gardens had tackled the question of ensuring adequate drainage under very different conditions. The term "adequate drainage" implies that surplus water will drain away quickly yet sufficient moisture will be retained in the soil to keep the roots healthy and active.

The first garden is very flat and was laid out some twelve years ago on rich farm land. Its first owner had bulldozed a part of the ground to make a lawn on a slightly lower level. This left two flat stretches with a drop of about two feet between them, supported by a rough wall of sandstone. The effect of the bulldozing was to remove the top-soil at the foot of the wall and spread it elsewhere, leaving only a few inches of soil above a heavy clay pan. In wet weather the lawn below the wall became a pond. However, this drop was the only break in the flat ground and, facing South-West, was the obvious place for a rock garden if it could be drained. So, after a good deal of planning on paper, the front edge of the rock bank was marked out on the lower lawn and the turf between this edge and the wall, a distance of about 15 ft., was lifted.

Through the heavy clay sub-soil a number of trenches were dug, criss-crossing the site, to a depth of twelve inches, with a deeper sump at the foot of the projected scree. Into these trenches barrow loads of stones, broken bricks, old crockery and the general rubble one inherits in a garden, were tipped. When the trenches were filled to a depth of some nine inches a layer of inverted turves was laid over the rubble to prevent the good soil from filtering through. Upon this foundation the rock garden was built (fig. 1). The walling stone was removed and a gently sloping bank was built, using the sandstone for outcrops and stepping stones as required, but the building of it is another story ; our concern here is with the drainage (fig. 2).

Though the preparation involved a lot of heavy work, this has proved well worthwhile, for the garden has never become waterlogged.

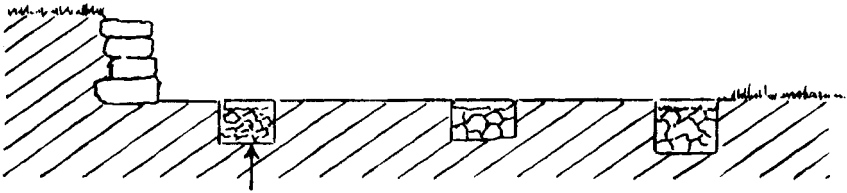


Fig. 1. Trenches with rubble and inverted turf.

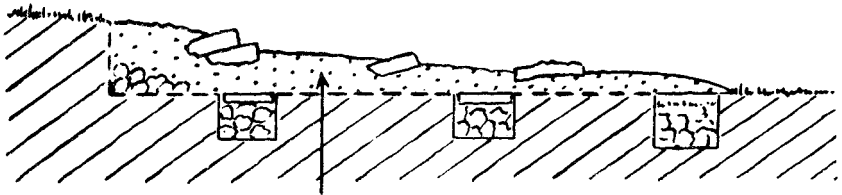


Fig. 2. Alpine soil mixture with rocks in position.

Garden number two is only a couple of hundred yards away, but it lies on a belt of sandy soil. Here there was no need for artificial drainage, as the rain seeped straight through the soil; the problem was rather to conserve moisture. In order to do this the owner had first to work in a large quantity of humus in the form of peat, which acts as a kind of sponge and holds the water which would otherwise be lost. This garden is also flat and the rock garden is built in the form of low mounds, incorporating a greater proportion of peat than is normally used in the basic mixture of two parts soil, one part peat, one part sand. The addition of sand is, of course, unnecessary in such a garden, but some $\frac{1}{4}$ in. grit keeps the soil open and cool and a good top-dressing of grit helps to retain moisture by preventing evaporation.

The third garden surrounds a house recently built on a steep hillside. The underlying rock has only a thin layer of covering soil held together by the roots of grass and weeds. Once this layer is scraped off, nothing is left but the rock, which is fortunately very friable. In order to plant anything the owner is obliged either to hack out rock and fill the hole so formed with soil, or else to build up pockets with stone and pack behind them with a suitable soil mixture. The drainage, through cracks in the rock or down the rock face itself, is very rapid, and to grow plants which require a rich, moist soil would involve some

heavy construction. Nevertheless, a garden like this has great possibilities when it comes to growing plants which call for perfect drainage. Once the plants settle in the pockets of soil and push their roots into the crevices in the rock, they will be living in conditions very similar to those of their native mountains. It is very probable that some alpines which are normally difficult to grow may establish themselves very happily in this garden.

The fourth and last garden is one which is now well established in a disused quarry. Here many different experiments have been tried for growing plants, but the one which could be adapted for any garden, whether it has natural drainage or not, is the raised bed. The shape of the bed is immaterial, though it is advisable to make it of such a size that the plants can be reached without walking over the bed. The bed is outlined with a row of stones set close together, then into this enclosure are thrown any pieces of rubble to a depth of six inches. The rubble is covered with something which will prevent the soil from dropping through ; this may be coarse peat, leaves, sacking, an old carpet or one's old clothes. This completes the drainage layer and the walling surround is then built up, packing soil between the stones, to a height of 18 inches. As it is built this enclosure is filled with the required soil, a basic mixture for easy plants, or a very gritty mixture for kabschia saxifrages and other plants which like scree conditions (fig. 3).

In addition to the raised beds built with stone this garden has, in a more shaded position, similar beds with a surround of peat blocks and filled with a mixture containing extra peat and sand. These beds are ideal for the smaller Himalayan primulas or for cassiopes and other ericaceous plants.

Raised beds such as these can not only be adapted to any garden, but they have the added advantage that plants can be tended and admired without bending to ground level, no small consideration as the years pass by.

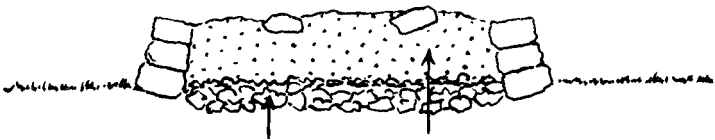


Fig. 3. Rubble, covered with leaves. Alpine soil.

The whole subject of drainage has caused a certain amount of controversy among rock gardeners, but these four gardens, with their very varied conditions, have shown our Beginners that there is no one set answer for every garden.

BOOKS

In the last number of the *Journal* two books on rock gardening in general were suggested. For anyone who is about to build a rock garden and who would like more detailed information about the choice and placing of rocks, I would recommend "Natural Rock Gardening" by B. H. B. Symons-Jeune, published by *Country Life*, 30/-.

Additional Note to 'Botany and Bogs'

by A. JACOT GUILLARMOD

Rhodophyxis rubella Bak. This grows as a dense, mat-forming plant in perennial marshes in Basutoland and along the higher parts of the Drakensberg. It is rooted in mud, sometimes has free water circulating round the base of the leaves, and is subject to extremes of temperature even in summer—days of considerable heat, and great insolation, nights when frost may occur, coating the bog with a film of ice; in winter the frost may bind the bog solidly for weeks on end. The plant is about the same size as *R. baurii*, but bears smaller flowers: it grows at higher altitudes, also, up to 11,000 feet. At present it is not available commercially, but may soon be.

Rhodophyxis baurii (Bak.) Nel, and *R. b.* forma *platypetala*. These grow commonly in small communities on gravel outcrops in hollows or on ridges, where there is often a fairly high water table. They are subject to the same weather conditions as *R. rubella*. They are never a constituent of the bog flora, preferring the sharp gravel ground of open, sedge-free areas and growing as individual plants, not in a dense mat. They grow generally at a lower altitude than *R. rubella* (up to 7000-8000 feet).

Rhodophyxis palustris Killick. As its name indicates, this is a species which grows in or near water, generally among stones. Not commercially available.

There are other species of plants growing in the Basutoland mountains, which would be useful in gardens, but as they are mostly not available commercially, I see no point in dealing with them. I can, for your records, give you the address of one nursery where South African plants are obtainable—there must be more, but I do not have ready reference to the names and addresses. The one is: Mrs. L. Richfield, A.H.S., F.R.H.S., Bloem Erf Nurseries, P.O. Box 210, Stellenbosch, C.P., South Africa.



Photo—H. Esslemont
Fig. 20—*Primula rubra* at Bernina Hospice



Photo—H. Esslemont
Fig. 21—*Rhododendron repens*, Rock 59174 (see pages 168 and 173)

Plant Notes

“WHAT’S IN A NAME ?”

INDEED, YES ! One might dare to reply—“everything”. Having read with appreciation Mr. A. C. Small’s contribution to the April *Journal*, I turned to F. K. Makins’ book “Herbaceous Garden Flora”. This interesting volume has a very comprehensive Index of more than 1000 species of perennials, biennials and annuals, and naturally this wide range of plants includes many of interest to S.R.G.C. members. The name “Dusty Miller” has always meant to me, not Mr. Small’s *Primula auricula*, but the old-fashioned ‘blue’ (?) garden auricula as the original plant given to me over twenty years ago was so called by the donor. Out of curiosity, I checked the name in Makins’ Index. Here I found two references given, one being “*Senecio cineraria*” and the other our old friend-cum-enemy, “*Cerastium tomentosum*”, alias ‘Snow in summer’—which fact is also indicated by Makins.

So at least one of four different plants might be supplied by a Nurseryman to a person specifying “Dusty Miller” in the Order list !

I hope the above facts will serve to support Mr. Small’s plea for ‘botanical’ names and if any reader of Mr. Small’s paper is tempted to delve further into the source and meaning of plant names, I can recommend from personal experience the following slim and handy books of reference :—

“Plant Names Simplified,” by Johnson & Smith (Publ. Collingridge).

“Dictionary of Botanical Names & Terms.” by G. F. Zimmer (Publ. Routledge & Kegan Paul).

“Glossary of the British Flora,” by H. Gilbert Carter (Publ. Cambridge Univ. Press).

The first two books are, as it happens, included in the list of Reference Books given by Mr. F. K. Makins, but the third, though limited in scope, as its title indicates, yet supplies much interesting information not found in the other two.

Edinburgh.

JEAN R. AVERY

Footnote : “A Glossary of Botanical Terms”, by Benjamin D. Jackson, (published 1905 by Duckworth & Co.) is also excellent.—*Editor*.

ANDROSACE BRIGANTIACA VAR. CARNEA AND A. LACTEA

THE GENUS *Androsace* is roughly divided into quite impossibly difficult but gloriously beautiful cushion plants and rather sprawling lax easy-going plants of the sarmentosa type. There are two, however, that

combine the neatness of the very difficult aretians with the ease of the other type and these are the two in the title of this note.

A. brigantiaca carnea forms little dull-green cushions, growing slowly larger as the years go by, sometimes tinged with red on the leaf, sometimes without. It throws up little sprays of small pink flowers which set their oddly-large seeds and then dry to a rich reddish-brown. It is hardy as nails and seeds itself about in a quiet way so that you are unlikely to lose it, though it will have its ups and downs.

A. lactea is a bigger, rougher plant with gleaming green leaves, forming quite neat, compact cushions above which rise the sprays of snow-white flowers with a tiny yellow eye. Oddly enough, I have never seen a self-sown seedling of this plant. It also is very hardy and long-lived and grows on very slowly, a ten-year-old plant being about three or four inches across.

Midlothian.

H. T.

DIMORPHOTHECA BARBARIAE COMPACTA

THIS IS a very good plant—if you have plenty of room and want a striking show of colour—but it has to be watched and this note is to that effect. Oddly enough, although the *Dimorphothecas* are an African genus, most of which are on the edge of tenderness or frankly tender, this one is bone-hardy, quite untouched by twenty-five to thirty degrees of frost. The problem is that it runs by underground shoots as well as running on the surface and rooting at the nodes—further, it forms its two distinct shapes of seed (hence the name), sheds them—and they germinate. It is quite easy to get out, as it does not dive deeply into the soil as it travels, but bits of root left behind often bud freely. It is a magnificent, if slightly barbaric plant in flower, covered with pink daisies each about two inches across on six- to eight-inch stems above the green, prostrate foliage, and it comes well from seed. It is good—but you have been warned !

Midlothian.

H. T.

EURYOPS EVANSII

SOME YEARS ago I saw a fairly new plant at the Chelsea Show which struck me as distinctly attractive. It had a very good silver foliage and little yellow daisy-like flowers and looked as though it would have a good "form" when it developed. It was sold with a caveat as to possible tenderness (it is an African plant) and to liability to all the rusts, etc., that the *Senecio* family are apt to be attacked by, with warnings as to spray programmes, etc., etc.

