The JOURNAL of THE SCOTTISH ROCK GARDEN CLUB

VOLUME XVIII Part 2 No. 71

Editor A. D. McKELVIE

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JANUARY 1983

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Cover painting of Scottish alpine plants by LAWRENCE GREENWOOD

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CLARENCE HOUSE
S.W.1

I have always loved and admired Rock Garden plants, not only when beautifully exhibited in Horticultural Shows, but also when seen growing in the wild.

Often when at my home in Caithness I go searching for wild flowers, and it is a great joy when I find Primula scotica, Oxytropis halleri, or most important of all, Dryas octopetala, the emblem of the Scottish Rock Garden Club.

It is, therefore, with much pleasure that I send my congratulations and warmest good wishes to the Club on its Golden Jubilee.

Elizabeth R

1983

Preface

by SIR GEORGE TAYLOR

FOR this Jubilee number the Honorary Editor has invited me to contribute a short preface and I value the opportunity to do so.

I have been a rock gardener since 1928 when I had immense satisfaction in creating a garden in the valley of the River Chess in Hertfordshire where six inches of flinty gravel overlaid heavy clay and not far beneath was pure chalk. My neighbour was that great gardener Bertram Anderson and together we amassed a rich collection of lovely alpines. Though we were in a notorious frost pocket it was a wonderful locality for daphnes, penstemons and crocuses which seeded freely. The not too distant Six Hills Nursery provided many gems but from other sources I had such treasures as *Corydalis cashmeriana, Stellera chamaejasme* and *Calceolaria darwinii.*

While in exile, to keep in touch with rock garden affairs in Scotland, I joined the Club in 1949 but was an ordinary Member for one year only for in 1950 I was honoured to be elected an Honorary Member and now I have the proud distinction of being your Honorary President. I hope that I shall be excused this personal note which is merely to claim that my link with the Club has been much more than a token one and I have closely followed its fortunes over many years.

The Club has steadily prospered since its inauguration by a band of enthusiasts and now is rightly recognised as a body of national and indeed international repute. If pressed to pinpoint a single significant development in the Club's history I would opt for the decision to follow the path of rectitude accepting integration with the Alpine Garden Society in the Joint Rock Garden Plant Committee of the Royal Horticultural Society. This has certainly led to universal recognition of awards made to plants and the Club's contribution to the Pantheon of Alpines is most noteworthy.

In celebrating our Golden Jubilee we must remember the debt we owe to the founder members and all their successors who have unflinchingly devoted so much effort so that the first half-century has brought the Club to its present healthy state to ensure that we can continue to find joy, satisfaction and friendship in growing and sharing rock garden plants.

May I, in conclusion, express in a slight adaptation of the precept of the Worshipful Company of Gardeners of the City of London that the Club may flourish root and shoot for ever.

The S.R.G.C. – The Pre-War Days

by W. G. MACKENZIE

LOOKING back over the past fifty-odd years when the forming of the Club was first being considered and now witnessing what it has achieved today gives one a feeling of pride and one of great satisfaction. Before dealing with the Club's beginning I feel it only right we should first remind ourselves of the conditions prevailing around the early thirties, which I think we would agree must have had a marked influence on the desire to form such a Club, for the conditions then were ideal for the launching of such a venture.

It was my good fortune to join the staff of the Royal Botanic Garden, Edinburgh, in 1928 and for the next forty years I was privileged to meet most of the plant collectors throughout that period. George Forrest had returned from his sixth expedition and to add to the thrill of handling his collection he was himself often present as, having taken up house beside the Garden, he very soon became our regular morning visitor. He was greatly missed when he set forth on his seventh expedition, which sadly proved to be his last, but not before he had achieved all that he had planned to do. Kingdon-Ward had also returned from his successful second collecting venture covering Burma and Assam, but unlike his earlier collections it lacked the choice alpines one associated with his previous expedition. The Garden was also handling Harold Comber's Andean and Tasman collections and he rejoined the staff, as did R. E. Cooper following his earlier expedition to Sikkim and Bhutan. In 1930 the Garden was particularly fortunate in sharing a valuable and most interesting gift of seed from the Maharaja of Nepal to King George V. This Nepalese expedition was led by Major Lal Dhwoj and the 666 specimens collected included very many choice alpines, some new to cultivation. As we mourned the passing of George Forrest, this great plant collector, we were soon to be welcoming two that were equally as great, as Messrs. Ludlow and Sherriff soon proved through the wealth and quality of their numerous introductions from their seven highly successful expeditions. As south-east Asia was not the only area that had enriched our gardens, I would simply mention two amongst others – The Giuseppi Balkan Expedition and Paul Furse Expedition to the Middle East, for without them our Spring and Autumn Shows would be the poorer today.

With so much happening it was not at all surprising that we had so many interested visitors at the Garden, which gave all of us the opportunity to discuss at length our ideas on the forming of a Club. With such enthusiasts as Mrs Hally Brown, Mr E. Darling, Mr Wm. Fair and Dr. Wm. Buchanan, to mention but a few, we were left in no doubt as to what we should or should not do. As a result our first official minuted meeting was simply to rubber stamp the wishes of our enthusiastic members, and how right the passing years have proved them.

How very different might our story be today but for the efforts and the hardships endured by those plant collectors. One might rightly ask what influence the numerous and exciting plant introductions have had on the actual forming of a Club such as ours. The early thirties certainly injected a new enthusiasm into many branches of horticulture and greatly increased the number of amateurs who took up gardening as a healthy and interesting pastime. From the garden point of view the success of any botanical expedition can only be measured against what we, the growers, succeed with. Looking around, I think we are very much better equipped today than we were in the early thirties in the knowledge and the cultivation of the new plant introductions. We certainly have many keen and skilled growers today, which to a large extent is due to the Club's providing the conditions where people of like mind can exchange views for the benefit of all and in this the Club has played a leading part.

Turning now to the actual forming of the Club itself, our first minuted meeting was held in the 'Rutland Bar', Edinburgh, on the 27th July, 1933. There it was decided to form a "Club to be known as 'The Scottish Rock Garden Club', for the purpose of creating an interest in Rock Garden plants, to encourage their cultivation and to hold Meetings and Exhibitions for this purpose". A list of persons who might accept office was prepared and Mr E. P. Laird was instructed to communicate with them and to call a further meeting on 14th August to report and to form a Constitution and make Rules. This Minute was signed by Mr Andrew Harley and those present included Messrs. F. Bishop, T. A. S. Fortune, F. Glass, E. P. Laird, R. E. Cooper, D. Wilkie and W. G. MacKenzie.

The second meeting was held as arranged in the Y.M.C.A. Hall in Edinburgh. Mr E. P. Laird was elected as Chairman and he first read out what had taken place at the inaugural meeting, then gave the names of people who had been asked to take office and the substance of their replies. The names of the Committee were then read out and as the office of President was still vacant it was proposed Mr Andrew Harley be asked to act as President, Mr E. P. Laird as Secretary and Mr F. Glass as Treasurer.

The object of the Club was read out and approved, as was the proposed Constitution, after several amendments and additions had been passed by the Meeting. It was agreed that a General Meeting be held on the first day of the Royal Caledonian Horticultural Society Show and that a Sub-Committee be elected to prepare printed matter to be ready for distribution at the Glasgow and Edinburgh Shows.

The Office-Bearers for the Year 1933-34 were as follows –

President: Mr Andrew Harley, Blinkbonny, Kirkcaldy

Vice-Presidents:

Dr. Wm. M. Buchanan, Kirklands, Bothwell
Mr W. S. Fair, The Corrie, Galashiels
Mr Wm. Adamson, Dunreggan, Moniaive, Dumfriesshire
Mr T. A. S. Fortune, Cairngreen, Davidson's Mains
Mr R. E. Cooper, Royal Botanic Garden, Edinburgh

Committee:

Mrs Hally Brown, Craignahullie, Skelmorlie
Miss J. M. Clark, Castlehill Nurseries, Kippen
Mr A. McLean, Erigmore Gardens, Birnam
Mr Wm. Graham, Pittencrieff Park, Dunfermline
Miss H. M. Logan-Home, Edrom Nurseries, Berwickshire
Mr A. McKie, Belhaven House Gardens, Dunbar
Mr T. J. Gray, 46 Torphichen Street, Edinburgh
Mr A. O. Curle, 8 South Learmonth Gardens, Edinburgh
Mr F. Bishop, Ruthven House, Colinton, Edinburgh
Miss N. M. Robinson, Glassel, Aberdeenshire
Mr D. W. Wilkie, Royal Botanic Garden, Edinburgh
Mr W. G. MacKenzie, Royal Botanic Garden, Edinburgh

Honorary Secretary: Mr E. P. Laird, Pinkhill House, Edinburgh

Honorary Treasurer: Mr F. Glass, Grey House Gardens, Murrayfield

Following the General Meeting on 13th September 1933, it was unamimously agreed to add Mr Wm. Carvel, Mr J. Renton and Mr Kerr to the Committee.

The first General Meeting was held in the Goold Hall, Edinburgh. The President presided and an account was given of the inception of the Club and the Minutes of the Meeting held on 14th August were agreed and signed. Following the General Meeting the Committee met to discuss the work for the coming year, which resulted in a Sub-Committee being appointed to consider Shows, Lectures, etc, and to report back before 1st November. It was agreed that the Club should affiliate with the Royal Caledonian Horticultural Society. A suggestion was also made to

inaugurate a fund to be known as 'The George Forrest Memorial Prize Fund' and if Mrs Forrest was agreeable to this, the Fund and its objects were to be advertised. A general discussion followed on the proposed Fund and it was the wish of the Meeting that Mr Cooper should prepare an article for publication by the Club, which he kindly consented to do. The Treasurer submitted designs and prices for having a die made for striking medals and this was agreed and he also intimated that Mrs Forrest was delighted at what was being done to perpetuate her husband's memory.

The Club's first lecture was given in Dundee by Mr D. Wilkie and this was followed by one from Mr R. E. Cooper prior to a Committee Meeting held in the Overseas Hall, Edinburgh, on 22nd November.

So ended 1933 and the main points covered by the seven meetings held.

The New Year began with a meeting being held in the New Gallery, Shandwick Place, Edinburgh, at which the main business was deciding between the silver and bronze medals prepared for the 'George Forrest Memorial Prize Fund'. It was unanimously agreed that the bronze medal only should be struck. It was also resolved to award one medal at each of the Shows to be held in Glasgow and Edinburgh for the 'Best Plant' in each Show. As the Silver Medal of the 'George Forrest Memorial Fund' was not being offered for competition, it was agreed the Club present it to Mrs Forrest.

Further discussion took place on Mr Cooper's article on the late George Forrest; this article was adopted in its entirety and it was agreed to have 5,000 copies printed and that they be distributed to members of different societies together with a suitable printed slip for the return of donations.

Mr Paterson, who was holding a Scottish Sports and Holiday Exhibition in the McLellan Galleries, Glasgow, suggested that the Club might care to be represented and it was agreed that a collection of photographs and prints be sent. He also suggested that he might publish a bulletin for the Club, but this matter was left for further consideration by the Editorial Committee.

The Treasurer, Mr Glass, intimated that as he was moving to the South of England he unfortunately had to resign and proposed that W. G. MacKenzie take his place as Treasurer and undertake the Perth lecture which had already been arranged. At a later meeting a letter was read from Dr. Buchanan in which he stated that owing to ill health he was no longer able to attend meetings and wished to resign, but the entire Committee agreed that he be asked to continue as his service to the Club

could still be of considerable value.