I got one and planted it on the top of a bank in the most exposed part of my rock garden, where it got all the wind and sun possible. Some time later I saw one at an A.G.S. Show, and was shocked at its appearance. It had blackened at the base of the stems and was "speely" and did not look at all well. I enquired as to how it had been grown and was informed that it had been kept as an alpine house plant. When I got home I compared it with my own one, which was a brilliant silver ball with no signs of "legginess" and just beginning to show yellow buds.

It is now well over two feet across and about the same height and this year was smothered in yellow flowers. In the winter of '62-'63 it stuck up out of the snow, exposed to all the bitter wind and hardest frost—and never turned a hair. Not bad for a plant "of slightly dubious hardiness" I think, and now it is showing signs of being extremely easy to propagate, for wherever a root approaches the soil surface, it forms buds and tufty little roots and there is a new plant just waiting to be detached. This is an example of a plant which definitely does *not* do well with any protection whatever—apparently it *must* have the most extreme exposure it can be given if it is to thrive.

Midlothian. H. T.

FABIANA VIOLACEA (SOLANACEAE)

THE GENERAL appearance of this Chilean plant suggests that it might be a conifer or whipcord hebe. When, in early summer, it is covered with mauve trumpet-shaped flowers, a random guess might place it in *Bignoniaceae*. In autumn, careful search will reveal that the fruits are tiny purple fluff-balls, and it is these which make it so difficult to believe that *Fabiana* is actually a relative of the potato, the tomato and the nightshades.

Fabiana violacea is a graceful shrub which forms a loose hummock, with branches downswept at the tips to hug the ground. The minute leaves are bright green and closely adpressed along the branches. They are sticky with aromatic resin or gum, thus increasing the plant's resemblance to a conifer. The flowers are about three-quarters of an inch long, and give off a bitter-sweet perfume rather like the scent of hawthorn. At all times of the year it is most worthy of a prominent position in the garden. My plant is about ten years old, and is a foot high and a yard across. I had under-estimated the speed of its growth and have allowed other plants to encroach too near it, so that its interesting outline is somewhat obliterated. Fortunately I have a

small cutting in a pot and am planning to plant it out surrounded by flattish rocks, so that its beauty of form will be well displayed.

It is unaffected by frost, drought and deluge, and suffers from neither diseases nor pests. Even the sparrows leave it alone—the gum given off by the leaves is most powerfully bitter.

East Lothian.

L. C. B-H.

GENTIAN VERNA ANGULOSA

GERMINATION here was exceptionally good, but pricking out was obviously going to represent more than the usual problem. Having been advised (by an experienced grower) just to plant out the whole contents of the seed pan in one piece, I rather jibbed at this as it seemed like placing all one's eggs in one basket !

I decided to try pricking out a few while they were still too small to handle. I used a pointed narrow plant label as a tool and dug up each seedling with a small amount of compost and placed it carefully in a suitable indentation in the pricking out soil in the pot which was then firmed and watered in the usual way.

All the seedlings survived this extremely delicate operation and grew on, so I was emboldened to prick out my full quota in this way.

I lost no seedlings, but sometimes had more than one in a pot.

I was equally successful in pricking out *Campanula Raineii* using this method, but feel that success this way is probably dependent on the seedlings developing a large root system while still very tiny.

Northumberland.

DOROTHY B. WALLS,

M.B., B.S.

INCARVILLEA GRANDIFLORA—LUDLOW & SHERIFF (? NOW INCARVILLEA MAIREI—FRANK LUDLOW)

HAVING achieved a very good germination of seed sown in January 1962, the seedlings were duly pricked out in ordinary seed compost. Having read, however, that these plants do not like pot culture and try to force their root through the drainage hole at the expense of the rest of the plant, I decided to try an experiment. Half the seedlings were planted out in the garden during the summer and left with only the protection of a handful of ashes during the winter. Some were placed on the main rock garden in standard two parts loam to one peat and one sand mixture, in different positions of exposure and shade. The rest were planted with some trepidation in a partly shaded bed composed of normal soil into which a considerable amount of

peat and grit had been incorporated. This bed appears to suit *Celmisia coriacea* and *Ranunculus insignis*, both of which have flowered well this year although quite small plants.

The other half of the seedlings remained in their pots in the cold frame.

None appeared until May, but then the frame plants and the peaty bed plants appeared almost simultaneously. Five out of seven in the peaty bed survived and all the good seedlings in the frame. However, not one survived on the rock garden. It would seem, therefore, that in areas of comparatively low rainfall more than a good depth of well-drained soil is needed for these plants.

Northumberland.

DOROTHY B. WALLS,

M.B., B.S.

POLYGONUM AFFINE (POLYGONACEAE) LOWNDES' FORM

THE SHOW benches at North Berwick usually have a good display of cyclamens and gentians. There is, however, too high a proportion of sedums, sempervivums, cushions not in flower and conifers, so that the need was felt for good flowering plants to demonstrate to the general public that rock gardens are still floriferous in September. It was the Editor himself who recommended *Polygonum affine* Lowndes' form as a good plant guaranteed to be in flower on the day of the Show. I felt rather dubious about this because many years ago I had thrown great wads of the type plant on to the rubbish heap. However, Colonel Lowndes himself had referred to this form as "my brilliant Polygonum", and the specimen exhibited by Mrs. Knox Finlay in September 1957 had received an Award of Merit.

The type plant which has been cultivated for many years is not much more garden-worthy than the common weed Persicary, but the plant grown from seed collected by Colonel Lowndes in Nepal is most attractive and has a more ample and loose inflorescence, because each flower is on a short pedicel instead of being nearly sessile. The flowering spike is 3 ins. long and stands 6 or 7 ins. above the glossy mat of leaves. Each flower opens as pale pink, and persists a long time after changing to a brilliant cherry-red. Eventually it becomes an autumnal russet brown. I was disappointed when the plant began to flower as early as May, but there was no need to worry—it gave a continuous performance right on into November.

East Lothian.

L. C. BOYD-HARVEY

SISYRINCHIUM DEPAUPERATUM

THIS is a Ruth Tweedy introduction from Patagonia and promises to be a good garden plant. It has upright rush-like leaves about 9 ins. high and the flowers, of the usual sisyrinchium kind, are carried clear of the leaves. The flowers, up to nine to a stem, are produced here in May and June, and the flowering period lasts for some weeks. The flowers when flat open are up to an inch across. In colour they are mauvey white, both ends of the petals are mauve fading to white in the middle zone of the petals. It is hardy and not fussy about soil, any 'normal' sandy well-drained mixture should suit it. It is an attractive plant and the colour is a change from the usual run of flowers found in the family.

Perthshire.

M-L.

Review of the Year

THIS WILL be the last "Review of the Year" that I will send as President to our hard-working Editor, and I should like first to make a plea on his behalf for contributions to the *Journal*.

The supply of articles, notes and the like is a curiously erratic one. If the weather is bad a small trickle comes in—if it is good, the trickle dries up with remarkable promptitude. At no time, however, no matter how bad the weather may be, is the Editor in any way drowned in floods of contributions and I would make an appeal to members to send in any material they have for consideration for our pages. A full-length article may be beyond your scope, but surely you have either succeeded with some tricky plant or failed for no obvious reason with a relatively easy one on some occasion. Those are the sort of items which make "Plant Notes" and these can be helpful either to you yourself when you get a reply from someone else or they may help another member who has struck a snag. Then, too, we most urgently need black-and-white photographs for our illustrations. Nowadays almost everyone works in colour and "b & w" photography is rapidly becoming a lost art—why not have a try at it again? The films are cheap enough and a really good black-and-white photograph is so often far better than a mediocre coloured one—and can be a really stiff test of your photographic ability, to say nothing of artistic gifts.

After a rather stormy passage the Club has now reached calmer waters financially. The increase in subscription caused a far smaller

loss of membership than some of the more pessimistic members forecast ; in actual fact our loss was very closely similar to all societies which have had to raise their "sub" and it was less than some have had. Loss or no, we have now been able to settle all our debts and start to put away small sums against, for example, the next Conference. At present the Council is discussing some form of grant to the various groups towards their running expenses—this is not just quite as easy as it would seem at first sight, for a straight "capitation grant" has a strong tendency to work on the lines of "to whom it hath shall be given," for the bigger the group, the bigger the grant. Probably those groups which need help most are those which are scattered, not very numerous, and fairly remote from the main centres from which they may have to get speakers—and that costs money. We do not pay fees to our lecturers, but we *do* pay travelling expenses and, if hospitality is not available, hotel expenses. For a group with a smallish membership this may mean a quite disproportionate cost per member ; we have a Development Fund which is at the disposal of the President to assist groups to "get going," but obviously it cannot be used year after year to assist groups such as I have described, and here the capitation grant will be a help, but here also is the difficulty as to numbers. These are some of the problems which will have to be threshed out before the Council can make definite recommendations in terms of L.S.D.—but something will be worked out, at any rate as a trial.

Our membership is increasing slowly and steadily now that most of the members who are far in arrears have been written off and the number of new members from places outside of Scotland is a very welcome and reassuring sign of our activity. Our Seed Distribution is still a very great "draw," especially to Overseas members. When I was in the United States I was a trifle taken aback to be told that members there could often only get seeds of their native American rock plants *through our seed distribution* !! We, of course, are a bit apt to forget that the Rockies, say, may be farther from our American members than Scotland is, but it does seem somewhat roundabout.

* * *

The more kindly winter we had meant that the early Shows were less of a gamble than usual and the first two, Penicuik and Dumfries, were quite outstanding in the standard of the exhibits and their number too, but just after this a period of cold, dull, miserable weather ensued and the Glasgow and Edinburgh Shows were hit by this, for the plants

just seemed to “stand still” and it was difficult to get exhibits. It was noticeable that as the weather improved, so did the later Shows, and Dundee was quite outstandingly good. At both the Dumfries and Dundee meetings of the Joint Awards Committee we had excellent entries of plants and they did well—the contrast to the miserable handful that appeared at Chelsea was startling *and* the standard of the plants that we put forward was infinitely higher.

We must, however, at all costs get more exhibitors to bring their plants forward for our Shows. At present we have a moderate number of staunch supporters who bring their plants, often great distances too, to our Shows, and we are getting one or two new exhibitors at each Show. This is not, however, nearly enough. Our Shows are our shop-window as well as our meeting place and we must not let them shrink to vanishing point. Only too often the Show Secretary, who has quite enough to do anyhow, has to spend a hectic series of days just before his or her Show chasing up exhibitors and their plants—surely this should not be needed. Most members have one or two plants at least which are of good enough quality to show to their friends—isn’t that really what is being done at a Show? Why not let more than a handful see them—put them on the Show-bench and you might get a prize as well! Do, please, bring one, two, six or twenty, whatever you can, to *at least* your nearest Show and once you have started, you will usually find that it really is a lot of fun and it becomes a habit—but a good one!

While on the subject of Shows I would like to make some mention of two new Show Secretaries, in Aberdeen and Dundee. In Aberdeen we suffered the very grievous loss of William Mitchell, our Show Secretary there, earlier this year, but he has been succeeded by Mr. Pole, who took over just before the Show and made a brilliant success of it. At Dundee Mr. Rorie succeeded as Show Secretary and had a most happy and attractive Show in a new venue. Mr. Mitchell had been having difficulties in past years about the hall and so he and Mr. Rorie decided to try a change—and it was a happy change. At Dunfermline Mrs. Wilson was not able to be in charge as usual and Mr. Bonnar took over for the last stages—and ran it most capably, a really good first effort. We owe these three our sincere thanks for all they have done and are doing.

Lastly, there is a point of policy that I would like to mention. The Council, and the President, Secretary, and Treasurer in particular,

cannot always know how things are progressing in the Groups, whether they are active or not—or even if they have stopped functioning altogether, *unless* someone lets them know. This arose from the problem of two good-sized Groups which, for various reasons, had ceased altogether to have meetings. This was, in these cases, notified to ‘‘H.Q.’’ and the Treasurer and I organised a meeting in each case, sending a notification to each member in the Group with an invitation to the meeting—all the expenses of which were met by the Development Fund. At these meetings, which were very well attended, a Group Committee was elected and a Group Convener found—and both are going on very well and with great enthusiasm and a full programme. So please do let us know at ‘‘Headquarters’’ if things start to go wrong or, even worse, stop, and we will do all we can to help get them going again. It really *is* worth it.

HENRY TOD

Correspondence

[*Editor’s Note* : When we received a copy of the following ‘show notice’ as sent out to the members of East Lothian and Berwickshire Group by their G.C., we thought it of such general interest that we have no compunction in publishing it. Show Secretaries, Group Conveners, and exhibiting and other members should all find in it ideas to interest them.]

Dear Member,

It is less than three weeks now to the North Berwick Show on September 3rd, but Mr. Sanderson has been making his preparations for many weeks. We can ease his work by sending in our entries *as soon as possible*. The final date is Monday 31st August. If, after sending in your entry, your best plant lets you down, you probably have a second-best to substitute for it in that class. If in doubt or difficulty, do ring up any member who has had previous experience of exhibiting.

Several Shows recently have had too few entries in Section II (beginners). Any organisation will stagnate unless it has keen new members pressing on and up. Twenty new exhibitors able to show only one plant each give greater satisfaction to a Show Secretary than one expert able to produce twenty show plants. But besides *new exhibitors* we must also have *new plants* and usually we must rely on experienced growers (often from distant Groups) to bring these to the Show for us to see.

At the Symposium on "Showing" last March, it came to light that certain ancient prize-winning plants, which turn up year after year, act as a deterrent to the exhibiting of smaller plants of the same species. Some of the owners of these large old "unbeatables" have agreed to retire them to Section V (non-competitive) to give good small plants a chance to catch up.

At Edinburgh Show there was much discussion about the relative merits of plants grown in the open garden or in pots in an alpine house. The general conclusion was that some plants resent alpine house treatment, but others cannot tolerate a wet winter in the open. It would add to the educational value of our Shows if each exhibit had a second label or small card stating briefly the conditions under which it had been grown, thus—

"Grown in the open rock garden, *or* peat bed *or* trough, etc., etc."

"Pot-grown with no overhead protection."

"Pot-grown in a cold frame."

"Grown in an alpine house."

This extra labelling is entirely optional ; it will give you extra work, but if you can find time for it, Mr. Sanderson and I think it will be of great interest and value to fellow members.

In Class 52, where Mrs. Porter's new Wellstanlaw Cup will be awarded, please note that *all rock-garden material must have been grown by the exhibitor*, but flowers and foliage may be "borrowed" in Classes 49 and 56.

Please bring your friends. Their admission money (2/-) helps to pay the overheads. Tea will be served in the coffee-bar at the Harbour Pavilion.

Show Reports

PENICUIK

THE 11th Penicuik Show was held in Eastfield School, Penicuik, on 14th March 1964 on one of the worst days we have had since last summer's débacle, with rain, sleet and snow driven by a wild wind off and on all day. It was particularly unfortunate after the good weather that we have been having most of this year to date and the number attending the Show was a tribute to its promises of pleasures to come (we hope !).

Last summer's lack of sun and excess of rain were probably responsible for many of the erratic results in the bulb classes—blind bulbs ; five full out and one barely coloured in bud ; and so on. On the whole crocuses were good and fairly even, but the narcissi were generally erratic and below standard—and few were brought forward compared with the normal number. The entries of irises were down, but this year two pans of the rare *I. winogradowii* were staged and some of the new *I. reticulata* hybrids were on show too ; they have the quality of the species still and no coarseness as yet ; let us hope they stay so.

This year there were some really magnificent Kabschias on show, and the Forrest Medal was won by *Sax. lilacina* exhibited by Mr. Esslemont (fig. 30) ; this was one of the finest and most perfectly-flowered pans of this plant that I have ever seen. The Midlothian Vase for the best plant in Section II was awarded to a very fine pan of *Sax. x. 'Cranbourne'* shown by Dr. Davidson in beautiful condition and covered with bloom. Another notable plant was exhibited by Mrs. Maule and may have been missed by many people. This was a smallish plant of the genuine *Sax. x 'Cherry Trees'*—an old Boyd hybrid which was very widely grown years ago and which is now almost entirely lost. It was good to see this very old rarity again and in obvious health and excellent condition.

The Show had a welcome return of Asiatic Primulas which have been weak in recent years—there was a notable *P. edgeworthii alba* and several fine *P. 'Pandoras'*, as well as a good pan of *P. whitei*. An interesting feature was the number of new and uncommon plants on the staging. The Edrom Nurseries had some unique Japanese plants on their stand, particularly a lovely white Shortia and a Corydalis of the palest sky-blue—not, I am sure, a form of *C. cashmeriana* in spite of what the J.A.C. in London may have said ! Others were a number of the new bulbs from the Bowles Scholarship Expedition to Turkey and Iran which were shown by Messrs. Crosland and Esslemont from Aberdeen and by the Show Secretary. These, flowering for the first time this year, were some of the Tulips and Fritillaries which seem to promise well and are most engaging in their odd colours and forms. Whether they will keep to this very early date or will gradually conform to our spring here remains to be seen.

We were glad to welcome another competitor from Aberdeen in Mr. Duff, and as usual our staunch supporter Mr. Archibald brought some of his very fine plants from Wishaw—if only some of our local members would show the same enthusiasm as those who come from

afar with their plants ! One of Mr. Archibald's plants was a staggering *Ranunculus calandrinioides* which made the Judges wonder if any *R. lyalii* blood had been introduced into it ! Another magnificent plant was shown by Mr. Esslemont—a big pan of the Rock form of *Rhododendron repens* which was literally covered in bloom (fig. 21). He won the Midlothian Bowl for the maximum number of points in either, but not in both, Sections, Mrs. Maule being a close second. Gold Medals were awarded to the Edrom Nurseries for an exhibit of plants in pots and to Ponton's Nurseries for a built-up display of rock plants. Both firms showed a wide range of bulbs, saxifrages and various other plants, all in good bloom and fine condition.

The entries were slightly down on last year's high total as we had three major competitors absent due to illness, etc. If they had been present in their usual strength of entry our total would have been up again. The Penicuik Society's Bulb Show was at its usual colourful level, but in it also there were similar absences and irregularities of development in the Narcissus classes, though the Hyacinths were extremely good.

The Judges for both parts of the Show were Messrs. Ponton, Duguid and Evans, and the competition was close in the majority of the classes with four to eight entries in most of them. Once again the ladies of the Penicuik Society's Industrial Section, who run the Bulb Show, provided much appreciated teas for the surprisingly large number who attended the Show considering the awful weather.

HENRY TOD

DUMFRIES

AT A TIME when a large entry was not looked for, due to losing some of our usual exhibitors, a truly amazing response came from our members at our Show in Y.M.C.A. Hall, Dumfries, on 10th and 11th April. Our entry finished only four short of 400 and made up almost entirely of local exhibitors. Our judges were Mrs. Christina Boyd-Harvey and Messrs. John Mowat and John Ponton, who seemed to relish the task set them, and who gave up a large part of what must have been a very busy day for them to carefully sift some very large classes (fig. 35). For example, the Anemone class had 15 entries and a few others with around the dozen made their job no easy one. Their decisions were very well received. It was a very remarkable effort on the part of all exhibitors, quite a number of whom were showing for the first time. Nor were numbers achieved at the expense of quality ;

all over, the Show was the best ever held in Dumfries, and must have been one of the best held by the S.R.G.C. The entry was very ably supported by the Trade stands of Messrs. Longmuir & Adamson, Ponton, Edrom Nursery, and King & Paton, with our usual high quality exhibit from Crichton Royal Garden. The Joint Award Committee met on the first day of the Show and had a good number of plants forward for their examination, and I would like to record my own appreciation of the helpful manner in which R.H.S. Secretary Scase carried through his task. His co-operation was readily given on all matters referred to him, and these were many and varied.

Now to the main results :—

Forrest Medal : Brigadier Hutchinson, Rockcliffe, with a very fine *Rhodo. pemakoense*.

Runner-up : William McGinley, Dumfries, with a grand plant of *Androsace imbricata*.

Certificate of Merit : William McGinley, with *Andromeda polifolia nana*.

Lewis Cup for Best in Section II : Miss J. C. Young, Rockcliffe, with *Rh. pemakoense*.

Bronze Medal, Section II : Mrs. Carson, Southwick.

TRADE AWARDS :

Large Gold Medal : Messrs. Ponton, for built-up rock garden.

Gold Medals to : Messrs. Longmuir & Adamson for a built-up display of shrubs and rock plants ; to Edrom Nurseries for alpiners in pans ; to King & Paton for dwarf conifers in pots and alpiners.

The awards of the Joint Committee were as follows :—

F.C.C. to Edrom Nurseries for *Primula petiolaris*.

A. M. to Brigadier Hutchinson for *Anemone slavica*.

A.M. to Brigadier Hutchinson for *Primula marginata*, 'Pritchard's var.'

A.M. to William McGinley for *Andromeda polifolia nana*.

A.M. to Mrs. R. G. Smith, Dumfries, for *Sax. apiculata alba*.

A.M. to Mrs. Crewdson, Kendal, for *Sax. andersonii*.

Preliminary Award & Certificate of Cultural Commendation : Dr. James Davidson, for *Androsace wulfeniana*.

Preliminary Award : Dr. Gibson, Southwick, for *Aciphylla munroi*.

In a very evenly contested Class I (Walmsley Cup), the winner was William McGinley, Dumfries, with pans of *Draba rigida*, *Lewisia tweedyi* (Pink form) and *And. imbricata* ; second was yours truly with *Dentaria ensifolia*, *Lewisia tweedyi* and *P. gracilipes*, and third was Dr. Gibson with *A. vernalis*, *P. gracilipes* and *L. tweedyi*. Also shown

in this class were three pans by J. Henderson, Dumfries, of *Draba bryoides*, *P. griffithii* x, and *Cassiope lycopodioides*. In the rare class the leader was Mr. Esslemont, Aberdeen, with *Dionysia Sp.* (F2523) (probably *D. diapensifolia* ?). This was a very beautiful specimen, and must have been very quickly raised from Furse Seed. Dr. Gibson was second with the rare *Aciphylla munroi*, and third was Dr. Davidson with a lovely specimen of *And. wulfeniana*; also shown was *Cyathodes colensoi* by Major and Mrs. Walmsley. In the easy plant classes the following were prominent: *Pp. pubescens alba*, *frondosa marginata*, *clarkei* (which was consistently good in a large number of exhibits), *Cassiope lycopodioides* (easy ?), *Draba aizoon*, *Arabis* "Spring Charm," and in cushions, *Sax.* "Faldonside," *sulphurea*, *salomonii*, "Bridget," *petraschii*, and the unusual *coriophylla lutea* (?) from Dr. Gibson, also *Draba mollissima*. In very strong Asiatic Primulas good pans were shown of *Pp. gracilipes* (both forms), *aureata*, *clarkei*, *macrophylla*, *edgworthii* and the very rare *tayloriana* from Mrs. Crewdson. In European Primulas the following were prominent: *Pp.* "Mrs. Wilson," "Rufus," "Marven," "Beatrice Wooster," "Ethel Barker," "Highland Twilight," "Blairside Yellow," "Linda Pope," "Barbara Barker," *pubescens alba*, and a lovely pan of the dainty "Joan Hughes." This class was particularly good and contained 13 entries, all of a very high standard. The Androsace class was won by William McGinley with *A. muscoidea*, followed by Mrs. Lewis with *A. microphylla*. In Ranunculaceae H. Esslemont led with *Paraquilegia grandiflora*, in fine bloom, followed by the lovely *Caltha palustris alba* from Major and Mrs. Walmsley.

A good Anemone class of 15 was headed by a magnificent *Pulsatilla vulgaris* from Mrs. Drummond, and in Dwarf Narcissi Mrs. Jebb was first with a fine *N. cyclanineus* x, followed by myself with *N. bulbocodium*, and Dr. Gibson with *N. rupicola*. Also noted in this class was a good *N. juncifolius* from Major and Mrs. Walmsley.

In Tulips, which were surprisingly few, the winner was *T. kauf.* "Shakespeare" from Mrs. Lewis, second was *T. pulchella* from Mrs. J. A. Young, and third was *T.* "Gaiety" from William McGinley. Other bulbous plants on show were *Scilla bifolia rosea*, *Erythronium californicum* (dwarf form), *Tritelia uniflora*, *Scilla siberica alba*, *Fritillaria pinepicola* (?). A most interesting class of Papaveraceae was won by Major and Mrs. Walmsley with *Sanguinaria canadensis*, followed by a very good *Meconopsis integrifolia* (not often seen at Shows) from Mrs. Jebb.

In heavy classes of Sempervivums and Sedums the following were noted. *Ss. dasyphyllum microphyllum*, *dasyphyllum niffense* (?), *brevifolium quinquefolium*, and *winkleri*.