The Agenda for the Annual General Meeting was discussed and the Secretary's and Treasurer's Reports were agreed; so too was the 'George Forrest Memorial Prize Fund' account considered and approved. It was also agreed to proceed with the publication of a book on the 'Life and Work of the late George Forrest' as was approved and minuted at the January Meeting.

At our second Annual General Meeting Mr W. S. Fair was elected President and the retiring President, Mr A. Harley, was warmly thanked for his work and the keen interest he had shown during the inaugural year of the Club. It was agreed at the following meeting to hold the Spring Shows again in Glasgow and Edinburgh and, as they were so well supported, both Shows should be extended to two days. It was also hoped that better and more spacious accommodation be provided, particularly in Edinburgh. The Secretary reported that Mr Kenneth Chas. Corsar was presenting a Cup to be awarded at the Edinburgh Show for the best exhibit by an Amateur. At the November Meeting it was reported that only five Vice-Presidents had been elected at the Annual General Meeting in place of six as required by the Constitution. The proposed election of Mrs Hally Brown was carried unanimously.

On the question of the George Forrest publication Mr Cooper was asked to give a brief resumé of the proposed work and in doing so was thanked for his labours in compiling what should prove to be an interesting book. As the cost of publishing was to be somewhere in the region of £100 for 1,000 copies it was agreed to raise a Guarantee Fund. It was also agreed that members for the year 1934-35 should each receive a free copy. At the final meeting of the year it was decided to alter the wording of the 'George Forrest Memorial Prize Fund'. In discussing further publications it was proposed that instead of considering a Quarterly Bulletin an annual publication be undertaken, but not before the 1935-36 season.

At the opening meeting of our third year it was pleasing for the Treasurer, in submitting his report on the 'George Forrest Publication Fund', to report that those members, who had kindly agreed to act as guarantors, would not now be required to do so.

Mr Curle presided at the Annual General Meeting held on 12th September, 1935 and the Secretary's and Treasurer's reports were adopted and the Report of the George Forrest Fund was also agreed. Mr Curle was elected President and Mr Fair, retiring President, made a Vice-President. Except for Mr MacKenzie resigning as Treasurer, the

Committee of 1934 was re-elected. Mr MacKenzie continued to serve on the General and Show Committees. Mr Laird agreed to carry on the joint offices of Secretary and Treasurer and to relieve him of other duties, two Flower Show Secretaries were to assist him, Mr Corsar in Edinburgh and Mr Gemmell in Glasgow.

A motion calling the Meeting to alter the Constitution so as to include a Life Membership of the Club was agreed.

The November Meeting concluded the year and following the routine reports a programme of lectures was discussed for the coming year. In reply to a letter received from Aberdeen, Mr Cooper agreed to give a lecture there as requested. It was also hoped that lectures could be arranged in Edinburgh, Glasgow, Hawick, Dundee, Dunfermline, Dunbar, Falkirk and Ayr. It was also agreed that a Flower Show be held in Edinburgh in April and another in Glasgow in May and that two Show Schedule Committees be appointed to cover the two Shows.

To start the 1936 Season the Committee met in St. George's Church Hall, Edinburgh, where the Secretary announced that the membership had now reached 442, which included 64 new members since September 1935. There were three suggestions put forward for discussion –

(a) Amalgamation with the Alpine Garden Society.
(b) That an annual list of plants be published with 32 pages text covering 100 plants and 4 pages of illustrations.
(c) That the Annual Report of the Club be enlarged to include: List of Members, Show Reports, Excerpts from Lectures and Notes on the general activities of the Club over the past year.

After some discussion both (a) and (b) were rejected but item (c) met with the unanimous approval of the Committee.

As it was proving difficult to hire a lantern and screen in some of the areas where lectures were arranged it was proposed and approved to use the 'George Forrest Memorial Fund' to overcome this by purchasing the necessary equipment for the use of the Club.

The Annual General Meeting was held at 5 St. Andrew Square on 9th September, 1936. In accordance with the usual preliminaries the following officers were elected –

Honorary President: Sir William Wright Smith
President: Mr A. O. Curle was re-elected.
Vice-Presidents: Messrs. K. C. Corsar and J. T. Renton.

The additional names were added to the existing Committee: Lady Vivian Younger, Colonel Dundas, Dr. MacWatt and Messrs. T. A. S. Fortune, J. McCrindle, J. Anderson, G. Lawrie, I. Lawrie, E. A. Jamieson,

J. Archibald and J. Small.

In discussing the Shows it was agreed the Glasgow Show should be the earlier one in April and the Edinburgh one in May. The question of approved accommodation for the Edinburgh Show was again raised and was to be discussed further in the New Year.

The first meeting in 1937 was held in the Y.M.C.A. Rooms, where it was intimated that the McLellan Galleries had been secured for the two day Show in Glasgow. Regarding the Edinburgh Show, it was reported that an option had been received from the City Corporation for a two day Show in the Waverley Market. As this would be a costly venture considerable discussion took place before a final decision was taken. To safeguard Club funds certain costs were reduced and the balance was to be partly met by a guarantee and this sum was generously offered at the Meeting. As there was ample space to offer, every effort would now be made to encourage maximum trade support.

The Director of Tours reported that she considered it inadvisable to proceed with the Summer Outing, but it was decided a visit to the Royal Botanic Garden would be arranged for the first morning of the Edinburgh Show.

A meeting of those Members of Committee resident in the Glasgow area was held in the Religion Society Rooms and it was decided to have an opening ceremony at their forthcoming Show and that the Duchess of Montrose be invited to perform the ceremony. It was also agreed to hold a Rock Garden Club tea during the afternoon of the opening day and that Mrs J. T. Renton be invited to address the gathering. Mr Carvel intimated that there would be a 'Dr. Wm. Buchanan Rose Bowl' presented for annual competition and it was agreed that it should be offered to the 'Six Pan Class'. Mr G. Lawrie kindly intimated that he would present a 'Silver Medal' to the winner.

At the July Meeting, held in the Y.M.C.A. Rooms, the President, Mr Curle, presided. In preparing for the Annual General Meeting the Secretary announced that the membership had now reached the 525 mark. Mr Curle intimated a number of resignations, including that of Mr E. P. Laird, Secretary and Treasurer, and also that of the Editor, Mr R. E. Cooper. Mr K. C. Corsar kindly agreed to take over the Editorship but, as there were no definite names put forward, Mr Laird generously agreed to continue his duties until the Annual General Meeting. After some discussion it was approved that some form of financial assistance should be allowed for the holder of this office and the sum of £20 per annum was agreed.

Prior to the Annual General Meeting which followed in the Waverley Market on 9th September, a meeting was called to make further nominations of Office-Bearers for the approval of the General Meeting and it was unanimously agreed to recommend that Mr D. P. Laird be appointed Secretary and Treasurer and that Mr W. F. Fleming be put forward as the Show Secretary for Edinburgh.

As no provision has been made in the Constitution it was agreed that 'After 1st October in any year members whose subscriptions are two years overdue shall be deemed to have lapsed'.

The following Minute was then read for inclusion in the Minute Book and was prepared by Mr K. C. Corsar –

"The Committee of the Scottish Rock Garden Club desire to place on record their deep appreciation of the service rendered to the Club by its retiring Secretary, Mr Eric P. Laird. They are sensible that but for his unsparing efforts and the ungrudging gift of his time and energies the Scottish Rock Garden Club could never have attained its present proportions and prosperity. While recognising that Mr Laird feels unable to bear the burden of Secretaryship any longer, the Committee hope that his knowledge and experience will still be at the service of the Club. To Mr Laird they tender their sincere thanks for all that he has done for the Scottish Rock Garden Club.".

The Annual General Meeting then followed and reappointed all Officers and Committee with the addition of Mr D. P. Laird as Secretary and Treasurer. It was agreed to allow him an honorarium of £20 per annum. It was decided to hold the Edinburgh Show again in the Waverley Market but it was left to the Committee regarding the Glasgow Show, as they had to take into consideration the possiblity of holding their Show in the Exhibition Ground in place of the McLellan Galleries.

Votes of thanks were proposed to Mr R. E. Cooper for his work as Editor, with special reference to the publication of the George Forrest book, and to Mr Eric P. Laird for his work as Secretary and Treasurer of the Club and were heartily accorded. If I may add a personal note here, having worked closely with Eric Laird on various Committees from the outset of the Club until his retirement, I know how rightly he deserved the special mention included in the Minute Book.

Immediately after the Annual General Meeting the General Committee met to consider and appoint the two Committees dealing with the Glasgow and Edinburgh Shows, for it was now arranged that the Glasgow Show would be held at the Empire Exhibition.

Mr Curle proposed that a Suggestion Committee should be formed

and asked that they arrange to meet early in October in time to report to the General Committee. This Committee duly met and put forward a number of useful suggestions.

Of the four meetings held throughout the 1938 Season, much of the time was devoted to discussing the normal routine activities of the Club and in particular the proposed Joint Spring Show with the Royal Caledonian Horticultural Society but, unfortunately, it was finally decided that it presented too many difficulties to be successful.

Before the Annual General Meeting, Mr Curle announced that he considered three years were long enough for any one person to remain as President, but it was unanimously agreed at the Annual General Meeting that he be elected President for the fourth year and that Mr Eric P. Laird be elected a Vice-President. As Mr David P. Laird asked to be relieved of his duties, Mr Archibald Campbell, Jnr. was appointed as the new Secretary and Treasurer. Two additions were made to the General Committee, Major Wood and Mr Arnott.

Mrs Hally Brown intimated her resignation as the Director of Tours.

At the final meeting of the year and in the absence of Mr Curle, it was agreed that Mr E. P. Laird take the Chair. After the formal business it was considered unnecessary to publish a list of members each year as the general feeling was that every third year would suffice, but it was agreed that a list of new members should be included in next year's *Journal.* Mr Cooper submitted a proof of the *Journal* which he hoped would be sent out before the end of the year.

Coming now to the last Meeting for which I have a copy of the Minutes, this Annual Meeting was again held in the Goold Hall and is dated 28th September, 1939. Mr Harley took the Chair and on the signing of the Minutes of the previous Annual General Meeting he vacated the Chair, as Mr Corsar had now joined the Meeting and was appointed Chairman. The audited accounts, which had already been circulated, were submitted and approved, as was the £20 honorarium to the new Secretary.

The Secretary, Mr A. Campbell, reported that he had received a letter from Mr Curle to the effect that he would be unable to continue in office as President. It was agreed to Minute the Club's sincere appreciation of the great service which Mr Curle had rendered to the Club and to invite him to become an Honorary Vice-President. It was then proposed that Mr Edward Darling be appointed as President, but he declined with regret and said he was unable to accept office but agreed to become a Vice-President as proposed by the Meeting. It was moved that Mr J. T.

Renton be appointed as President of the Club and this motion was carried unanimously. As there were no further resignations all other serving members were reappointed.

A lengthy resolution was formally submitted to the Meeting by Mr R. E. Cooper which amounted to: "That for the duration of the War the activities of the Club should be suspended, etc, etc". The Secretary then read a number of letters which he had received from members of the Club expressing their views on the resolution and following a full discussion among the members present the resolution was put to the Meeting. As there were only two in support the resolution was defeated by a large majority. It was unanimously agreed that the Club should continue its activities during war time so far as it was practicable to do so. On the question of Shows this could present some difficulties, but it was decided that the Committee should meet again in April with a view to considering whether it would be possible to arrange exhibitions of plants by members and to discuss the publishing of some form of *Journal.* It was agreed to minute the Club's appreciation of the splendid work done by the Show Committees and to congratulate them on the success of the previous season.