Rhododendrons were good and included *Rr. patulum*, *ciliatum*, *microleucum*, *fimbriatum*, *lutescens*, *pumilum*, and *R. leucaspis*, which won the single pan class for Brigadier Hutchinson.

Ericaceous plants were not up to our usual Dumfries standard, but dwarf conifers were more plentiful, among which were *Chamaecyparis obtusa pygmaea*, *Ch. obtusa juniperoides compacta*, and the unusual *Picea kosteriana*. Dwarf shrubs were headed by *Polygala rhodoptera*, and also noted was a fine plant of *Daphne collina* in excellent flourish.

In a strong Section II, where competition was very keen, prominent plants were *P. x berninae* "Windrush," *marginata* "Holden Clough," "Linda Pope," *marginata* "Kesselring," "Marie Crouse," *Pulsatilla* "Red Cloak," *Anemone blanda*, *Erythronium dens-canis*, *Sedum monstrosum*, *Andromeda polifolia*, and a very good class of conifers was won by Mrs. J. A. Young, *Cham. obtusa aurea*, followed by *Cham. pisifera squarrosa intermedia* from Mrs. Carson, and *Cham. pisifera compacta variegata* from Miss Templeton.

Outstanding in Section IV were the polyanthus, and a wonderful class was won by Dr. Gibson. Daffodils were not many, and as usual were led by Major and Mrs. Walmsley. In the cut flower classes, and in the pot daffodil class, all three positions were held by the Templeton family. Usually Section III is without entries, but this year we had on view some delightful sketches and paintings of flowers by Mrs. B. Henderson, Dumfries.

Trade stands were very good indeed, and provided very grand support to the Show. On the stand of Edrom Nurseries the following were noted: *P. petiolaris* (awarded F.C.C.), *P. bracteosa*, *Chionodoxa gigantea*, and *Anemone blanda* "Radar." Messrs. Longmuir & Adamson, *Caltha palustris flore plene*, *Rhodo. pemakoense* and *Rosa pumila*, and in shrubs *Paeonia ludlowi*, *Viburnum x burkwoodii*, and *Rhodo. nobleanum* were outstanding. On King & Paton's stand, which was mostly made up of conifers, they had an excellent plant as a centre-piece of *Rhodo. repens* x. Dwarf conifers included *Tsuga canadensis*, *Picea congesta*, *Ch. pisifera alba spica*, *Pinus parviflora*.

Messrs. Ponton's stand, which comprised a built-up rock garden, contained the following: *Primula scotica*, *P. bileckii*, *Anemone blanda* "Bridesmaid" and *Erythronium revolutum* "White Beauty," among many other good plants.

Finally, a word of thanks to our judges, my committee, and to our many exhibitors, new and old, who contributed to a magnificent Show.

N. B.

GLASGOW

THE GLASGOW SHOW was held in the McLellan Galleries on 14th and 15th April. There was a steady stream of visitors on both days, with the number who paid for admission approaching twelve hundred. The quality of the rock plants on show was about up to average, with a few outstanding plants, but some of the classes were thinly entered. As has been stated before, it is imperative that members come forward in greater numbers with plants if the success of our Shows is to be assured in the future. The rhododendron section, without the co-operation of the Royal Caledonian Horticultural Society this year, but with the moral support of the National Trust for Scotland, for which we were grateful, was again a great success. There were many fine trusses of flowers and competition was very keen.

The Dr. William Buchanan Memorial Rose Bowl for six pans of rock plants was won by Mr. William Urie of Turnberry. As usual Mr. Urie's plants were in good order. Of the six I personally liked best *Cassiope lycopodioides* and *Lewisia* "Dawn." Appropriately enough the Henry Archibald Challenge Rose Bowl for three pans rock plants was won by his son John, who lives in Wishaw. His two outstanding plants were *Primula aureata* and *Saxifraga lilacina*, both of which require some extra care and attention to bring them to the state of perfection in which they were exhibited.

Last September the Club lost one of its most famous members, Mr. Willie Buchanan of Bearsden. His cousin, Mrs. Elizabeth W. McLean, also of Bearsden, kindly donated a handsome cup to be known as the William C. Buchanan Challenge Cup. The Glasgow Show Committee decided that because of "Willie's" association over many years with new, rare or difficult plants, this new cup should be allocated to a class for three pans of such plants. The honour of winning this cup for the first time fell to Mr. J. D. Crosland, Torphins, who is the grower of many fine plants. Two of his three which I had not previously seen and which interested me very much were *Orchis pallens* and *Haastia pulvinaris*, the latter a very recent introduction from New Zealand. In the second prize exhibit there was a small specimen of the little willow *Salix cascadiensis* collected by Professor Pontecorvo in the Rockies in 1962. Unfortunately its red catkins were only just beginning to open.



Photo—Betty W. Ritchie

Fig. 22—*Anemone vernalis* on Weisshorn, Arosa



Photo—J. D. Crosland

Fig. 23—*Geum reptans* (at 9,000 ft.) Diavolezza, Switzerland

The entries in the saxifraga classes were unfortunately not strong, only one being outstanding, another *S. lilacina* shown by Mr. John Archibald. On the other hand, the Asiatic Primulas were forward in good numbers and in very good quality. The best pan, *P. gracilipes*, won a first prize for Mrs. C. Allan. The European Primulas were also well represented and in Mr. Neil Morris's winning lot, *P. pubescens* "Mrs. J. H. Wilson" a grand old variety of easy culture, and *P. "Linda Pope"* were very good. *P. "Blairside Yellow,"* a dwarf auricula type, was shown in excellent condition by Mr. Alec Todd, as was *P. marginata* by Mr. John Archibald. The latter was unusually strong in its growth.

Anemone vernalis is not very often seen at this Show, but Mrs. C. Allan and Dr. M. F. Gibson won first and second prize respectively in the class for one pan *Ranunculaceae* with this species. An excellent pan of *Narcissus triandrus albus* took first prize for Mr. Harold Esslemont in the class for one pan dwarf narcissus. *Sedum stahlii*, in perfect condition, was in the set of three which won the class for three stone-crops for Mr. John Archibald, but again one heard the question asked, "Is it hardy?" Mr. Alec Todd swept the boards with his house-leeks, winning first prize in each of the three classes for sempervivums. All were in very good condition, but of his six pans I think the hybrid *S. "Jubilee"* was best.

The winners of the classes for dwarf rhododendrons had brought their plants long distances, but they were still in fine condition. Dr. Gibson in her pair which won a first prize had *R. pemakoense* in good flower and of an unusually good colour. The comparatively rare form of *R. repens*, Rock's No. 59174, a first prize winner for Mr. Harold Esslemont, was also beautifully flowered. This is a particularly fine form which runs to flower with greater regularity than some of the others (fig. 21).

Class 54 for one pan *Ericaceae* excluding Rhododendrons brought together three of the best quality plants in the Show and it was fitting that the first prize winner here, *Epigaea repens*, staged in wonderful condition by Mrs. Slack, should also win for her the George Forrest Memorial Medal for the best rock garden plant in the whole Show. It is right to note here that Mrs. Slack raised this plant from Club seed. Is this a record? Second and third in this class were won by Mr. John McPhail and Mr. John Archibald with very good specimens of *Andromeda polifolia compacta* (almost white) and *Cassiope selaginoides*, surely about the most attractive of the genus.

Mr. John Archibald won all three classes for conifers against light competition, which is regrettable, because his plants were really good and would have stood up to keener competition. I liked particularly *Pinus parviflora pumila*. Two other fine plants which won first prizes for their owners were the little shrubby *Polygala rhodoptera* shown by Dr. Gibson and the easy white-flowered *Draba dedeana* exhibited by Mr. Neil Morris.

Mrs. Collis Brown worthily gained first for a container of rock plants arranged for effect. Not only had she skilfully placed a nice selection of plants round a little pond, but she also had made personally the most attractive earthenware container.

The growing popularity of the so-called hardy orchids was reflected in four good entries of *Pleiones* in the class for one pan Orchid suitable for alpine house or rock garden. The winner here was Mr. Alec Todd with a well-flowered pan of *P. limprichtii*, smaller in flower than some of the other species and perhaps the easiest to cultivate and increase. I said so-called hardy orchids advisedly, because their hardiness outside is doubtful, but plants in a dry state have survived something like 17 or 18 degrees Fahrenheit of frost.

Miss M. N. MacFadyean took first prize for a bowl of cut flowers of rock plants. She had a nice selection of flowers delightfully arranged as one would expect from a person with her artistic abilities.

Mrs. E. W. McLean was the principal prize winner in Section II, gaining the Bronze Medal and the James A. Wilson Trophy for the most points. Outstanding amongst her exhibits were *Saxifraga diapensioides lutea*, one of the more difficult plants of the genus, *Narcissus nanus*, an easy doer, free with its flowers and quick to increase, and the very fine conifer *Chamaecyparis obtusa nana gracilis*.

Mrs. Joan Clark gained first prizes with a very fine specimen of *Cassiope lycopodioides* which would have fared well in the senior section, and *Primula balluensis*, which is not very often seen on the show benches.

Dr. and Mrs. J. G. Macarthur gained a well merited first prize with the European hybrid primula *P. bileckii*. This variety deserves to be grown more widely than it is, as does its sister *P. forsteri*. The class for tulips suitable for the rock garden attracted four good entries, the best of which was judged to be *T. praestans* "Fusilier" shown by Mr. Jack McCreery. Miss M. G. Nicolson was successful with an unnamed *Sedum* which was the subject of many admiring comments. In habit it resembled *S. acre*, but its foliage was of the highest gold.

Classes 102 and 103 for bowls of cut flowers brought together some fine arrangements. The prize winners here were Mr. and Mrs. D. McKay and Mrs. Neil Ruthven.

Trade exhibits were fewer than usual, but the quality of the plants was well up to standard and order books were well filled. The Trade stands are an essential part of our Shows and it was very pleasing that the enterprise of the nurserymen was well rewarded on this occasion.

Jack Drake, Inshriach, Aviemore, was awarded a Large Gold Medal for a fine collection which included amongst other excellent plants the dwarf conifer *Chamaecyparis obtusa intermedia*, European hybrid primulas of his own raising "Jenny," "Dianne" and *marginata* "Highland Twilight," Asiatic primula species *obtusifolia*, *sonchifolia* and *macrophylla*. Others noted particularly were *Leucogenes leontopodium*, *Androsace carnea x pyrenaica* and *Douglasia laevigata*.

J. R. Ponton, The Gardens, Kirknewton, who gained a Gold Medal for his exhibit, had a wide variety of plants in good condition. Spring bulbs were particularly strong here. Those to catch the eye were *Tulipa pulchella violacea*, *T. praestans*, *T. urumiensis* and the rare attractive multi-headed narcissus, *N. calcicola*. *Anemone blanda* in various colours made a good show, as did *Rhododendron* "Carmen." Others to catch the eye were the easy saxifrage *S. sancta* and the more difficult but very beautiful *S.* "Faldonside" and the orchid *Pleione formosanum*.

Edrom Nurseries, Coldingham, also gained a Gold Medal for a nicely assorted collection of rock garden plants. The most outstanding plant here was the very attractive flowering shrub *Corylopsis pauciflora* shown in excellent condition. *Primula petiolaris*, as one has come to expect from this firm, was in good flower, as were various primulas. A new variety of *Anemone blanda* called "Radar" caught the eye and so did *Saxifraga porophylla* and *Draba aizoides*.

Thanks are due to the Scottish Orchid Society, whose members once again staged a fine collection of orchids in flower. I find it hard to resist the appeal of these most attractive plants and when I see them my thoughts go back to my earliest days as a gardener—to the age of eleven or twelve—when I saved my pennies, which were hard to come by in those times, to buy a plant of *Odontoglossum crispum*. How delighted I was when it first flowered. Now I confine my orchid growing to seven species of *Pleione*. Readers please forgive this nostalgic note on which I end.

D. L.

EDINBURGH

AS THE Dalmeny Street Drill Hall was not available this year, the Show returned to the Music Hall but, on account of the utterly prohibitive cost, not to the Assembly Room as well, and as it turned out there was quite sufficient room for the Show. The season has been very peculiar with an early start after a very easy winter, which had the result of good entries at Penicuik and a record Show at Dumfries. After this the weather became cold, dull and damp, and the plants which were coming on strongly just seemed to "stick" with the result that it was extremely difficult to find a reasonable number of plants at anything approaching show stage or standard. This had the very unfortunate result of cutting both the Glasgow and Edinburgh Shows down, as far as one could see, to about half their normal size.

The entries which did arrive were, however, good and the Show, though small, was of good quality and surprisingly representative, even though there were obviously many blanks. In the open section the primula entries were notably good and numerous in both European and Asiatic sections, even if some of the rarer ones were still missing. With the early start to the season the saxifrage entries were largely confined to Englerias, but these were good and there was one very fine pan of *Sax. retusa* beautifully flowered. The bulb classes were much stronger this year, both Tulips and Narcissi being well represented, but perhaps the most striking and interesting bulbs were the Fritillarias, a number of new species of which are now appearing on the bench from the Furse and the Bowles Scholarship expeditions. Whether they will stay with us and become a regular feature is another matter altogether !

The Forrest Medal was awarded to a superb plant of *Douglasia laevigata* shown by Mrs. Maule, the runners-up being a very good *Androsace imbricata* from Mr. Esslemont and a pan of the relatively new *Primula warshenewskiana* shown by Jack Drake—this, I gather, bids fair to be a really good and reliable introduction, as it seems to be tough and to reproduce readily. These two, together with Mr. Esslemont's *Anchusa caespitosa*, were awarded Certificates of Merit, as was a group of really magnificent dwarf conifers put up for non-competitive exhibition by Mrs. J. G. Neilson. Certificates were also given to two beautiful displays of photographs from Dr. H. S. Wachter and Dr. B. O. Mulligan.

A Gold Medal was awarded to Messrs' Ponton's Nurseries for a built-up rock garden, a Large Gold Medal to Jack Drake and a Gold

Medal to the Edrom Nurseries for exhibits of rock garden plants in pans. Our good friends Messrs. Grant of West Calder had a display of their range of composts and materials to let us see, and handle, the wares they deal in—whoever else may fail to turn up, they never do.

The Club's Bronze Medal for the highest number of points in Section II went to our hard-working Show Secretary, Mrs. McLeod—how she managed to run the Show so excellently and, as well, bring forward so many good plants for exhibition is a major mystery. The Reid Rose Bowl for the highest number of points in Section I was won by Mr. Crosland of Torphins, Aberdeenshire, by a hairsbreadth from Mr. Archibald of Wishaw. Mr. Harold Esslemont of Aberdeen won the Corsar Trophy, the Carnethy Medal, the Elsie Harvey Trophy and the Curle Trophy, while Mrs. McLeod won the Henry Archibald Rose Bowl. The Boonslie Cup for a miniature garden was won by Mrs. Tucker and the Kilbryde Cup for a floral decoration was won by Mrs. Davidson of West Linton.

Some very fine plants appeared in the Corsar Trophy, Carnethy Medal and Elsie Harvey Trophy classes, shown by Messrs. Esslemont, Crosland and Archibald, and Mrs. Maule. Among them were several *Androsace imbricata*, a very fine dwarf *Chaenomeles*, beautifully flowered, an equally floriferous *Haberlea rhodopensis*, *Cassiope muirheadae*, several of the new *Dionysia demavendica*, and a very good *Daphne petraea* on its own roots and flowering well (fig. 31). There were several of the very tricky New Zealand alpine, *Raoulia grandiflora*, *R. mammillaris* and *Haastia pulvinaris*, all looking very lively, and a very beautiful *Rhododendron pumilum* in full bloom. Unfortunately the Ericaceae were very few in numbers in the Show, for they normally make a very colourful and generous contribution on the benches, but apart from a few dwarf rhododendrons and a very good *Arctericana nana* and the *Rh. pumilum* mentioned above there were few others to be seen.

I personally was delighted to see a return of the Auriculas, for they have always been a favourite of mine, and Mr. Elder has now come into this field with some real beauties so we will hope to see more and more year by year—some day, perhaps, we will even get our old "six pans Auriculas" class back again !

The cactus and succulent classes were good this year and we were glad to see that some of the junior competitors were in these classes as well as their own special classes. This was an experiment and it was most satisfactory to see that it is working, for to our great pleasure

we had several "Juniors" competing—and this is just what we were aiming at.

Fortunately our "gate" was very good, which eased the worry of our Show Secretary, Mrs. McLeod, who made such a success of the Show, but had the nagging worry of the exorbitant rent charged by the City Fathers to cope with, and we are most grateful to those members who waived their right of free admittance and paid at the door to help out—this was very much appreciated.

HENRY TOD

DUNDEE

THE SHOW in its new venue, on the 1st and 2nd May 1964, was outstanding in the variety and quality of rare and difficult plants on the benches.

The George Forrest Medal Bar for the outstanding plant was given to a magnificently flowered specimen of *Primula calderiana*, exhibited by Dr. and Mrs. Stuart. The Alexander Caird Trophy, and Dundas Quaich, were both won by Mr. H. Esslemont, with many perfectly grown plants, including *Iris attica*, *Helichrysum coralloides*, *Anchusa caespitosa*, and *Daphne petraea*, the latter growing on its own roots in tufa (fig. 31). The L. C. Middleton Trophy was awarded to Mr. J. R. Terris for most points in Section I. The Club Bronze Medal was won by Mrs. Margaret Taylor, who was also awarded a Certificate of Merit for a plant of *Phyllothamnus erectus*.

Other Certificates of Merit were awarded to *Eritrichium nanum*, shown by Major-General and Mrs. Murray-Lyon, and *Androsace imbricata*, shown by Mr. J. B. Duff.

Outstanding plants were the wonderful pans of *Pleione formosanum* and *Anemone vernalis*, shown by Mr. Dorward; *Primula aureata* with its silver farina on the leaves, from Mr. K. J. Green, which also received a Certificate of Merit; the brilliant sky blue *Gentiana acaulis coelestina* shown by Murray-Lyon; *Anemone obtusiloba patula* and *Celsia acaulis* from J. B. Duff; *Pleione formosana alba*, *Soldanella montana*, *Polygala chamaebuxus rhodoptera* and *Primula reinii* (given a Cultural Commendation), all from Mr. J. Crosland.

There were many attractive conifers, and in the Cactus section a fine flowered *Mammillaria glochidiata*.

Mr. Dorward's miniature garden showed his skill and plantsmanship, while Mrs. M. Ingram's skill in flower arrangement gave her a deserved 1st Prize.

Large Gold Medal Cards were awarded to both the Trade Exhibitors.

Bonsai trees and Cacti were exhibited by Struan Bank Nurseries and J. R. Ponton had a neatly arranged exhibit, which included the dwarf yellow *Fritillaria citrina*, *Erythronium* "White Beauty," *Rhododendron keleticum* and *Iris bucharica*.

The whole Show ran very smoothly, reflecting credit on the energy and efficiency of all the members who made this Show possible.

H. TAYLOR

DUNFERMLINE

THIS SHOW, on Friday and Saturday 22nd and 23rd May, was held as in past years in the Music Pavilion, Pittencrieff Park. In the absence abroad of Mrs. E. D. Wilson, Show Secretary, the organisation and management of the Show was in the hands of Mr. James Bonnar, who acquitted himself in this role new to him very excellently indeed and carried through most successfully an attractive Show which was well up to standard in both number and quality of entries.

In Class 1 (3 pans) the Mrs. Robertson Challenge Cup was won by Mr. H. Esslemont of Aberdeen with *Cypripedium cordigerum* (which gained a Certificate of Merit), *Spiraea hendersonii*, and a good *Ramonda*; Mr. J. D. Crosland, also of Aberdeen, was a close second with *Rhododendron ludlowi* (winner of the Forrest Medal), *Schizocodon soldanelloides alpina*, and *Ourisia macrocarpa*; while Mrs. Maule, Edinburgh, was third with the L. & S. form of *Cassiope selaginoides*, *Rhodo. campylogynum myrtilloides*, and *Raoulia grandiflora*. The same three members led the next class in the same order with plants of *Eritrichium nanum* (Certificate of Merit), *Orchis papilionacea*, and *Raoulia mammillaris*. The winning plants in the class for natives were *Salix reticulata*, *S. x boydii*, and *Sagina boydii*, and the winning dianthi were *D. subacaulis* (1st and 3rd), and *D.* "Whitehills." Winning primulas were *P. redolens* (an excellent plant), *P. chungensis*, and *P. pulverulenta*; while in Class 6 Mr. Crichton, St. Andrews, a newcomer to our Shows, was first with *Androsace sarmentosa*, Mr. Crosland second with *A. arachnoidea superba*, and Mr. Strachan, Perth, third with *A. sarmentosa chumbyi*.

Mr. and Mrs. Aitken, Edinburgh, were first in the saxifrage class with *S. cebennensis*, Mr. Strachan second with a *S.* sp., and Mrs. McLeod, Edinburgh, third with *S. marginata*. Mrs. Cormack, Edin-

burgh, was first in Classes 9 and 10 with a good *Sedum* and *Sempervivum arachnoideum*, Mrs. Niven next in Class 9 with *S. spathulifolium* and Mrs. Simson Hall in 10 with *S. montanum rubrum*, while Miss Milburn had an excellent *Sempervivum* "Jubilee." Class 12 was won by a fine *Eritrichium nanum* and 13 by *Campanula carpatha*, both by Mr. Esslemont who was also first in 14 with *Helichrysum coralloides* (not in flower); in this class were *Anacyclus depressus* and a good *Antennaria dioica rosea*, both in flower. The class for *Ericaceae* was won with a fine plant of *Andromeda polifolia grandiflora*, and in Class 16 *O. laciniata* were both first and second. Mr. Crosland was first (with a Certificate of Merit) for a handsome plant of *Ranunculus lyallii* in Class 18, and in 19 Mr. Strachan with a good *Penstemon davidsonii*. Mrs. Maule gained the honours in Class 20 with that fine but seldom-seen plant—*Convolvulus nitidus*, second being *Leucogenes leontopodium*. In Class 22 a fine *Pimelea sericeo-villosa* caught the eye and in 23 a good *Asperula suberosa*, while 24 was colourful with excellent plants of *Mamillaria prolifera*, *Notocactus lenninghousei* and an *Epiphyllum ackermannii* hybrid. First in Class 27 was a very excellent *Cypripedium calceolus*, shown by Mrs. Boyd-Harvey, which also gained a Certificate of Merit.

It was most encouraging and very promising for the future of our Shows to see new names and good competition in Section II, where the Bronze Medal, for most points in the section, was won by Mrs. Champion, Rosyth, in the face of keen competition from Mrs. Murdoch. Other names new to Club Shows which appeared several times on prize cards in Sections I and IV were those of Mr. and Mrs. Crichton and Mrs. and Mrs. Sherett.

Competition in Section IV was perhaps not up to the standard it has sometimes attained in the past, but it was none-the-less very keen. Mr. Crichton won the 3 pan class (44) with three good plants, closely followed by Mr. James Moir with almost as good, and in Class 45 Miss Milburn had a really fine *Androsace sarmentosa chumbyi* and in Class 47 an excellent cushion of *Scleranthus*. Mr. R. W. Rutherford was first in 48 with saxifrages which included fine specimens of *S. "Esther"* and *S. cotyledon*; a good *S. "Southside Seedling"* was also in evidence. Mrs. Niven was first in 49 with *S. cebennensis* and Mr. G. Hill third with *S. "Four Winds."*

There were five really outstanding entries in Class 50, Miss Milburn and Mr. Moir first and second with sempervivums, and Mr. Crichton third with sedums. Mr. Hill with a very fine *Sedum spathulifolium*

aureum was first in Class 51, while second and third were excellent specimens of *S. spathulifolium* 'Capablanca' and *S.s. purpureum*. In Class 54 Mr. Crichton was first with a very neat *Dianthus subacaulis* and in 56 with a very good *Lewisia*. In Class 64 Mr. Hill showed one of the finest *Chamaecyparis obtusa nana* ever seen at a Show and in 65 Mr. Sherett showed a *Schumbergia gaertneri* with over 200 blooms.

As already mentioned the Forrest Medal for the most meritorious plant in the Show went to *Rhododendron ludlowi* shown by Mr. Crossland, while the Carnegie Dunfermline Trust Trophy, for most points in Section I, went to Mr. H. Esslemont and the Institute of Quarrying Quaich, most points in Section IV, went to Mr. J. R. Terris and the Bronze Medal in Section II to Mrs. Campion. In every way Dunfermline members had every reason to be satisfied with their Show, except for the regrettable fact that Fife County members might well have turned out in much greater force.