So ended an eventful Meeting, but in a way that fully demonstrated the true spirit which has brought the Club the respect and appreciation that it so widely enjoys today.

Post War Memories

by DAVID LIVINGSTONE

MY memories of the Club go back to the shows held in Glasgow before the start of the 1939-45 War. Most vividly I remember a show held in the Christian Institute, Bothwell Street, Glasgow in the spring of 1940 in aid of the Red Cross at which I showed rock garden plants for the first time and took first prizes with *Androsace arachnoidea* 'Superba' and *Lewisia cotyledon* 'Purdyi'. The Show Secretary that day was, as I recall, Mr George Lawrie of Bishopbriggs. As far as I know that was the last Club activity during the War.

My next recollection is of attending a meeting of a small group of members in the Queen Street Station Hotel, Glasgow in the autumn of 1946 at which it was agreed we should try to resuscitate the Club. At that time the membership was thought to be about 300. I cannot remember

who were present at that meeting except for Mr McCrindle of Dunure who was strikingly dressed in his fisherman's dark blue jersey. In any event things soon began to move with Major Alan Walmsley as President, Mr Archie Campbell, Treasurer, Mr Kenneth Charles Corsar, Editor and myself as Secretary. Whatever is said or written about those stalwarts who started the Club in 1933 I believe that, above all others, the Club owes much of its success to Alan Walmsley whose drive, energy and organising ability quickly laid the sound foundations on which the Club exists today. By the time I resigned as Secretary in late 1949 or early 1950 the membership had increased to well over 1,000, several shows were being held annually and active groups all over Scotland were holding meetings and garden visits.

Walmsley, Campbell and Corsar were the 'national' officers who breathed new life into the Club but they were most ably supported by others working diligently in their own areas such as Dr. Henry Tod in Edinburgh and the east of Scotland and Mr Edward Darling in Glasgow and the west. The drive, and enthusiasm, of Major-General D. M. Murray-Lyon too was making itself felt all over the country. A vigorous, rejuvenated Club was now a power in the horticultural world.

In the years that followed the early post-war period, the club owed much to Squadron Leader John Boyd-Harvey as Secretary and, after his death, to his wife who also became Secretary.

About 1948 a Seed Exchange was started with Mr R. S. Masterton in charge, a venture which has grown enormously in size and which has proved to be, perhaps, the most successful aspect of the Club's activities in that members, wherever they live, may participate in it. Of course a venture such as this is only as good as those who organise it and therefore we are much indebted to Bobby Masterton who laid the foundation as it were, to those who have been in charge since and to their many willing helpers. A particularly big thank you is due to Joyce Halley who has been the very successful mainspring of the Seed Exchange for the last ten years or so.

The twice-yearly *Journal,* too, is a unifying element in the Club's activities in that it is sent to full members wherever they live. As already stated Kenneth Corsar edited the first *Journal* after the re-birth of the Club and there have been several editors since although the number is relatively small considering the onerous post this is. That the number is small is due to the remarkably long service as Editor of Mr John L. Mowat and Mr R. J. Mitchell both of St. Andrews University Botanic Garden. The quality of the *Journal* over all these years has been main-

tained, indeed, more correctly, has been enhanced and that is the measure of success achieved largely by the unceasing endeavours over a long period of John Mowat, Peter Kilpatrick and Bob Mitchell.

Shows are a very essential element in the Club year. Six are held in various venues in Scotland under the sole auspices of the Club and two are run jointly in the north of England by the Alpine Garden Society and the S.R.G.C. This co-operation between the two societies is most welcome as is the continued co-operation in organising the International Conference. The A.G.S. has already shown its appreciation of the sterling work of Mr Alf Evans as Chairman of the Joint Committee which organised Alpines '81.

Has the Club realised its aims? I think it has in that there is plenty of evidence that the quality of rock garden plants produced at shows and seen on garden visits is higher than ever. Plants, which were awarded Forrest Medals thirty years or so ago, might have difficulty in getting a prize at all at present day shows. A few years ago it seemed that there was likely to be a dearth of young, active members but that fear has not been realised. Even babes in arms are appearing at shows!! A source of great strength for the Club is the continuing increase in the number of overseas members and the active part played by many of those members in the Seed Exchange and in contributing articles to the Journal.

The Club is in good heart, thoroughly revived from the hibernation of the war-years and can look forward to continued progress into the next century.

Men, Flowers and Gardens

by JAMES T. AITKEN

THE 1981 CLARK MEMORIAL LECTURE

THE garden is changing around us as much as any other facet of our lives. The way we garden is different from how our fathers did, and not only because we have a great range of chemicals and mechanical tools not available a generation ago. We grow different flowers and vegetables and in different ways. Today's garden looks different from that of fifty years ago; that garden in its turn had changed from that of the prior fifty years.

Change in the garden is not new. It has been going on for at least three

hundred years. Has the change been accidental and capricious? Has it merely reflected the increasing availability of plants? In that three hundred years, plant exploration has vastly increased the flowers available to the gardener. Is this why the garden has altered?

The oldest garden in Scotland is at Edzell Castle in Angus, cared for as an Ancient Monument by the Secretary of State for Scotland. The Castle was completed by Sir David Lindsay about 1600. It is a castle in name only; it was always a domestic building and when completed Sir David added a garden – a pleasance, as it was termed in the Scots of the day. Nowadays you can still see the garden much as then laid out beside the now ruined Castle. It is in symmetrical patterns of neatly trimmed dwarf box hedges, intricately designed parterres (as they are termed), sometimes with roses within the patterns, but the beauty depending as much on the simple sharp neatness. This garden which Sir David laid out about 1600 in Scotland, was similar to what his contemporaries were enjoying not just in Scotland and England but in all of Europe settled enough for ornamental gardening to be practised.

Different from now, gardening was not the subject of change in Sir David's time. His type of garden was not very different from the earliest garden recorded in Britain. About two thousand years ago on the south coast at Fishbourne, near Chichester, a British king, a wealthy puppet of Rome, built himself a palace with a garden which the archaeologists consider little different from Sir David's at Edzell.

It has to be said also that while in Britain Sir David's garden is a historical curiosity, that style of gardening subsists still on the continent of Europe, particularly in France where it adorns both château and cottage.

Sir David's style of garden persisted, whether in this modest style of Edzell or in the vast acres of Longleat, till the 1700s. Its impact derived greatly from its scale and symmetry and it – as nowadays still at Edzell – could and did accommodate flowers.

By the 1700s there had been a notable accretion from overseas of ornamental plants. The first of the great plant collectors, the Tradescants, father and son, had made collecting trips to North Africa, Eastern Europe and North America. William Bartrum the first of the indigenous American collectors was sending his seeds and specimens to London. The accumulation of such plants had become fashionable not only among the traditional landed gentry but also among the new commercial magnates. Sir Hans Sloane, the physician who succeeded Newton as President of the Royal Society conducted an extensive

correspondence with naturalists in the Americas who sent him seeds, bulbs and plants. North America was within the See of London and in selecting men for living there a prime qualification to Bishop Henry Compton was the ability and willingness of the prospective incumbent to send him natural material and particularly specimens, seeds and roots of plants.

The list of flowers available in 1750 is already impressive. To the *Calendula,* hollyhock and stocks of 1600 had been added such as *Delphinium,* lupin, *Pelargonium,* and even *Aubrieta, Oenothera* and *Bergenia.* By the mid 1700s there were nurserymen especially around London to grow the new plants; they were being written about and reproduced in pictures; new flowers were arriving continually. There was a wealth of them going into the fashionable gardens. And then suddenly they disappeared from the fashionable garden. There came a revolution in gardening inspired by the philosophical absorption of the man of culture – and his lady, for the lady of the house has always had a considerable influence in the garden. Nature had become the concept to follow and inspire. Beauty lay in the emulation of Nature. Nature implied liberty and freedom. Constraints were challenged. Established doctrines and methods of all types were scrutinised. There was no greater condemnation than that something was unnatural. This revolution of thought changed not only the garden. It was one of the motivating forces of the new political ideas which eventually played a part in inspiring the French Revolution. The leaders were the writers and literati of the day, men like the poet Pope, Addison the essayist, the thinker Rousseau. This flow was still strong enough half a century later to influence Burns and Walter Scott.

The effect on the garden was swift and striking. Out went the symmetrical and the contrived, the geometrical pattern, the lines and rows, the parterres and knots, no matter if these were interplanted now with the showy flowers of the new lands. Instead the fashion was for the vista, the long view, the rolling natural landscape. At first such landscapes were often adorned with eye-catching temples or even newly built ruins for it was permissible to make nature more natural! The early landscapists of this period, Chambers and Kent were inspired often by the classical landscapes of Italy rather than Britain. Of this period are Stourhead in Wiltshire and Castle Howard in Yorkshire, magnificent conceptions and still glorious. But the magnificence and glory had no place for flowers. When the greatest landscapist of them all Lancelot 'Capability' Brown (1716-1783) came on the scene, he purified the

natural landscape. It was brought right up to the mansion house. The 'eye-catchers', the phoney ruins, and pseudo-classical temples went. The flower garden was relegated out of sight into the kitchen garden. Flowers were no part of his conception. Like vegetables, flowers were grown unobtrusively for the house. The landscape garden was a concept of rolling scenery of lakes and clumps of trees, most of them contrived but all looking so natural that when we now see such a property it remains a splendid and seemingly characteristic landscape.

It is difficult, however, to understand why the 'natural' garden and landscape prized of the philosophers so completely rejected the flowers which were more and more available. The explanation may be that it coincided with the first impact of the industrial revolution. In 1733 Kay invented the flying shuttle and in 1769 Watt invented the steam engine. Industry was drawing people from the country to the new factories in the towns. At the same time and to some extent because of the rise of industry, the agricultural revolution was changing the countryside. Land was enclosed and husbandry changed. It was a period too of overseas expansion, of prolonged wars with France and Spain. Labour, in the country, was at a premium for the first time.

These new natural gardens were created by contract labour. In modern economic terms they were capital but not labour intensive. Once laid out they required little care; far, far less than the parterres they succeeded; far less care than flowers which had to be planted at least yearly, tended carefully, pruned and deadheaded. The new gardens when laid out, looked after themselves – and many still are, two hundred years later!

But inevitably there came the reaction. In his later years Repton (1752-1818), the next great gardener, still in the natural tradition, was including areas of flowers in his plans. The tide was turning and the 'natural' garden receded for a century.

The process of plant discovery and introduction had continued. The Wardian case in 1829 greatly solved the difficulty of transporting live plants in slow sailing ships over long distances. The great collectors of Sir Joseph Banks were making their marks. The phenomenal harvest of David Douglas in north-west America came home. There was a reaction against banishing flowers to the unseen enclosure for house purposes only.

But there was another factor. The economic revolution had gathered further momentum. The great depression which followed the Napoleonic Wars made labour again cheap and plentiful. Transport changed

out of all conception. In 1830 the first passenger railway – the Manchester and Liverpool – was opened and within twenty years the country was networked by 5,000 miles of the new lines. It was now easy for the nurseryman – upon whom the gardener ultimately depends for the supply of new plants to dispatch his stock quickly and reliably all over the country. As importantly, coal had become easily transported all over the country, cheap and plentiful. In the first half of the nineteenth century, its production increased fourfold. The heated glasshouse could now be easily constructed and heated. As the century progressed, Britain became the richest nation in the world. Then arose a prosperous middle class and above it an upper class of incredible affluence. But at the bottom the labouring class remained plentiful and cheap.