ABERDEEN

FOLLOWING upon a fairly mild spring the late date allotted for the Aberdeen Show raised many problems for the organising committee and exhibitors. However, spurred on by the new Show Secretary, Mr. Pole, the local members rose to the occasion and staged a Show that fell little short of the high standard expected of the Aberdeen Show. As a consequence of the late date, many of the local exhibitors' prize plants were missing, but it was refreshing to see a higher proportion of superb plants which had been lifted from the open ground.

The premier award, the Forrest Medal, was given to a fine plant of *Rhododendron yakusimanum* exhibited by Dr. H. Robertson. Many other fine plants must have been considered since no less than four awards of a Certificate of Merit were made to plants. These were : to *Celmisia walkerii* and *Euryops evansii*, both exhibited by Mr. J. N. Aitken, to *Cypripedium cordigerum*, shown by Mr. H. Esslemont, and to *Rhododendron hanceanum nanum* exhibited by Mr. J. D. Crossland. Another fine plant was Mrs. Gray's specimen of *Rhododendron cam-pyllogynum*, which was covered in flowers.

The six pan class was won by Mr. Crossland, whose plants included *Briggsia penlopi* (questionable hardiness) and *Dicentra peregrina pusilla*. In this class Mr. Esslemont had fine plants of *Spiraea hendersonii* and *Primula redolens*. The three pan class attracted five entries and was won by Mr. Esslemont, who also received the Walker of Port Lethen Trophy for gaining most points in Section I. Some noteworthy plants

in this class were *Cypripedium reginae*, *Phlox triovulata*, *Rhododendron ludlowii* and *Calceolaria darwinii*.

The new or rare plant class generally attracts considerable attention and it was interesting to see *Pyxidantha barbulata* shown by Mr. Crosland, covered with small white flowers. Mr. A. Reid showed *Lilium sherriffae*, a rather sombre little lily. One of the interesting plants grown from seed was Mr. Esslemont's yellow-flowered *Dionysia demavendica* grown from seed collected in Persia by Admiral Furse.

In Aberdeen New Zealand plants are becoming more numerous on the show benches ; in addition to the superb *Celmisia walkerii* of Mr. Aitken, *Raoulia mammillaris* and *Myosotis eximea* were shown by Mr. Esslemont, while Mr. Duff showed *Myosotis decora*, another white-flowered forget-me-not.

Dr. A. Garton has two specialities which always attract attention on the show benches, *Gentiana acaulis* and *Calceolaria darwinii*. This year it was a fine pan of the latter that was exhibited.

In the "Beginner's" section, it was encouraging to see a number of new names among the prize winners. Mrs. Thow won the Bronze Medal, among her plants being *Primula aureata*. Good plants in this section were shown by Mrs. D. C. Wilson, Mr. W. Bick and J. Aitken, jun.

Large Gold Medals were awarded to Messrs. Jack Drake for a fine display of rock garden plants in pots and to Mrs. McMurtrie for a built-up display of attractive plants. From the Cruickshank Botanic Garden, Mr. Sutherland put up his usual magnificent display of excellently grown and presented rock plants and associated dwarf shrubs, for which he was awarded a well deserved Certificate of Merit. It was a revelation to many of our members to see the very fine exhibit of botanical illustrations which Mrs. McMurtrie had painted. A Certificate of Merit was awarded to this exhibit.

H. R.

Joint Rock Garden Plant Committee

DUMFRIES—10th APRIL 1964

AWARDS TO PLANTS

FIRST CLASS CERTIFICATE

To *Primula petiolaris* as a flowering plant for the Rock Garden. Exhibited by Messrs. Edrom Nurseries, Coldingham, Berwickshire.

AWARD OF MERIT

To *Saxifraga andersonii* as a flowering and foliage plant for the Rock Garden. Exhibited by Mrs. Crewdson, Helme Lodge, Kendal, Westmorland.

To *Primula marginata* 'Pritchard's variety' as a flowering plant for the Rock Garden. Exhibited by Brigadier G. F. Hutchison, D.S.O., Tarlillyan, Rockcliffe, Dalbeattie, Kirkcudbrightshire.

To *Pulsatilla ? slavica* (subject to verification of the name) as a flowering and foliage plant for the Rock Garden. Exhibited by Brigadier G. F. Hutchison, D.S.O., Tarlillyan, Rockcliffe, Dalbeattie, Kirkcudbrightshire.

To *Saxifraga apiculata alba* as a flowering plant for the Rock Garden. Exhibited by Mrs. R. G. Smith, Moza, Moffat Road, Dumfries.

To *Primula* 'Mary Curle' as a flowering plant for the Rock Garden. Exhibited by Messrs. Edrom Nurseries, Coldingham, Berwickshire.

To *Andromeda polifolia nana* as a flowering and foliage plant for the Rock Garden. Exhibited by W. McGinley, Esq., Trokoughton Cottage, Bankead Road, Dumfries.

CERTIFICATE OF PRELIMINARY COMMENDATION

To *Aciphylla munroi* as a flowering and foliage plant for the Rock Garden. Exhibited by Miss M. E. Gibson, Brackenhill, Colvend, Dalbeattie, Kirkcudbrightshire.

To *Androsace wulfeniana* as a flowering plant for the Rock Garden. Exhibited by Dr. and Mrs. J. Davidson, Linton Muir, West Linton, Peeblesshire.

AWARDS TO EXHIBITORS

CULTURAL COMMENDATION

To Dr. and Mrs. J. Davidson, Linton Muir, West Linton, Peeblesshire, for a well-grown plant of *Androsace wulfeniana*.

DUNDEE—1st MAY 1964

AWARDS TO PLANTS

AWARD OF MERIT

To *Orchis sambucina* as a flowering plant for the Rock Garden. Exhibited by Major-General and Mrs. D. M. Murray-Lyon, Ardcuil, Pitlochry, Perthshire.

CERTIFICATE OF PRELIMINARY COMMENDATION

To *Ranunculus lobulatus* as a flowering plant for the Rock Garden. Exhibited by Major-General and Mrs. D. M. Murray-Lyon, Ardcuil, Pitlochry, Perthshire.

AWARDS TO EXHIBITORS

CULTURAL COMMENDATION

To J. D. Crosland, Esq., Treetops, Torphins, Aberdeenshire, for a well-grown plant of *Primula reinii*.

To H. Esslemont, Esq., M.B.E., 9 Forest Road, Aberdeen, for a well-grown plant of *Daphne petraea* (fig. 31).

To A. Duguid, Esq., c/o Edrom Nurseries, Coldingham, Berwickshire, for a well-grown plant of *Schizocodon ilicifolius albus* (exhibited as *Schizocodon soldanelloides alba*).

Group Activities

ANGUS

A WINTER session of seven meetings was held. The opening meeting in October was a particularly interesting talk by Mrs. Ruth Tweedie on "Patagonian Plants", with slides which gave a good idea of the habitats of these plants. Some of these are now on the market, and other very desirable ones, we hope, will follow.

In November Miss Joyce A. Halley gave a talk entitled "High Jinks", which successfully expressed the sheer joy of an Alpine holiday, with its interesting incidentals, in addition to the beautiful flowers all recorded on colour slides.

Dr. C. North under the title "Some Flower Portraits, 1963" showed at our December meeting a remarkable number of perfectly produced transparencies, which were a delight to see. The expert commentary was most informative, the *Liliums* being a feature.

The usual "Members' Transparency Night" at our January meeting was again a great success. Besides those we now consider "regulars", there is the pleasing emergence of a "dark horse", who has not previously taken part, who shows perfectly lovely slides.

At our February meeting we had an expert talk by Miss C. W. Muirhead, of the Royal Botanic Garden, Edinburgh, on "Sempervivums and Sedums", which was bound to enhance still further our regard for these wonderful plants. The slides of new and rare species delighting the specialist.

In March the Group Convener gave an illustrated talk on "Campanulas for the Rock Garden", showing some pictures of the more precious species, amongst others which should be in every garden.

The closing meeting was as usual a Group Members' Show. We

were again fortunate in having Mr. J. L. Mowat as Judge. It was Mr. Mowat who started us off on a very high standard with this type of meeting which is now a regular feature in our programmes. His very wide knowledge is apparent always in the address he gives, which is useful to both experienced and prospective Show exhibitors alike.

Visits to gardens arranged by Miss Halley were to Pitlochry and Branklyn. On 9th May we visited Major-General and Mrs. D. M. Murray-Lyon's garden at "Ardcuil", Pitlochry, which was as usual full of interest for the keen plantsman (and plantswoman). After tea, the party went to "Millglen", the fairly new garden of Dr. and Mrs. T. A. Stuart, which is already showing the promise of its importance to garden lovers.

A Wednesday evening run on 3rd June to Mr. and Mrs. J. T. Renton's garden at "Branklyn", Perth. (We are lucky to be so near). The garden was at its best, a mass of colour with Rhododendrons and Meconopsis, amongst other lovely things. The maintenance of this excellence year after year is a very great achievement.

A further visit to see the glories of Keillour in Autumn colourings is fixed for Saturday 26th September. Details of bus times, etc., will be sent to Angus members who have not already advised Miss Halley that they mean to attend.

STEWART MITCHELL,
Group Convener.

EAST LOTHIAN AND BERWICKSHIRE

THE MEETINGS on the 8th and 9th October combined the last of garden visiting with the beginning of winter lecturing. Nineteen members made their way to Pitlochry and met at Millglen to see the new garden which is being built on the hillside by Mr. and Mrs. T. R. Stuart. An extensive new scree had already been built and planted, and there are stepping stones running through it, which make it easy to examine the plants. *Rhododendron kamchaticum* was noted as being very much redder in the leaf than plants further south and east. There was a fine collection of *Cassiope* sp. in the woodland, and moisture-loving plants on the banks of the swiftly-running burn. What an enviable garden situation this is, and how cleverly Mr. and Mrs. Stuart are working with, instead of struggling against, Nature!

In the evening the visiting members were joined at Scotland's Hotel by the North Perthshire members for a lecture on "Peat Beds and Banks" by Major-General Murray-Lyon. Lively discussion

followed, which continued even after the departure of the Perthshire members, far into the night.

After breakfast members met at Ardcuil to see again those same peat-loving plants in the flesh. The walls, terraces and raised beds which Major-General Murray-Lyon has built were much appreciated by those who like to examine the plants at or near eye level. The best example of autumn colour of the whole trip was provided by the Japanese maple near the entrance to the garden. In response to an urgent telephone call Mr. Stewart Mitchell hastened over from Dundee to record it on film, before it shed its leaves in a scarlet circle on the ground like the other maple growing near it which had caught the first night frost.

After taking coffee with Mrs. Murray-Lyon, the party split up again, some returning home, others staying on for a few days, and others going on further north.

The programme on 7th November was provided by two Group members—Mrs. Cairns from Berwickshire and the Rev. E. M. Ivens from East Lothian. Mrs. Cairns showed her cine film of “Wild Life in Inverness-shire.” There were close-up portraits of *Silene acaulis* and other native plants, and some wonderful pictures of young birds hatching, and parent birds feeding them. It is not often that a meeting of rock-gardeners is reduced to helpless laughter, but this was the reaction to some shots taken from a caravan window of the riotously comic efforts of a red squirrel to rob a bird-table just out of his reach.

Following this, Mr. Ivens played back the tape recording he had made of six well-known East Lothian voices reading passages from Farrer. Members were asked to identify the voices, and were questioned on what the voices had said. This turned out to be surprisingly difficult. One member failed to recognize the voice of her own sister, very few remembered that *Cyclamen europaeum* was the only flower mentioned as having a sweet scent, but nearly everybody remembered that the plant “found as a fossil in the frozen heart of the world” was *Dryas octopetala*.

The December meeting consisted of a “Rock Gardeners’ Forum,” subsequently broadcast by the B.B.C. in “The Scottish Garden.” All the details for this had to be arranged earlier in the year with the late Mr. Kennedy Stewart. Almost at the eleventh hour, Miss Pamela Patterson was appointed to act as producer, and it was she who selected from the questions sent in by members those which she considered would be of greatest interest to a wide listening public. Normally our

meetings are confined to members only, but on this occasion members were able to bring friends, and the Provost and Town Council of North Berwick honoured the occasion with their presence, so that the audience numbered 180. The experts on the platform were Mr. Edward Kemp, Mr. David Livingstone and Dr. Henry Tod, under the Chairmanship of Major-General Murray-Lyon. After the six questions had been asked and answered, and the producer had signalled that we were no longer "on the air", everybody relaxed, and other questions were answered informally.