The Victorian bedding garden arose from these factors, the availability of the flowers and the economic circumstances. The garden was never so colourful. The spectacle was magnificent. It eminently suited the new villa garden and the new public municipal garden. No style of garden can be vicariously enjoyed so much as the bedding garden. The remaining examples of it are in the parks of local authorities dependant on visitors who joy in it. And what a frame it made for the rich man in his castle. Back were the disciplined rows, the geometric patterns. The vista gave place to the carpet. But the great policies had remained. They were too big to remove even if the precinct of the house was now embellished with the flowers of the Cape or the Sacramento Valley.

Still the plants came in. From the tropics came orchids for cultivation in houses steamed on cheap coal by gardeners of extraordinary skill and dedication. It was now feasible and beginning to be fashionable to travel by train across Europe to the Alps to climb and the rock garden was born, but it was a crude and uninteresting conception which had to wait a while yet.

The mid-1800s saw new plants from the interior of Asia. Notably Joseph Hooker frustrated by his failure to be appointed Professor and Regius Keeper at Edinburgh, undertook an expedition to the Himalayas which resulted in the first significant batch of broad leaved large rhododendrons. They were not for everywhere; they were not easy. But if the place was right, and the skill was at hand, the blooms were unsurpassed. Hooker was followed by others and ultimately by Wilson, Forrest and Ward in the first quarter of this century. The Hooker plants had been of marginal hardiness; later harvests were increasingly of hardy plants.

Again the pendulum swings. The English Garden of William Robinson is again the natural garden as the century turns. The Edwardian era

saw the advent of the herbaceous border. The *Rhododendron* and *Magnolia*, unfitted for the regimented garden, modified the landscapes of Brown and Repton. The criterion again with the advent of the 20th century was becoming what was natural. Even if you bedded out, it should be in drifts which merged, not patterns which were regimented like grenadiers. The trend began before 1914, gathered way between the wars, and finally by 1945 had established itself, and bedding-out was a rarely met phenomenon.

The economic climate had also changed. The wages of labour had rocketed. Fuel was too expensive for long ranges of glass. The house and garden were alike smaller. More important the gardeners were generally the owner and his wife with week-end time only. As with Capability Brown the need was for a garden which would look after itself, but in contrast to his time there was a vast interest displayed by these amateur gardeners in plants whose flowers would embellish the curtilage of the house.

So by now the flowers have made their mark, but reasonably trouble-free flowers. The floribunda rose ousted the hybrid tea on that count. The herbaceous border is waning for it demands too much time.

The rock garden is advancing because it can look after itself remarkably well. But it too has changed from the grottos of Alexander Pope at Twickenham and the cliffs at Chatsworth of Joseph Paxton, the greatest of all head gardeners who went on to design the Crystal Palace, became a director of the Midland Railway and achieved a knighthood.

For the rock garden the evangelist of the new doctrine was Reginald Farrer. He derided what he found as 'almond puddings' and 'dogs' graveyards'. The rock garden, like other good gardens, should emulate nature. If the eye would accept it as if it were in the wild, then it was right. Equally, if not, if it looked contrived, made-up, in a word un-natural, then it was wrong. Within that natural framework, so he preached, the rock plant would be seen at its best. And that is how we grow nowadays in the good rock garden.

Over the years, as the tide has flowed and ebbed, we have moved far and radically from Sir David at Edzell. For most years, and often without the gardener, professional or amateur, in the suburban plot or the ducal policies, being conscious of it, the abiding trend in Britain has been towards the natural garden. Our climate and soil suit it. It meets our culture and our economy. In essence what separates last century's rock garden of MacNab in Edinburgh from that of 1980 Evans, is the same trend which has applied in the rest of the British garden, the steady move to the natural.

This move to the natural garden – and the periods when the move has been contrariwise – have had little to do with the availability of plants. In the three centuries considered, the plants available have always been great, and became vast. But ultimately, the factor which dictated the fashion in the garden was not the flowers. It was men. Men as proprietors, rich and poor. Men as gardeners, servants or owners. Men as paymasters; men with time-a-plenty or men with time at a premium. The garden, through the ages and today no less, is as it is because that is how it suits us in time and labour and money and facilities.

Hardy Ferns for the Rock Garden

by REGINALD KAYE

IT is gratifying to see during the last few years a renewal of interest in hardy ferns as garden plants. Many a dank and shady spot is being transformed these days by judicious planting of these graceful and trouble-free subjects. Although flowerless their often vivid green colouring and fascinating shapes will lighten up a previously uninteresting spot in the garden.

For rock-garden planting, the great majority of ferns are much too large and rumbustious for consideration except perhaps for very large constructions such as those found in botanic gardens and parks. For our purposes the choice of a maximum height really poses problems. If we confine ourselves to a maximum height of one foot there still are a good many species and varieties at our disposal to fit the scale of the average-sized rock garden – whatever that might be.

Some of the smaller kinds make excellent subjects for the show-bench and we are seeing these appear quite frequently in our shows where they always command a good deal of interest. The fern can also present problems to inexpert judges. I well remember James Davidson putting in a plant of, I think, *Athyrium filix femina* 'Caput-medusae' at one of the Edinburgh Shows, as a miniature fern, possibly with tongue in cheek, for when it was rejected as 'not according to schedule' being mistaken for Triple Curled Parsley by the judges, James took some delight in rather pungently expressing his opinion of their knowledge.

Ferns make no great demands on the grower's skill except of course in providing the best conditions for healthy growth without forcing. In general, provision of a compost made up from good loam, peat or leaf

mould, and coarse grit in the proportions of 2:1:1 with a peppering of a slow-release fertiliser, in well-drained pots or pans just large enough to take the roots without cramping, is all they need, given adequate shading, and no attempt to force growth by undue heat. Exposure to hot sun will brown the fronds and stunt growth. A few ferns are fully calcifuge, the majority are not particular, a few definitely like lime and any special preferences will be noted with the species listed below. In the open garden the ground should be well dug with the addition of peat and/or leaf mould when the native soil is lacking in humus, with a normal application of a slow-release fertiliser, a site being chosen which is shady most of the day – in the rock garden the north side of a large rock or in north-facing crevices, or on the shady side of shrubs will be adequate.

Many ferns are deciduous and these are indicated by 'D'. There is no truly evergreen hardy fern but many are wintergreen and are marked 'E'. These keep their frondage bright and fresh through most of the winter until the new fronds begin to unfold and are most useful for brightening up the winter scene. An exception is the Polypody, whose fronds become 'tatty' about March (later in deeper shade) but the new fronds do not appear until late spring. In the case of *Polypodium australe* they do not appear until mid-summer. In my experience, hardy ferns grown in the open do not suffer from any pests or diseases in the north, but if kept continuously under glass, the frondage becomes tender and can become subject to attacks by the usual greenhouse pests such as white fly, red spider, scale and so on. Their fronds are damaged by most fumigants and sprays, so if they must be grown under glass, a shady cold frame is better than the normal greenhouse.

The naming of the ferns mentioned below is, I hope, correct by current standards, but our botanical friends seem to find it necessary to make changes rather more frequently than I can cope with as new relationships come to light, and new 'original' names are disinterred from some long-forgotten work of the past. A friend who is working on his fourth 'final' draft of a book on hardy foreign ferns, suggests that some botanists should be licensed, the licence to be endorsed every time a frivolous name is made, three endorsements resulting in loss of licence for several years!!

ADIANTUM. Our own "Maidenhair Fern" cannot be called hardy though it has come throught the recent winter alive but 'tatty' at its most northerly station where it adorns a cliff overhang four miles across the bay from my nursery. My own stock raised from its spores were all killed under the bench of a cold greenhouse where usually it survives the winter.

Adiantum capillus-veneris 'E' "Maidenhair Fern". I hesitate to include this as it is definitely tender away from the sea cliffs, and the interior of old well-heads in warm districts. Grown as a pot plant it has survived on a north-facing windowsill in my dwelling house in an unheated room. It likes a humus-rich loam containing a third of its bulk made up of old mortar rubble or tufa nodules. A foreign variety *Adiantum capillus-veneris* var. *mariesii* has come through several winters in the lee of a limestone boulder in my scree, but failed to reappear this spring.

Adiantum pedatum is bone-hardy but is too big except the very dwarf variety *Adiantum pedatum aleuticum* which is ideal. This can be evergreen in very sheltered conditions, but is usually deciduous. The 4-5 inch long, imbricated, bluish-green fronds make a dense mound of really beautiful foliage.

Adiantum venustum from Kashmir, winters perfectly here, the tender young fronds come up in spring bright pink and change to vivid pale green then darken to bluish-green in autumn. 'D'. The dead winter fronds hang on till spring, a vivid russet, most attractive, and 4-5 inches long. The Japanese species *Adiantum monochlamys* is also perfectly hardy and differs in some minor botanical details. It makes a fine pan.

ASPLENIUM. The "Spleenworts". Mostly 'E', these are ideal rock-garden ferns and make excellent show plants. They like to be planted in vertical crevices in walls or rocks, or in a shady corner of the scree. They are mostly lime-lovers. Recently our botanists have included *Phyllitis (Scolopendrium)* the "Harts-tongue Fern", and the *Ceterach,* "Rusty-back", in *Asplenium* which seems reasonable as they hybridise readily. This could have caused some bother with the Southport Show committee as their schedule had separate classes for "Harts-tongue" (*Phyllitis*) and *Asplenium*. I wonder if the judges knew?

Asplenium adiantum-nigrum. The "Black-stemmed Spleenwort". So called because the lower part of the rachis (stem) is almost black. The blade is bright green, rather leathery, narrowly triangular, bi- to tri-pinnate, usually not more than 4-5 inches long but the stem can elongate considerably in certain conditions. It makes an excellent crevice plant and is also a good pan-plant.

Asplenium x *alternifolium (Asplenium septentrionale* x *Asplenium trichomanes)* (Fig. 23). This very rare native hybrid is found occasionally in north Wales and Cumbria, frequent in the Alps, often near old mine-shafts, and always on acid rocks, in my experience. The forked, linear 3-inch long fronds are rather light green. There are in the European Alps several hybrid Spleenworts but I have never seen them. They

Fig. 21 – Dr James Davidson (President) presenting the Midlothian Vase to Dr Henry Tod. Penicuik Show, 1965 (See page 102)

Photo – Scotsman Publications

Fig. 22 – Mrs Chris Boyd-Harvey, J. L. Mowat and John Panton. Judges at Penicuik Show (see page 102)

Fig. 23 – *Asplenium* x *alternifolium* (see page 112) Photo – R. Kaye

Fig. 24 – *Asplenium dareoides* (see page 113) Photo – R. Kaye

Fig. 25 – *Asplenium* x *costei* (see page 113) Photo – R. Kaye

Fig. 26 – *Polystichum setiferum* 'Setoso-Divisilobum' (see page 120)
Photo – R. Kaye

Fig. 27 – *Diapensia bulleyana* (see page 133) Photo – R. J. Mitchell

Fig. 28 – *Rhododendron cephalanthum* (see page 133) Photo – R. J. Mitchell

include x *heufleri,* x *poscharskyana,* x *protoadulterinum* and are all of great interest to the botanist.

Asplenium dareoides (Fig. 24). This charming little fern has fronds reminiscent of a smaller more fragile "Parsley Fern" but comes from south America as far south as Tierra del Fuego. It is predominantly epiphytic in nature but seems easy to grow in pots of standard compost though it is not too happy in my rather dry rock garden. It is reported as quite hardy in the north of Scotland. It is 3-4 inches high.

Asplenium fissum. A delightful miniature from the limestone Alps, the tripinnate fronds, 3-4 inches long, have terminally notched, cuneate pinnulets. I hope to make its acquaintance some day.

Asplenium fontanum. A very doubtful native. It is particularly neat with very dark green fronds, paler below, bipinnate, the ovate pinnae crenately lobed with cuneate bases. It makes a splendid show-pan.

Asplenium forisiense is not unlike the last. The fronds are 5-6 inches long somewhat imbricate and tending to curl the pinnae slightly. They are bi-pinnate, the lowest pinnae having the pinnules, nearest the rachis, stalked. An old plant in my rock garden has wintered perfectly but my small stock in pots, not plunged, all died last winter. There is an extremely rare hybrid, *Asplenium* x *costei (Asplenium forisiense* x *Asplenium septentrionale)* (Fig. 25) of which I am the proud possessor of one plant which wintered perfectly with very little protection. I find the *septentrionale* hybrids have a very strong family resemblance, requiring an expert eye to differentiate between them.

Asplenium lepidum is from the eastern Alps. The 3-4 inch fronds are bi-pinnate, triangular the lower pair of pinnae frond-like and the pinnules have a cuneate base. It is rare in cultivation.

Asplenium majoricum is an endemic from Majorca which I have not seen but which will need winter protection. The 3-5 inch fronds are narrowly oblanceolate, glabrous with a thin nearly black polished rachis.

Asplenium marinum. This very handsome native is fairly common around the coasts of Britain, but is never found away from the sea-cliffs and in my experience cannot be grown even a mile away from them without winter protection. I think it prefers acid rocks although it is occasionally found on limestone. It will not grow for me. The glossy, emerald, pinnate fronds may be 3-12 inches long, 1½ inches wide. The pinnae are oblong-ovate, with bases lobed on the upper side, and the stems are purplish brown. It can grow much larger if treated as a greenhouse plant.

Asplenium officinarum (Ceterach officinarum) "Rustyback". This

first-class species is a fine rock garden subject and is one of the few ferns which will do well in a sunny position. In fact after a long drought it can become curled up, brown and brittle but after a good rain the fronds uncurl and look as good as ever. It does well in the lee of a stone in scree and makes an ideal plant for a dry wall. The fronds are pinnatifid, 3-6 inches long, matt sage to dark green, on the upper surface. Below the sori are hidden by a dense coating of silvery scales which turn rusty-red on maturity.

Asplenium petrarchii is a rare species from south Europe, resembling *Asplenium majoricum* in shape but is hoary with glands. It is found on dry chalky rocks and will need protection from our winters.

Asplenium platyneuron. This rather elegant north American species, the "Ebony Spleenwort" has linear-lanceolate fronds 6-10 inches long, 1½ inches wide, bi-pinnate. The short pinnae have auriculate bases, dark to glaucous green. The stems are dark, glossy, purple-brown. Not too difficult on limestone soils, it resents over-watering when pot-grown.

Asplenium ruta-muraria. "Wall Rue". This neat native species is found commonly colonising old stone walls made with lime-mortar and also is a frequent denizen of rock crevices in our limestone country yet it is not at all an easy plant to establish from collected plants unless a complete root system is obtained. Also it is not at all easy to raise from spores. The close humid conditions necessary for raising ferns do not suit it, and sowing in an unprotected medium usually results in copious cultures of moss and little else. The leathery fronds are 1 to 3 inches high, triangular-ovate to lanceolate-ovate, bi- to almost tri-pinnate. The pinnules vary from obovate to rhomboidal, with toothed apex. It makes a fine show-pan but needs care when watering. A few years ago my friend Fred Jackson of Borrowdale found a plant of the natural hybrid *Asplenium* x *murbeckii (Asplenium ruta-muraria* x *Asplenium septentrionale),* which caused quite a sensation in botanical circles as it had not been found in Britain this century. It occurs rarely in the Alps. It is still thriving with Fred but I lost the piece he gave me probably because I planted it in tufa, and one parent is calcifuge.

Asplenium scolopendrium. "Harts-tongue". Formerly it was named *Scolopendrium vulgare,* then *Phyllitis scolopendrium.* Its hybrids with other aspleniums were named x *Aspleniophyllitis;* presumably this name will not be valid now. It is a catalogue-maker's nightmare. The type plant is too large for the average garden as are indeed many of the varieties of which over a hundred have been recorded. However, several of the crested varieties keep below a foot high and they are really invaluable for

brightening up the winter scene. *Asplenium scolopendrium* 'Ramo-marginatum' usually does not exceed six inches and the fronds branch into irregular crests. I have three plants of a tiny sport less than an inch high, apparently sterile after ten years so it may not be in my lifetime that a commercial stock can be raised.

Asplenium seelosii. A very rare species found in the eastern Dolomites and adjacent Switzerland this tiny fern has fronds under two inches long, the blade being palmate with three to five narrowly-elliptic segments. Plants sent to me from Switzerland seemed to have been growing in pure chalk or white granular tufa but they did not settle down here after their journey. It should make an interesting show-pan.

Asplenium septentrionale. The "Forked Spleenwort" is not uncommon on acid rocks often near mineral veins and is local in the western counties. There is a small colony on Arthur's Seat, Edinburgh. The leathery fronds are forked rather than pinnate, and are dark green. The pinnae are very slender, linear-lanceolate, with very few teeth. The plant seldom exceeds 5 inches tall. It is the parent of several hybrids and makes an attractive show-pan.

Asplenium trichomanes. "Maidenhair Spleenwort", adorns old walls anywhere where the atmosphere is not polluted, provided good old-fashioned lime mortar has been used. The slender fronds, less than an inch wide, may be 5-10 inches long according to environment. The rachis is black and the light green pinnae oval to oblong and slightly toothed. This very pretty fern is an ideal rock garden subject and it loves a shady scree or rock crevice facing north. It recovers well from drought. This species is now separated into three or four sub-species but for garden purposes we can ignore this. There is a very charming crested variety, the tiny ultimate pinnae of the crest no larger than a pin-head. It comes true from spores.

Asplenium trichomanes var. *incisum.* A beautiful variant with larger pinnae deeply incised and quite sterile, found very rarely in Britain, more frequently in the Alps. It resents disturbance. There is an intermediate form, *Asplenium trichomanes* var. *incisum* 'Moule', with smaller, deeply toothed pinnae which is fully fertile and breeds true. All make good show-pans.

Asplenium viride. "Green Spleenwort" resembles the last, but the rachis is as green as the pinnae. Seldom exceeding 6 inches this fern in the wild is a sure indicator of basic rock. It is common on limestone hills, seldom being found below 1,000 feet, but seems quite happy in my garden a little above sea-level. Crested varieties have been found from time to time.

ATHYRIUM FILIX FEMINA. The "Lady Fern". 'D'. A misnomer as the mature fern plant is a neutral organism. The type is far too strong for the rock garden but there are dwarf varieties which provide very attractive bright green foliage in spring.

Athyrium filix femina 'Acrocladon'. Here the frond divides repeatedly from the base to form a ball of light green foliage about 9 inches high.

Athyrium filix femina 'Caput-medusae'. The frond divides repeatedly about 3 inches above the ground to form a ball of emerald finely-cut cresting. It grows to about 9 inches tall.

Athyrium filix femina 'Crispum' forms a mat of crisp greenery 3 inches high.

Athyrium filix femina 'Crispum Coronans'. A crested variety of *crispum* with a large terminal crest. This plant seldom exceeds 4 inches in height.

Athyrium filix femina 'Frizelliae Nanum'. Here the pinnae are reduced to tiny balls of verdure, the fronds are about 4 inches long, and less than an inch wide.

Athyrium filix femina 'Minutissimum'. This variety is a perfect replica of the type in miniature and is 6 to 10 inches high with bi-pinnate and broadly lanceolate pinnae.

BLECHNUM. 'E'. A calcifuge plant requiring acid, peaty soil.

Blechnum penna-marina. From the Antipodes, this plant forms a mat of tiny pinnate bronze-green congested fronds 3 inches long, more or less prostrate. The pinnae are closely set like a comb. The fertile fronds are erect, 6 inches long, very dark in colour and are freely produced.

Blechnum penna-marina 'Cristata' has a pretty terminal crest to each frond.

Blechnum spicant. Our native "Hard Fern" is frequently found on acid moorland and in woodlands in damp places. The type is rather too large but there are smaller varieties.

Blechnum spicant 'Caespitosum'. I have named this provisionally. It is a wild form I secured recently. The rootstock divides repeatedly to form a close cluster of small prostrate crowns. The original plant, about 15 inches across, had 40 crowns.

Blechnum spicant 'Cristatum'. Most of the *Blechnum* varieties have been lost but Willie Buchanan had this nicely crested form at Bearsden, and shared it with me. It is still growing well but I have had no fertile fronds as yet. It comes true from spores when available.

CHEILANTHES. "Lip Fern". 'E' when growing well. It gets the name from the dark line of sori which follow margins of the lobed pinae. This is

a large mostly tropical genus but there are several hardy species from Europe, America and New Zealand. Nearly all have fronds densely felted with hairs or scales to reduce water loss, which means they have to be treated as alpine house subjects rather like Aretian androsaces with extra good drainage and very light shade in mid-summer. A normal compost but with added very coarse grit to prevent compaction of soil surface is best.

Cheilanthes alabamensis. The narrowly lanceolate fronds are pinnate and the rachis is glossy black, hairy. The pinnae are glabrous above, hairy below, with shallow teeth. The fronds are 3-5 inches long.

Cheilanthes argentea. Although recorded from as far north as Siberia and from China northwards, I have found this fern needs greenhouse protection during the winter. It is sensitive to overwatering. The blade is 4 inches long, broadly triangular, deep green above but densely white farinose below outlined by the sori which are black when ripe and forming a continuous border to the fronds. The two lower pinnae are almost as large as the rest of the frond.

Cheilanthes eatonii. Colorado. The narrowly triangular fronds, bi-pinnate, 3-5 inches long are completely covered with silvery-grey hairs. The stems are 3-4 inches long. It stands the frost well if kept on the dry side.

Cheilanthes distans. New Zealand. The blade is bi-pinnate and the lobed pinnae well separated up the dark brown, wiry rachis. The pinnae are dark green, hairy above, densely hairy below.

Cheilanthes fragrans. South Europe. The pinnae are narrowly triangular and the frond pinnate, violet scented, deep green above, paler and more hairy below (see also *Notholaena*).

CRYPTOGRAMMA CRISPA. "Parsley Fern". 'D' is a native plant and is strictly calcifuge. It is perfectly delightful in spring when the vivid, light green 4-5 inch tri-pinnate fronds appear. The fronds have the unique character of being tri-morphic on the same plant, the fertile frond being the strongest. It needs coarse gritty acid soil.

CYSTOPTERIS. 'D'. The "Brittle Bladder Fern" is named on account of the inflated indusia protecting the sori.