The Group always has a short hibernation period for the sake of those members who are likely to be house-bound by snow on the Lammermuirs, and so the next meeting was not until the end of February. It was held at Dunbar on a Saturday afternoon to make the homeward journey easier in wintry weather. Unfortunately the Berwickshire members were still snowed in, and the lecturer, Miss Muirhead, ran into snow on her homeward journey to Carlisle. She spoke to the meeting on "Cassiope and other dwarf Ericaceae" and showed lovely slides, most of which had been taken at the Royal Botanic Garden. In the low-rainfall, high pH county of East Lothian probably fewer ericaceous plants are grown than anywhere else in Scotland, but this lecture, following the autumn visit to Pitlochry, provoked a determination to contrive "micro-Perthshires" in those gardens where ericaceous plants are difficult.

In March, a symposium on "Showing" was held at North Berwick. The Group Convener ran through those relevant passages in Show Notes and Rules which are often overlooked, and outlined the procedure for sending in entries and staging plants before the Show. The Show Secretary reminded members what a great deal of paper-work he has to do between Monday 31st August and 5 o'clock on Wednesday 2nd September, and asked for punctual entries. He does, however, publish his telephone number in the schedule for the sake of those plants which suddenly burst into flower after the main entry has been posted. The Hon. Miriam Pease then gave a practical demonstration of the art of lifting a plant from the rock garden for the show bench. Her plants have always been notable for their beautiful presentation, and members were able to see a good spreading plant of *Saxifraga oppositifolia* lifted into a spotless pan, dressed with silvery mica schist from Argyll, and legibly labelled. Mr. Alfred Evans, who has several times judged at the North Berwick Show, then outlined the points by which the judges assess the winning plants. He laid particular

stress on the importance of a plant being ‘‘in character’’. He concluded by passing judgement on some of the plants which members had brought to the meeting.

The garden outing into Midlothian on 3rd June began with a visit to Mr. and Mrs. Maule’s garden in Balerno. This occupies a large disused quarry, is surrounded by cliffs and provides a wide range of habitats. Near the house there is formal stone paving and a raised bank filled with good rock garden plants, but beyond some stone steps there are screes and peat beds where Mrs. Maule grows the choice and difficult plants which have brought her so much success at the Shows. It is by no means the first time that the East Lothian Group has visited Quarry House, and on each occasion a new piece of the wild part has been taken in to accommodate Mrs. Maule’s ever-growing collection.

After lunch at Marchbank Hotel, the party went on to visit Mr. and Mrs. Bruce Robertson’s garden at Wester Howgate. With the exception of *Salix boydii* and some primulas, every single plant in the garden appeared to be in full flower on the day of the visit—a most brilliant display. Detailed inspection revealed that it was much more than just a brilliant display, and individual plants were of very high quality. Particularly noted were *Gentiana angulosa* and *Cypripedium calceolus*. Mr. Robertson appears to have enough plants to fill the show benches at Edinburgh twice over—except that, because of its altitude, the garden is at its best long after the Show is past. It is difficult to believe that this admirable garden is only seven years away from stinging nettles and sodium chlorate.

After tea at Bush House members, escorted by Dr. Tod, wandered round this garden with a past which has been rescued from extinction by the University, and is now used for agricultural research. There was a quietness and dignity in the tall trees, the lake and the green slopes which brought a brilliant and stimulating day to a restful conclusion.

L. CHRISTIANA BOYD-HARVEY,
Group Convener.

EDINBURGH

MR. W. R. ADAMS, who has been Convener of the Group for the past ten years, has now resigned. During his tenure of office Mr. Adams has worked very hard on behalf of the Group and has arranged many interesting lectures for us ; we are most grateful to him for all he has done.



Photo—G. S. Thomas

Fig. 24—*Picea abies* 'Pseudo-Maxwellii' (see page 131)



Photo—G. S. Thomas
Fig. 25—*Picea abies nana Compacta Crippsii* (see page 131)



Photo—G. S. Thomas

Fig. 26—Entrance to Rock Garden, Sizergh Castle, *Juniperus chinensis* 'Japonica aurea' on left, *Pinus mugo* 'Mughus' right (see page 132)



Photo—G. S. Thomas

Fig. 27—View of Rock Garden in Sizergh Castle
Gentiana asclepiadea in foreground (see page 132)



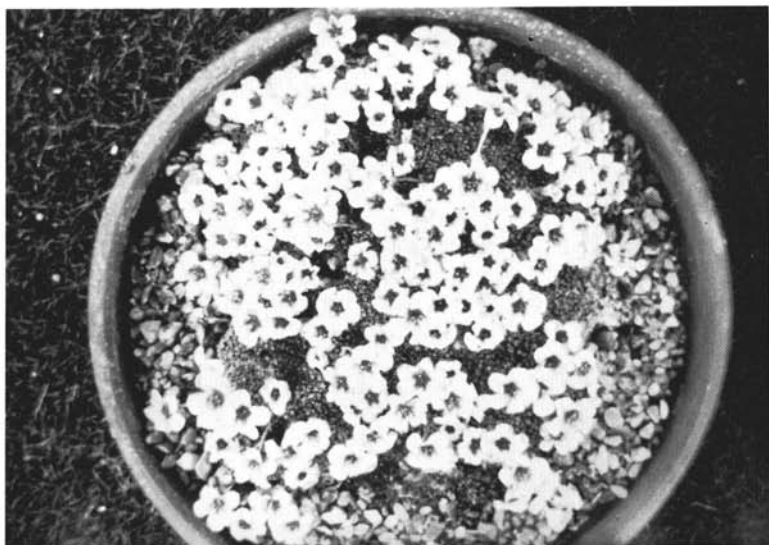
Photo—H. Esslemont

Fig. 28—*Iris winogradowii* (see page 150)



Fig. 29—*Taxus baccata* 'Dovastonii aurea', with astilbes (see page 131)

Photo—G. S. Thomas



Photo—H. Esslemont

Fig. 30—*Saxifraga lilacina* on tufa, F.M. Penicuik (see pages 150 and 167)



Photo—H. Esslemont

Fig. 31—*Daphne petraea* on own roots (see pages 151 and 177)



Photo—H. Tod

Fig. 32—Automatic watering (see page 142)



Photo—H. Tod

Fig. 33 Automatic watering (see page 142)



Photo—H. Esslemont

Fig. 34—*Phlox trioevulata* (see page 151)



Fig. 35—The Judges at Dumfries (see page 168)

A second "Beginners' Class" was arranged in the Spring and included talks, demonstrations and visits to gardens. The class consisted of eleven members, some quite new to rock gardening and others who, though they claimed to be beginners, knew quite a lot about the subject. They were all most enthusiastic and some interesting discussions arose. The value of a class of this kind lies not merely in the help it gives to beginners but also, when the numbers are kept small, in letting new members get to know each other.

This Group, in conjunction with the Midlothian Group, has been very fortunate in having a lecture given by Professor W. R. Philipson of New Zealand, whose book "Rock Garden Plants of the Southern Alps" has been so much enjoyed by many Club members. At the time of sending in this report the lecture lies ahead, when Professor Philipson is to be in Edinburgh for the International Botanical Conference, and we look forward with keen interest to hearing him.

During the winter of 1964-65 meetings will be held as usual in the Gartshore Hall, 116 George Street, on the second Tuesday of each month at 7.45 p.m. The lectures are held jointly with the Midlothian Group and any Club members who are in Edinburgh will be welcome.

- Oct. 13 E. B. Anderson, Esq. : "Dwarf Bulbs for the Rock Garden"
 Nov. 10 Dr. D. M. Morison : "Plant Hunting in Sutherland aided by Geology"
 Dec. 8 Rear-Admiral J. P. W. Furse : "1964 Expedition to Central Asia"
 Jan. 12 J. R. Ponton, Esq. : "The propagation of Alpines," with demonstration
 Feb. 9 "Put your Problems to the Panel" and Members' Slide Night
 Mar. 9 Dr. Henry Tod : "How to show Alpines," with demonstration and a Show in miniature
 April 13 K. C. Corsar, Esq. : "Primulas"

K. S. HALL,
Group Convener.

FIFE—EAST

THE WINTER session opened on Friday 1st November, with an extremely interesting and delightful travel talk—"Alpines in Eastern Europe"—by Dr. James Davidson. Dr. Davidson is a very accomplished speaker and an enthusiast on the subject of plants, so that we were entertained

to a most absorbing talk illustrated with a wonderful collection of beautiful coloured slides. The many members present were grateful to Dr. Davidson for a really wonderful evening.

The December meeting, when the speaker was Mr. James Crosland, was something entirely different and, showing what can be attained in a not very large garden, must have been both encouraging and helpful to many members with gardens somewhat similar. With the help of colour slides Mr. Crosland showed the gradual development of his garden from its early days right up to the present, and it was interesting to see how the plants fitted into their surroundings as they settled down and grew in size.

The January meeting was held in Elmwood Agricultural College, Cupar, where Mr. Stewart Mitchell was the speaker and his subject "Campanulas for the Rock Garden." Mr. Mitchell is something of an authority on campanulas and many members will remember his article in the *Journal* a year or two ago. We therefore looked for an interesting evening and we certainly got it. Mr. Mitchell spoke with assurance on a subject of which he is obviously fond, and his slides were excellent in illustrating his points as he treated one favourite after another. A further article by Mr. Mitchell on this subject would be a welcome addition to the pages of the *Journal*.

"Members' Night" in St. Andrews on 13th February was very well supported with a varied selection of excellent slides on rock gardens and rock garden plants shown by quite a number of members. They were all without exception very much appreciated and led to several interesting discussions and exchanges.

The March meeting had as speaker a newcomer to this department of Club activities, Miss Joyce Halley, who entertained a well attended meeting with a racy and interesting account of the plant-hunting holiday of herself and four friends in the Alps last year. The talk was entitled "High Jnks", and though numbers of members were quick to point out an apparent printers' error (including the printers), this was no error but the Christian initials of the five friends concerned. The beautiful lot of slides Miss Halley used to illustrate her very graphic talk were selected from the many taken by all five members of the party.

Our ever-popular "Judging Competition" night in April was held at Elmwood College, Cupar, and the spacious, well-lit room provided proved an ideal setting for such a venture. The response was magnificent and attractive plants were brought in large numbers by mem-

bers, with the result that the evening was both exceedingly useful and instructive and also enjoyable. Members present showed a fine awareness of the qualities to be looked for in plants from the exhibition aspect, and competition was keen. After members had thoroughly gone over the plants and made their decisions, the appointed judges for the evening gave a running commentary of their reasons for placing the plants in order of merit and tried to answer the various questions put to them.

At the annual "Coffee Evening" in St. Andrews a week later there was the usual large turnout of members and friends and an even more than usual number of plants, etc., handed in for sale. At the end of the evening, which was enjoyed by all present, our Treasurer was able to announce a profit of just on £50—an extremely satisfactory end to a happy evening and a new record for our last meeting of the winter season. Unfortunately it proved impossible to organise any summer evening visits this year, but we look forward to rectifying this next summer.

NORTH PERTSHIRE

OUR WINTER programme opened with a joint meeting of East Lothian and North Perthshire Groups. Members of North Perthshire agreed that this was a very happy meeting. Members of East Lothian visited the garden of Dr. and Mrs. T. A. Stuart (Millglen) on the afternoon of 8th October. A lecture was given in the evening by Major-General D. M. Murray-Lyon, D.S.O., M.C., his subject being 'Peat Beds and Banks'. Next morning our visitors were shown round Major-General and Mrs. Murray-Lyons' garden (Ardcuil) before they left for home.

Monday 11th November 1963 : "The Small Garden and its Plants," by Stewart Mitchell, Esq., Dundee. Mr. Mitchell proved that the small garden can be as full of interest as the large garden, by careful choice of plants and positioning of them.

Monday 9th March 1964 : "Members' Transparency Night." This was an enjoyable evening and many members took part in showing their transparencies.

GARDEN VISITS :

Saturday 6th June 1964 : Members from South and North Perthshire met at St. Andrews University Botanic Gardens, where the Curator, Mr. J. L. Mowat, met us and showed us round the Gardens. There were trees, shrubs and rock plants to suit everyone's taste. The visit was enjoyed by all.