Cystopteris dickeana is a very rare native, confined to Scotland, but very easy to raise from spores. The 3-4 inch fronds are pinnate, and the pinnae pinnatifid. It forms a dense colony of small crowns.

Cystopteris fragilis. The lovely finely cut 6-9 inch long fronds, bi- to tri-pinnate are rather variable. The stems are very slender and brittle. When growing well it will sow itself freely but will never become a nuisance.

Cystopteris montana. This is one or our rarest British ferns, confined to the mountains north of the Tay, and in Argyll. The deltoid frond is tri-pinnate, and the blade is 3-4 inches long on a 6 inch stem. It creeps about by underground stolons. Willie Buchanan gave me my first plant from his Bearsden garden and it has spread into a fine colony now. All *Cystopteris* should be in continuous shade otherwise the fronds brown off and go down as early as July.

DAVALLIA MARIESII. 'D'. A smaller edition of the "Haresfoot Fern" sometimes named the "Squirrel-foot Fern" on account of the rhizomes creeping about covered with brown hairs. Apparently quite hardy, I had this fern growing in the garden over ten years with no trouble. A year ago I planted my entire stock along a deep crevice running across a very large limestone boulder, about five feet long, and last winter killed the lot. This Japanese species is one of a large family, all needing heated greenhouses except *Davallia mariesii.* The tri-pinnate, triangular fronds have deeply cleft segments, the sori are in cup-shaped or tubular indusia terminating the veins. Ideal for growing in hanging baskets, it gradually covers these with interlacing rhizomes.

DRYOPTERIS. The "Buckler Fern", 'D', are mostly very large plants and our commonest fern. The so-called "Male Fern" attains at least three feet in height, and is, in fact, a weed in many gardens, though it seems to be the favourite amongst landscape garden designers, judging by the enquiries I get. However, there are a few valuable dwarf forms.

Dryopteris affinis. I wonder if at long last this fern has received its final appellation. The golden-scaled "Male Fern", *Lastrea pseudo-mas* when I was a boy, became *Dryopteris pseudo-mas,* then some thirty years ago became *Dryopteris borreri,* only to revert to *Dryopteris pseudo-mas* again. Now, I hope, I can correct my catalogues for the last time. Be that as it may, there is a really splendid miniature, *Dryopteris affinis* 'Crispa Congesta' which makes a tight mass of crisped frondage less than 6 inches high.

Dryopteris assimilis is slightly variable. I found a delightful, mat-forming variety on the mica-schist hills between the Tay Valley and Glen Lyon. This has triangular fronds, tri-pinnate, very finely dissected, no more than five inches high. However, it does not like me and remains one small crown after twenty years. I do not think it has been named. *Dryopteris assimilis* is 15-20 inches. On the other hand a friend brought me a variety collected on Mull, exactly corresponding to *Dryopteris dilatata* 'Dumetorum' of the Moore nature prints, and this thrives. About 5 inches in height, I believe that this now is referred to *Dryopteris assimilis.*

Dryopteris filis-mas 'Linearis Congesta'. This is a very neat refined variety of the "Male Fern". The fronds are 9-10 inches, and 4-5 inches wide, bi-pinnate, and the pinnules very slender and closely set.

GYMNOCARPIUM DRYOPTERIS 'PLUMOSUM', the "Plumose Oak Fern" does not grow as tall as the type, the deltoid blade is tri-pinnate and broadly foliose. Nothing can equal the lovely soft golden-green in spring. However, in the acid humus it loves, the creeping underground stems can invade and take over more ground than it should – and very nice too. 'D'. It is 6 inches high.

LOMARIA. 'E'. Now largely taken over by *Blechnum,* I consider *Lomaria alpina* as so distinct that to regard it as a mere form of *Blechnum penna-marina* is nonsense in lay circles. I believe the pundits too are having second thoughts. Anyway it is a delightful evergreen ground-cover plant and the polished, bronzy-green 6-inch narrow fronds pack close like the pile of a luxurious carpet. It spreads quite quickly. In all the years I have grown it it has produced very few fertile fronds, on one occasion only. *Blechnum penna-marina* has annual forests of fertile fronds.

NOTHOLAENA 'E' is close to and merging with *Cheilanthes.*

Notholaena aurea. North America. The bi-pinnate fronds are up to 10 inches, less than 2 inches wide. The pinnae are deeply lobed, densely hairy below, slightly hairy above with a yellowish-green surface. It needs protection.

Notholaena marantae. Austrian Alps, South Europe. The fronds are 6-10 inches, bi-pinnate to pinnatisect, and the pinnae are triangular, covered below with a dense coating of bright rusty-red scales. It needs a sunny position or alpine house culture.

PITYROGRAMMA TRIANGULARIS. "American Gold-backed Fern". 'E'. Oregon and Vancouver Island are its most northerly limits but it winters in the alpine house if kept just moist, never soaked. The deltoid blade with large basal pinnae can be pinnate. It has a deep green, slightly glossy, upper surface and its lower surface is densely powdered with orange-yellow farina, sometimes white in which the black sori are almost hidden. It is 6-10 inches tall.

POLYPODIUM is just a fraction too large for the average rock garden, but invaluable for winter greenery where there is plenty of room, and ideal for furnishing a walled garden. There are several varieties with finely divided frondage such as *Polypodium australe* 'Cambricum', *Polypodium australe* 'Cambricum Barrowi', *Polypodium australe* 'Cambricum Wilharris' and in fact I have built special rock outcrops to accommodate my

collection of these treasures. But when the rock garden is at its best from March to June, the polypodies are at their worst, not coming into their glory until July and August.

POLYSTICHUM. 'E'. The "Shield Ferns". The type species and many of their varieties are too big for our purpose but again there are a few genuine dwarf forms.

Polystichum aculeatum. 'Broughton Mills'. A variety I found near Coniston in the Lake District, a few years ago, has not exceeded 6 inches. The fronds tend to arch backwards and have small neat crests when mature. It comes 100% true from spores.

Polystichum setiferum 'Congestum' has imbricate, closely set pinnae, the bi-pinnate fronds are more or less erect, 10 inches high. There is a crested form with a terminal branched tassel. These also come quite true from sowings.

Polystichum setiferum 'Setoso-Divisilobum' (Fig. 26). One of my seedling selections, finely divided fronds with bristly teeth to the pinnae has not exceeded 6 inches high, by 10 inches broad after 6-7 years.

Polystichum tsu-simense. This is a delightful dwarf species from Japan, and is perfectly hardy with very neat semi-decumbent fronds, which are bi-pinnate. The pinnae basal pinnules are strongly 'eared' and lie along the dark scaled rachis in a characteristic pattern. The maximum height is 12 inches, usually less.

WOODSIA. Our two native species are very rare indeed and must never be collected, if found. I have plants sent from Norway occasionally but they have always been removed without my knowledge or permission. Imported spores have not succeeded as yet. The American species tend to exceed 12 inches with me but *Woodsia polystichoides,* an evergreen Japanese species is doing well and is unscathed by last winter. The decumbent fronds, 5-6 inches long are pinnate, lanceolate, and the basal pinnules auriculate, light-green, forming a low mat of foliage.

I have not mentioned *Microsorium diversifolium* and *Pyrrosia* spp. which I have lost several times in a cold glasshouse although they appear to flourish at Logan. I hope, at any rate, to have shown that there are plenty of choice ferns for the enthusiast for experiment.

EDITOR'S NOTE

In Journal No. 1 published in 1937, John MacWatt wrote on "Ferns for the Rock Garden". This article, by Reginald Kaye, gives an updated account of the dwarf hardy ferns.

Plants of South East Asia –

Seed Collecting on the Makalu Trail

by RON McBEATH

NEPAL opened up its high mountains to plant hunters as recently as 1949; since then, numerous expeditions and individuals have gone to study and photograph the rich alpine flora in summer or collect the seeds in autumn. This is a report on a seed collecting expedition, in October and early November, to the Kongmala Pass and Barun Khola, situated between Makalu and the River Arun in north east Nepal.

There are two methods of approaching the upper reaches of the River Arun from Katmandu. The long and tedious route is to take a hot crowded bus, on a day long journey to Dharan; this is followed by a 12 to 14 day trek, before you reach the hardy plants. On this trek, all the food and supplies for the expedition are carried by porters, up and over the sub-tropical foothills and across many miles of rice paddy.

The alternative route is to fly from Katmandu to Tumlingtar, on an inexpensive internal flight, operated by Royal Nepalese Airways. This cuts out the bus journey and one week of the trek into the mountains. Of course there has to be a drawback; the airfield at Tumlingtar is a grass field set high on a hillside, surrounded by big mountains. If the weather is bad (and this can be a very wet part of the world), then flights can be held up for some time and you may end up sitting around in Katmandu to await fine weather.

We chose the hard way in. When nearing the mountains any ill thoughts about the long walk soon dissolve, as the path leads through warm evergreen forest, where such exotic plants as tree ferns, epiphytic orchids, gingers and begonias thrive, colourful birds, butterflies and giant spiders abound and monkeys crash through the high tree tops.

Eleven days after leaving Dharan, our party reached Tashigong, the final village on our route. Situated at 7,000 ft, the chief crops are maize, barley and millet. In the surrounding forest *Pleione praecox* was in full flower. The large individual blooms are pink, with a frilly margin to the white and yellow lower petal. This orchid only occurred as an epiphyte on semi-shaded, moss-covered trees and shrubs, from 6 ft to 40 ft from

the ground.

In this forest between 7,000 ft and 9,000 ft, perhaps high enough to make it hardy in Scotland, was the fine autumn flowering *Crawfurdia speciosa,* a climbing member of the Gentianaceae. In open clearings it scrambles over *Viburum* and bamboo, from which cascade long slender stems, with brilliant blue, gentian-like flowers, to be followed by a fleshy seed capsule, reddish purple in colour and relished by the porters, who consumed them in large quantities. Alongside, and with a similar growth form, was the yellow-flowered *Dicentra scandens,* but alas its flowering season was nearly over.

Above 9,500 ft, completely hardy plants occur, especially *Rhododendron,* which dominate the hillside for the next 3,000 ft. So dense are they, that an impenetrable barrier from 10 ft to 20 ft tall is formed by their tangled stems. Nine species were observed: *Rr. arboreum, barbatum, campanulatum, campylocarpum, cinnabarinum, hodgsonii, thomsonii, wallichii and wightii.* What a colourful sight must greet the traveller in spring!

Amongst the *Rhododendron* other members of the Ericaceae thrive. *Gaultheria semi-infera* with sky-blue fruits formed a shrub 2 ft high and 4 ft across, *Gaultheria trichophylla* resembled a green carpet studded with large bright-blue berries and *Gaultheria pyroloides* had blue-black fruits with a thick white bloom. *Gaultheria nummularioides* still had pinkish-white urn-shaped flowers alongside the round black fruit, but both were hidden under the leaves on short arching stems. Hanging like a curtain, *Vaccinium nummularia* preferred shaded ledges or moss-covered tree trunks.

An unusual and attractive shrub in the shade of the *Rhododendron* was *Ilex intricata,* a little holly 18 inches high, with glossy round leaves and red berries. Alongside the *Ilex,* the first *Primula* was found; *Primula boothii* in the Petiolaris section. It was quite common on shaded banks and rock outcrops, but avoided strong competition from other herbaceous plants. Although it would receive frost, it did not ascend high up the ridge into areas where the frost is hard and prolonged.

Much of the ridge leading to the Kongmala Pass is dominated by *Rhododendron*; however, the exposed crest of the ridge is open short turf and rock outcrops, with alpine plants occurring as low as 10,500 ft. Amongst the first to appear were *Rhododendron lepidotum, Cassiope fastigiata, Gentiana prolata, Codonopsis* and *Cyananthus.* Much more exciting, however, was *Diplarche multiflora,* a member of either the Ericaceae or Diapensiaceae. Found between 10,500 ft and 13,500 ft in

open stony turf, it resembled a small *Phyllodoce,* forming an upright shrub 6 inches high; the fruiting capsules on 3 inch long, upright, rigid spikes, contained much fine ripe seed, which was distributed by the wind.

On most expeditions there are plants one should recognise and collect, but for one reason or another fail to do so and later regret the missed opportunity. One such plant occurred on north-facing mossy ledges at 10,500 ft. It formed an evergreen cushion up to 1½ ft across, with solitary seed capsules on 1½ inch high stems. The family was not obvious and, not wishing to waste too much time, only a pinch of seed and a small herbarium specimen were collected; back in the herbarium it was identified as *Diapensia himalaica,* one of the real gems and most desirable plants in the Himalayan flora.

Above 12,500 ft the larger rhododendrons give way to the small species, such as *Rhododendron anthopogon, setosum* and the choice *pumilum.* The last was confined to open stony meadows and the crest of the ridge, where it was accompanied by *Diplarche* and *Cassiope,* but avoiding competition from strong growing herbaceous plants. The large seed capsule, sitting 1 inch to 2 inches above the purple foliage, had already shed much of it fine seed into the wind. On this part of the ridge *Cassiope fastigiata* and *Cassiope selaginoides* grew together. The slender creeping stems of *Cassiope selaginoides* contrasted sharply with the thick upright growth and clump forming habit of *Cassiope fastigiata. Cassiope selaginoides* was local in its distribution whereas *Cassiope fastigiata* was common and widespread.

Alpine meadows are widespread between 12,500 ft and the top of the Kongmala Pass at 14,000 ft. Amongst the grass *Primula calderiana* and *Primula obliqua* made large clumps. The leaves of the latter were now yellow and when parted many resting buds the size and shape of golf balls were revealed. Where turf was moist and short, *Primula dickieana* formed rosettes, from which arose the 9 inches high flowering stems, now bearing ample seed. Along with the primulas *Omphalogramma elwesiana* was frequent. By October all the leaves had disappeared leaving only its solitary seed capsule topping the 6 inches to 18 inches high stem.

Saxifrages in the Hirculus section, *Fritillaria, Lloydia, Potentilla, Androsace, Trollius, Megacodon stylophorus* and *Bergenia purpurascens* were other alpines on the Pass. The *Bergenia* was confined to open hillsides and rocky places high on the ridge, never descending into the nearby woodland. At those high altitudes the plant is completely herbaceous, the purple leaves turning to mush with the nightly frosts.

After crossing the Kongmala Pass the path quickly descends some 3,000 ft into the valley of the Barun Khola. At first this narrow path cuts through dense stands of *Rhododendron wightii* and *Rhododendron campanulatum,* amongst which are to be found a few specimens of rowan, birch, rose and *Lyonia ovalifolia.* Near the river *Abies densa, Acer* and *Betula utilis* form a forest with an understorey of *Rhododendron hodgsonii* and *Viburnum.*

In open rocky places on the path-side and in clearings in the *Abies* forest a *Primula* allied to *gracilipes* was very common. Both the flower buds which were already well developed by October and the toothed leaves, had a heavy dusting of farina, which turned them almost cream.

The path up to Makalu then follows close to the fast flowing Barun Khola. At first the valley is V-shaped with steep forested sides, but after a mile or two the valley opens out with a wide, flat, glaciated base. Three collecting sites were established in this valley, the lower at 12,500 ft, which is the upper limits of the *Abies* forest, the second site was at the side of the Lower Barun Glacier at 14,000 ft, and the third site just below the Upper Barun Glacier at 15,500 ft.

Around the lower of the three camp sites the common shrubs included *Berberis, Salix, Cotoneaster, Clematis, Juniperus indica, Juniperus recurva* and *Daphne retusa.*

The blue poppy, *Meconopsis grandis,* and a monocarpic *Meconopsis* allied to *paniculata* were very common, the latter having rosettes of leaves up to 2 ft across, very attractive, with a dense covering of yellow hairs. Related to the gentians is *Megacodon stylophorus,* another monocarpic plant; this forms a flat rosette of dark green leaves, which build up strength for a number of years, finally sending up a stout upright flowering spike, which may reach as much as 6 ft tall. After setting seed the plant dies. Other herbaceous plants to be found included *Podophyllum hexandrum, Thalictrum, Gentiana, Aster, Parnassia, Allium, Potentilla cuneata, Androsace globifera* and the first of the Kabschia saxifrages.

The collecting site at the Lower Barun Glacier was in the heart of the alpine zone. Much of the surrounding slopes were dominated with *Rhododendron setosum, Rhododendron anthopogon,* a few plants of *Rhododendron nivale* and on rock outcrops *Rhododendron lepidotum,* the leaves of all those species were now purple or brown, giving the countryside a rich autumn colour, especially when the sun was shining. Other shrubs which managed to survive although often only a few inches high included *Juniperus indica, Potentilla fruticosa, Cotoneaster micro-*

phyllus, Ephedra gerardiana and *Cassiope fastigiata.*

In the protection of the shrubs, on open banks and on rock ledges *Primula wollastonii, Primula pusilla* and other dwarf primulas were common, but alas all were well past flowering. In the summer they would receive ample water from the incessant rain and mists, but were now desiccated and shrivelled up by the cold dry winds, bright sunshine and severe night frosts.

Polygonatum hookeri appeared common but all that remained now were the red fruits embedded in the ground. *Cyananthus, Gentiana prolata, Gentiana ornata* and the recently described *Androsace nortonii* were frequent, this *Androsace* formed small cushions up to 1 ft across, from which arose 1 inch high flowering stems, bearing 1-3 seed capsules.

On nearby stable screes *Androsace lehmannii, Androsace globifera* and Kabschia saxifrages were abundant. The leaves of *Androsace lehmanni* were now a rich brown and the cushions up to 6 ft across stood out boldly on the hillside. The almost stemless seed capsules, full of ripe seed, provided food for the Tibetan snowcock, a large bird similar to ptarmigan and equally loath to fly away when disturbed.

The cushions of *Androsace globifera* extended to 3 ft across in the largest specimens, the yellow to grey leaves were densely covered with hairs and from a distance the cushions resembled sphagnum moss. Again the abundant seed capsules were almost stemless.

What a grand display those plants must produce when in flower in summer. Mixed in with the *Androsace* were several species of Kabschia saxifrages, but the iron-hard grey-green cushions up to 2 ft across were difficult to define into species.

A select band of high alpines were restricted to cliffs and steep, unstable, south slopes, covered with stones of various sizes. A number of plants were still in flower, including *Saussurea sacra,* which formed round, grey-white woolly balls 6 inches across, when the wool was parted, purple flowers were found still awaiting pollination. Another composite in flower was *Waldheimia glabra,* forming a flat rug of aromatic leaves up to 6 ft across, the shoots terminating in reddish-purple daisy-like flowers 1½ inches across. Although the flowers looked fresh on *Delphinium glaciale,* when the petals were parted ripe seed was found in the seed capsule. This species grows from 6 inches to 2 feet high in quite strong clumps, with the closed up pale blue-grey flowers held clear of the foliage.

Out of flower on the rock ledges and stone slopes were several species of *Cremanthodium, Potentilla* and *Sedum.* All that remained of *Primula*

macrophylla macrocalyx was a resting bud, a few dead leaves and on a 9 inch stem, several large seed capsules, out of all proportion to the size of the plant. On east facing cliffs an *Arenaria* which may be either *densissima* or *polytrichoides* was striking, as the 3 ft wide cushions were now desiccated and orange-brown in colour, the cushions were very hard and the brittle leaves disintegrated when the stemless seed capsules were removed. It looks a difficult plant to cultivate, although the seeds germinate freely.

At the higher camp site below the Upper Barun Glacier, plants fail to cover all the ground. *Rhododendron nivale* is widespread, often 1 inch high, but as much as 3 ft across. *Potentilla fruticosa* and *Ephedra gerardiana* are seldom over 3 inches high. On north facing slopes and tucked around the base of granite boulders two new plants occurred. An *Androsace* allied to *delavayi* formed cushions up to 1 ft across, they were tight, compact and yellow in colour. The other was *Primula caveana,* the toothed, rounded leaves were well dusted with farina, as were the 3 inches high stems and seed capsules.

In open stony moraines *Meconopsis horridula* grew sparingly, quite unlike the plant in cultivation, for here in the wild it seldom exceeded 6 inches in height, with one to six stems, which arise from ground level, each with a solitary, terminal seed capsule. Alongside grew *Tanacetum gossypinum,* a composite with finely divided silver foliage and yellow flower heads on 1 inch to 2 inch high stems, most likely a difficult plant to please in cultivation.

Still in flower at about 16,000 ft at the end of October was *Aconitum hookeri,* its deep violet solitary flower on stems 1 inch to 3 inches high, a choice plant for a trough. With the aconite grew one of the gems of the Himalayan flora, *Gentiana ornata,* still with a few tubby sky-blue flowers, a colour few plants can equal.

As winter was rapidly approaching in early November, and snow descending as low as 11,000 ft on one occasion, further attempts at seed collecting were abandoned. With the seed harvest safe, we walked back to Tumlingtar, where a flight to Katmandu returned us to the comforts of tables, chairs, beds and baths, the first for six weeks.

The Sino-British Botanical Expedition to Cangshan 1981

by R. J. MITCHELL

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FOR almost 100 years botanical research on the plant material of Yunnan has been taking place on the vast, though incomplete, collections available at major institutions. Specimens in herbaria previously collected in Yunnan have given rise to a number of taxonomic problems and even contradictions, and have shown confusing genetic complexity.

Our aims in this 1981 expedition were to study plant variations, particularly in *Rhododendron*, to record natural hybridisation between overlapping species and to determine if possible the delineation of species and intra-specific variation; to record and collect herbarium specimens of all the flowering and fruiting plants, particularly the woody members, at each study area; to study prevalence and variation of *Paris* and *Trillium*; to collect plants and seeds of many genera for study, cytologically, genetically and taxonomically; and also to introduce or reintroduce into this country plants lost to cultivation since China closed her borders to foreign travellers. A long term goal was to pave the way for future joint expeditions between our countries.

The British team consisted of David Chamberlain of the Royal Botanic Garden, Edinburgh studying *Rhododendron* and bryophytes; Peter Cox, Rhododendron expert, and son of the late E. H. M. Cox, a noted traveller in China in the 1920s; Sir Peter Hutchison with special interest in *Primula*; Roy Lancaster with considerable expertise of hardy trees and shrubs gained as former Curator of Hillier's Arboretum; and myself, joint leader of the expedition, studying *Trillium, Paris* and *Nomocharis*.

Professor Feng Guomei, from Kunming Institute of Botany, Chinese Academy of Sciences, was co-leader; eleven colleagues from his Institute, forestry officers, guides, guards and local officials (including a doctor provided by the leader and elders of the local and regional Governments) made up the party of about 25.

Western Yunnan, with adjacent Burma and Tibet, is the genetic centre of diversity for many plant genera and has probably the highest concentration of temperate plants in the world.