Thursday 18th June 1964 : Dr. and Mrs. T. A. Stuart welcomed members to Millglen ; this garden is just in the making, but many plants, trees and shrubs have been planted and are becoming established.

Friday 17th July 1964 : The July visit was also in Pitlochry to see Revoan, by invitation of Mr. and Mrs. A. Gray. This garden is eight years old and many lovely shrubs are well established. The rock garden is being enlarged and the walls make happy homes for alpine.

PROGRAMME 1964-65 :

All meetings will be held in Fisher's Hotel, Pitlochry, at 7.30 p.m.

Monday 9th November 1964 : J. Aitken, Esq., Perth : "Illustrated Talk."

Monday 14th December 1964 : Members' Transparency Night. All members with 2/2 colour slides of gardening interest are invited to take part.

Monday 8th March 1965 : D. Livingston, Esq. : "Primulas."

Monday 12th April 1965 : H. Esslemont, Esq., M.B.E., Aberdeen : "Temples v. Flowers."

GARDEN VISIT :

Tuesday 8th June 1965 : A visit to Keillour Castle has been arranged by kind invitation of Major and Mrs. Knox Finlay. Members will be notified direct about this and any other garden visits arranged.

M. R. STUART

SOUTH PERTHSHIRE

AN AUTUMN meeting of the Group arranged by Dr. H. Tod, President of the Club, and Mr. D. Elder, Hon. Treasurer, to encourage local activity was followed by a series of meetings throughout the year. These meetings were very interesting and greatly appreciated by the keen members.

During the winter the lecturers were Dr. H. Tod on "The Story of the Scottish Rock Garden Club" ; Major-General D. M. Murray-Lyon on "Peat Beds and Banks" ; Mr. E. H. Cox on "Dwarf Rhododendrons" ; Mr. Stewart Mitchell on "My Small Garden and its Plants" ; and Mr. J. L. Mowat on "Plants and Judging", each lecturer expert on his subject, and illustrating it with choice transparencies ; and most generous in his response to questions asked. At a Members' Night transparencies were shown by several group mem-

bers and the commentaries and discussion were proof of real interest and achievement. Funds were raised by the sale of plants gifted by members and by collection for teas provided by members at all meetings.

The Club Shows at Dundee and Dunfermline had successful exhibits by South Perthshire members.

Visits to gardens in June gave pleasure to everyone and also were instructive to the less experienced members. At the Botanic Gardens, St. Andrews University, Mr. Mowat made the large number of plants more interesting by his intimate knowledge of the garden. An evening in Pitlochry was all too short for a proper appreciation of the two gardens visited, as Major-General Murray-Lyon and Mrs. Stuart both have admirable gardens in beautiful surroundings. Members were enthusiastic about these gardens and grateful for the welcome given them by the owners.

A similar programme is being prepared for next year, with the added interest of the Joint Dundee-Perthshire Show to be held on 30th April/1st May.

A. FULTON

NORTH NORTHUMBERLAND

ON THE 30th April thirty members visited the gardens of Lord and Lady Joicey at Etal Manor, and the garden of the Hon. P. J. Fairfax at Mindrum.

At Etal the rock garden was just at its best and provided a great deal of interest and discussion. The range of plants was exceedingly wide and it was most beautifully kept by Lady Joicey. The trilliums were greatly admired. The party then walked round the extensive wild garden, where many ornamental cherries and hybrid rhododendrons were in bloom. A bed of most unusual copper-coloured *Fritillaria imperialis* received a great deal of attention.

At Mindrum it was seen that Mr. Fairfax had undertaken a great deal of work since the last visit of the Club. His rock garden is on a sharp slope and he has carried out many engineering feats with waterfalls and a pond complete with goldfish. A blue orchis was a most attractive plant. The trees had grown a great deal, among them some unusual acers. The rhododendron and shrub bank was barely recognisable, as it had furnished up so well in such a short time. There were some fine tulips in the more formal garden. Mr. Fairfax kindly offered the members tea.

On the 21st May the garden of Mr. and Mrs. J. Ellerington at Rothley Lodge was visited, and also the gardens of Mr. and Mrs. Gordon Harrison at Western Way, Ponteland. Twenty-three members attended.

Great progress had been made at Rothley Lodge, where Mrs. Ellerington is planting up the woodlands with rhododendron species. More natural rock had been uncovered in front of the house to make what is now an extensive rock garden in a very fine setting. Mrs. Ellerington showed the members her cutting and seed frames where she has a quantity of young stuff coming on that should provide everyone with much pleasure in the future. Mrs. Ellerington kindly gave the members coffee.

At Western Way, Mr. Harrison's large rock garden was very colourful and a credit to the skill of this great cultivator. Among the very many fine plants *Myosotis rupicola* was making a great show. It originally came from the Mickle Fell form. *Cyripedium calceolus* was in bloom. New dwarf irises from America received much attention and *I.* "Green Spot" and also a golden form got great admiration. Mrs. Harrison entertained the members to tea.

On the 9th June forty-one members visited the gardens of Miss C. J. H. Sanderson at Newlands, Mr. F. C. C. Wiseman at The Limes, Belford, and Mrs. J. Brunskill at Goosewells. In spite of somewhat indifferent weather, the only unfortunate day for our outings this year, the members were undeterred and greatly enjoyed the afternoon.

Newlands garden was lovely as it always is and meconopsis and primulas abounded, many of the latter being naturalised round the bottom pond, which provides the ideal setting. Bush roses, among which "Frühlensgold" and "Canary Bird" were outstanding, are a feature of the garden. The trout were leaping in the big pond.

The Limes was a garden new to most of the members. It proved to be a perfectly kept formal garden and Mr. Wiseman explained that it was a little early for the display he expected later, notably of begonias. The wonderful green of the weedless lawn caused great astonishment and admiration and Mr. Wiseman said the only fertiliser used was bonemeal.

The members then proceeded to Goosewells to see Mrs. Brunskill's new garden. This is now very beautiful and it was realised what a great deal of work had gone into converting a rough bank into a rock and shrub garden in a very short space of time. The mill stream and waterfall completes a worthy setting for Mrs. Brunskill's skill. Mrs. Brunskill very kindly invited the members to tea.

On the 15th June twenty-six members visited Holy Island and Ross Links to see the display of wild flowers. At The Snook, *Orchis incarnata* and *maculata* were at their best and Viper's Bugloss was prominent.

After a long walk at Ross Links a lovely piece of natural rock garden was found. The ground was white with a prostrate form of *Rosa spinosissima* which did not rise above the short turf. Among this was vivid magenta *Geranium sanguineum* and yellow hypericum. The scent of the roses carried a considerable distance. Moonwort was also found, but the ground was dry and *Pyrola* and *Epipactus palustris* evaded the party.

Eighteen members stayed at Lochgair on Loch Fyne from the 10th to the 14th of May. Nine gardens and an arboretum were visited. In spite of somewhat unfavourable weather, the visit was greatly enjoyed and was the most successful distant trip yet arranged by the Group.

On Tuesday 29th September, Mrs. J. Dodds has invited the members to South Hazelrigg. Slides taken by members of the Group will be shown and, possibly, there will be a small display of illustrated books on Alpines.

Four lectures will be arranged for the winter season and it is hoped that Miss E. M. H. King will give her talks on "Ericaceous Plants" and "Propagation of More Difficult Plants" in November.

D. C. PAPE,
Group Convener.

Book Reviews

"GENTIAN FOR YOUR GARDEN," by Doretta Klaber. Pp. 141, with 5 colour plates and over 50 line-drawings. Published by M. Barrows & Company, Inc., 425 Park Avenue South, New York 16, N.Y. Price \$4.50.

This book comes from a lifetime of practical and even professional experience on the part of Mrs. Klaber, who treats her subject in a very direct and personal way. The author was for 20 years a rock-garden nurseryman and also practiced as a landscape architect, and her aim in this book is to pass on her fund of knowledge to all interested in the growing of Gentians, particularly to those who have got the idea that nearly all Gentians are under suspicion as being difficult. She divides her subjects into three major groups—spring, summer, and fall gentians—with a separate section at the end of summer gentians for New Zealand ones and

fall gentians divided into Himalayan species, then hybrids, Japanese species, and American ones in two sections—bottle, fringed, and eastern species. The names are arranged alphabetically in each section, but the book ends with a very complete index.

Cultural details are very full, particularly for the more difficult species and those requiring specialised treatment, in which cases Mrs. Klaber often describes in full the conditions in which they are found growing in nature. Cultural advice is in many cases aided by useful explanatory line-drawings, and this section ends with notes on troubles liable to affect gentians and the recommended cures for them. Just before the Index are two useful lists—one of nurseries which list plants or seeds and the next of plant societies including our own S.R.G.C. Altogether this is a book which will give enjoyment and help to the expert as well as the novice.

“**BEN LAWERS AND ITS ALPINE FLORA.**” Pp. 87, with 4 full-page monochrome plates, 4 maps, and 24 pp. line-drawings illustrating approx. 100 plants by Miss Darling Inglis. Published by The National Trust for Scotland. Price 10s. Obtainable through booksellers or direct from The National Trust for Scotland, 5 Charlotte Square, Edinburgh.

Scottish members of the Club at all events will be familiar with the fine work which has been done and is still being done by The National Trust for Scotland towards preserving, and often restoring, objects and places of particular historical interest or beauty. In recent years the National Trust and the Nature Conservancy between them have been instrumental in acquiring for preservation tracts of ground, some extensive, others comparatively small, in various parts of Scotland. One of these is Ben Lawers, a mountain of 3984 ft. on the north side of Loch Tay, which because of the richness of its alpine flora is of special interest to all botanists and lovers of mountain plants.

It is not sufficient to describe the new edition of “Ben Lawers and its Alpine Flora” as a revision of Dr. Poore’s original publication, but rather as an excellent up-to-date book designed on the lines of the original. Its 87 pages are packed full of interesting matter, starting with History and Legend and continuing with a chapter on the geological structure of the Lawers Range. After this comes a chapter on the flora itself and the governing factors of climate, temperature, and the various soil formations, with 24 pages (not 5) of excellent line-drawings, by Miss Darling Inglis, of the plants to be found.

J. Grant Roger next contributes a chapter of notes on the plants illustrated and a short section on the fauna of the mountain, the book ending with a useful glossary of botanical terms used. The photographs used are superb and the maps are clear and extremely helpful. The book is well laid out and excellently printed on good quality paper—in every way a great credit to its publishers.

“RHODODENDRONS AND AZALEAS,” by Judith M. Berrisford. Pp. 288, with 4 colour plates and 24 full-page monochrome plates. Published by Faber & Faber, Ltd., 24 Russell Square, London. Price 42s.

In this book Miss Berrisford deals with her subject in a very masterly way, opening with a most interesting chapter on Rhododendrons in the wild, following up with a brief resumé of the history of rhododendron cultivation from 1656 down to the present day. In chapter 3 azaleas are treated as separate from rhododendrons in the wild and in the garden; this chapter on azalea spp. and their history and development is just as thorough and interesting as its predecessors. The next—on ‘Plant Associations’—is also one which should be helpful to all with gardens, and for gardeners with a limy soil chapter 5 will prove extremely helpful indeed. The author devotes quite a lot of space on the subject of growing on lime and goes into considerable detail, and then follows on with a chapter on soil, shelter, and site.

Chapter 8 on ‘Rhododendrons and Azaleas for the Rock- and Peat-Garden’ is one which will have a particular appeal for Club members, treating as it does those more dwarf species and outstanding hybrids, and most of those in the following—on ‘Rhododendrons for the Smaller Garden’—also come within the scope of most rock-gardeners.

And so it goes on, an engrossing book packed full with good solid meat. Seldom have I read a book so condensed and yet still so fascinating to read. One could very well say there is not an unnecessary word in the whole book, while at the same time no word is omitted which could add to its use or interest.

Part II begins with a key to symbols used in the following lists of rhododendron species, hybrids, and azalea species and hybrids, with full descriptions and, where necessary, cultural advice. These sections are followed by a list of ‘Useful Addresses’, a general index, and one of ‘Species and Hybrids.’ Production is excellent in every way, and one can say with confidence that this is certainly a book no one who is in the least interested in rhododendrons should be without.

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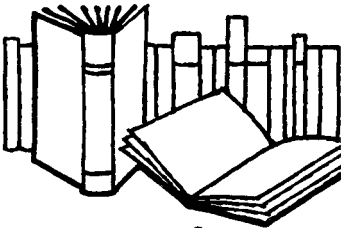
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