The location for study was the Cangshan range above Dali – a range of some 50 km in length, with seventeen peaks along its jagged ridge attaining a height of 4122 m. Dali (25°N 100°E) is centred in an area which is unstable geologically and is prone to earthquakes – the severe one of 1925 resulted in considerable damage to property and loss of life. The range was formed as the result of a granite extrusion through the limestone strata, and at areas of pressure and heat the rocks have melted and reformed to give a great variety of differing types including marble in many colours and formations. Cangshan is the only granite range in this large area; the remainder are predominantly limestone.

The eastern flank rises precipitously from the fertile plain. The sometimes stormy waters of Erh Hai Lake act as its eastern boundary along its 45 km length and is about 5 km wide. Twin sailed fishing boats and a host of smaller craft ply the waters with nets for the abundant fish to feed the local population. Colonel Baber in 1879 writes 'From the western margin of the majestic lake, which lies approximately north and south, rises a sloping plain of about three miles average breadth, closed in by a high wall of the Tian-tsang (Cangshan) range. In the midst of the plain stands the city (Dali), the lake at its feet, the snowy summits at its back'. Deep ravines and narrow lateral ridges make access to the high elevations very difficult. On the western flank a series of water courses and narrow river valleys transect the foothills. The slopes are not as precipitous as those on the eastern side but rise steeply in lateral ridges in what has been described by Kingdon-Ward as 'a land of deep corrugations', making cross country travel tiresome.

The valley floor at Yangbi, the county town on the western flank is at an altitude of 1,850 m and the Dali plain about 2,000 m. During the month of May the temperature in the shade is about 25°C but mercifully the humidity is low during this the dry season; at the end of the month come the monsoon rains which continue intermittently till the end of August. The lower slopes of the range are sparsely populated, for the majority of the population live in Xiaguan, the seat of Regional Government, and in Dali and Yangbi, both county towns with their local governments; a large number of small communities are scattered over the plain, amid the splendour of a patchwork of tiny fields each carefully and meticulously tended. Tree cover is sparse on the lower slopes but increases with altitude till, in the highest corries and valleys and on the precipitous slopes, a complete cover of mixed vegetation is present. It was in these latter areas that the expedition studied the plants – amid craggy cliffs and deep ravines, gurgling streams fed by melting snow and

Cypripedium margaritaceum Photo—R. J. Mitchell

Primula calliantha Photo—R. J. Mitchell

always peaceful solitude with only the birds as spectators.

On the western flank from our two camps at 3,000 m we could look out over the rolling hills away to the west towards the mountains above the Mekong and Salween Rivers. The tree-covered high ridges were silhouetted in the early morning and again in the evening before the setting sun, against a rich orange and fiery red sky. The darkness descended quickly into a clear night with the stars shining brightly and the constellation of The Plough clearly visible.

From another camp 1,500 m above Dali we could look into the hills at the north end of Erh Hai Lake with the greater mountains of the Likiang Snow Range beyond. Or we could look due east from our camp on a precarious ledge down to the plain and the walled city of Dali nestling among its fields of ripening grain and away across the lake to the seemingly barren, dry red hills of limestone and doleritic soil beyond. Above us, amid the pines and firs and the giant-sized bamboos, a great host of rhododendrons clung to the steep slopes and were flowering in hues of blood red, pink, white, and yellow. Beside them grew a range of herbaceous plants including primulas, bergenias, gentians, *Paris, Trillium tschonoskii* and a great many more. It was indeed a plantsman's paradise.

Marco Polo was probably the first European to visit Dali in the year 1253 at the court of Kublai Khan during the great campaign of the Mongols, but the original inhabitants of the area – the Bai people – have now re-established themselves, and the region is called the Dali Bai Autonomous Prefecture with its centre of government at Xiaguan at the southern end of Erh Hai Lake.

Our visit was arranged through the Royal Society under an arrangement with the Chinese Academy of Sciences. This was the first joint botanical field expedition to be undertaken by a Sino-British party. It took place during the period April/May 1981 with preparatory excursions around Kunming over a period of four days.

Each day the botanical party would leave camp about 8.30 am making for the high reaches by such tracks as were available. Where they were non-existent we had to fight a way through dense vegetation. The higher slopes were covered with conifers, rhododendrons and a great variety of woody plants, intermixed at an altitude of about 3,500 m with dense stands of tall bamboo. All the while plants were being collected, recorded and photographed and in the late afternoon the party would return to camp to complete the field note books (British and Chinese), to press the specimens, change drying papers, and to attend to the living plants and seeds. A daily routine was thus established involving all the

expedition members. Each evening after finishing the plant pressing and records Professor Feng and I would discuss, through our interpreter, the programme for the following day. Normally the route would take us upwards to the backbone ridge of the Cangshan range so that a representative collection of the vegetation could be collected.

A typical day in the field was Tuesday, 5th May. It had been decided that we should traverse the hillside above the camp to a point where the path divided, one going up to the higher dense tree covered slopes, the other descending into a remote gully also rich in plants. We would meet again later at this spot before returning to camp together.

Dawn the following morning indicated another fine day; there was a heavy dew on the vegetation and on the square Chinese tents and the three gaily coloured British ridge tents which comprised our camp. The papers in the plant presses were changed before breakfast (rice porridge and fried eggs – the nearest item to a western meal we encountered – and with hot tea to help it down). Packed lunches were prepared for us by the Chinese cooks and we filled our water bottles with boiling water from the great urns fired by sticks and logs gathered from the surrounding woodland.

Leaving camp in a clearing beside a spring we made good headway in the lightly wooded areas where children would daily bring herds of goats and pigs to pasture and return with them to the hamlets well below camp. In this area *Pinus yunnanensis* was intermixed with the blood red flowers on the tree-like *Rhododendron delavayi,* and under our feet a pale blue *Erigeron* and a host of autumn-flowering gentians grew abundantly. Here and there the dainty pink flowers of the dwarf terrestrial orchid, *Pleione delavayi,* could be seen growing amid the dwarf grasses in leaf litter under a light covering of deciduous trees through which entwined the large white flowers of *Clematis montana* or the pink coloured young developing leaves of a *Smilax. Rhododendron yunnanensis* with its white petals (and a considerable variation in its coloured blotches) was prominent here and proved to be the most abundant *Rhododendron* on the range. In the denser vegetation a *Piptanthus,* a shrub with yellow pea-like flowers, added further interest. At 3,200 m *Pieris formosa* var. *forrestii* was much in evidence with a profusion of pale creamy white, lily-of-the-valley-like flowers. Around it grew the Chinese yew, *Tsuga dumosa* sometimes with a mistletoe growing on it, and a great variety of trees including *Craibiodendron, Lithocarpus, Castanopsis,* lilac, *Schima,* poplar and willow. On the roots of *Rhododendron delavayi* grew a root parasite, similar to the broom rapes *(Orobanche)* found in Britain on dune plants.

Moving upwards through dense vegetation we could detect the scents of flowers – *Osmanthus delavayi* was one. Here in this rain-forest-like atmosphere it was (in full flower) a straggly bush covered in lichens and the long trailing growths of *Usnea longissima*. In gardens it forms a compact though erect bush because there is no competition for light. In this moist area the herb layer was rich and included *Disporopsis aspera* whose graceful white pendant flowers with lavender-coloured stamens were held on shoots 20 cm high. Through a thin covering of that typically Asiatic aroid, *Arisaema*, grew hosts of *Paris polyphylla* var. *stenophylla* showing considerable variation in height and number of leaflets and tepals. In *Paris* all the parts of this plant are green. Here too we found a giant *Magnolia*, probably *Magnolia campbellii* var. *mollicomata* but with no flowers, although higher up in this same area one flower was seen across a deep ravine.

In a clearing *Primula denticulata* ssp. *alta* had just finished flowering and some plants had produced seeds. At this point the party split, Professor Feng taking half of the party down into the gully, the remainder coming with me to the higher slopes. With each party went a guide and a guard armed with rifle and pistol; and most of us had a staff to fend off poisonous snakes. Very soon after leaving this clearing our path took us down into a valley with a small gurgling stream. We dared not drink this water for fear of amoebic dysentery (though in fact none of our expedition members suffered any gastric troubles). In the damp places a *Chrysosplenium*, much larger than our own Scottish *Chrysosplenium oppositifolium*, was in full flower; it was growing amid a great wealth of ferns through which seedlings of *Rhododendron sinogrande* with leaves 75 cm long covered large areas. Our path petered out shortly afterwards although there were signs of a track here and there into the bamboo thicket; hill tribespeople had been busy cutting canes for weaving into carrying baskets. Up we went in this shady rain forest with the sun streaming through the gaps in the canopy till we came out into a rocky clearing. The air was still and we could detect a sweet scent but could see nothing. A further 40 m would take us to the source of that scent, for growing on the steep rocky moss-covered slope were over 60 plants of *Rhododendron edgeworthii*. Beside it grew the yellow *Rhododendron sulfureum* and among them in the moss and lichens on these slippery rocks, with a drop of 100 m to the river below, two exquisite dwarf orchids were flowering. The yellow petals and red blotches on the throat of the lower petal of *Pleione forrestii* were seen here for the first time and brought back to Britain for only the second time. Nearby grew *Pleione*

yunnanensis with its magenta pink flowers and purple blotching, and equally attractive. Both orchids are only 10 cm high.

This had proved to be a most satisfactory day for we had also found and collected the rare *Sorbus vilmorinii* on this same site; we returned to camp with the other party in the early evening well pleased with ourselves.

On 12th May we climbed from Dali to set up Camp 3 at 3,200 m, below the highest peak on the range – Longquan Peak 4,122 m. Below the camp we found *Primula poissonii* flowering in the moist meadows where the plain meets the slopes of the mountain range. Here among the boulders unusual yellow-flowered plants of *Stellera thibetica* and the cherry red-flowered *Rosa roxburghii* were prominent. On the lower slopes *Rhododendron microphyton* flowered in a profusion of colours from pure white to deep red and overlapping in its distribution with *Rhododendron pachypodum* whose scented white flowers, sometimes with a pink tinge, could be seen from a great distance. *Rhododendron edgeworthii* also grew here at higher altitudes and is a week or so later coming into flower.

On the moist mossy banks the white-flowered orchid *Coelogyne corymbosa* was conspicuous among *Ophiopogon bodinieri* and *Aletris pauciflora,* and was sometimes seen, particularly on the western flank, as an epiphyte on trees.

On the drier sunny areas the miniature *Iris collettii* with pale lavender-blue flowers flattened to a horizontal disc-like form studded the short grass while the lavender-blue erect flowering stems of *Scutellaria amoena* were conspicuous among the pines – *Pinus armandii* and *Pinus yunnanensis.* Here too *Cypripedium margaritaceum* (Fig. 29) was found for the first and only time growing beside a massive Dali marble boulder. Its single flower is held close to ground level and set between two oval shaped purple spotted leaves. It was exciting to find this plant for it is illustrated in "The Journeys and Plant Introductions of George Forrest V.M.H.", edited by J. M. Cowan, on page 202, as a half-tone photograph. So we were indeed finding a host of Forrest's plants.

Near Camp, about 3,100 m, *Trillium tschonoskii* was found as a large colony in a dense thicket of willow and rhododendron. It was remarkably uniform in its growth and form with larger flowers than the cultivated Japanese forms. This species has the widest distribution of all trilliums yet, due to the pressure for cultivated ground in China, it has now been raised to protected plant status in China.

Close by, *Salvia hylocharis,* with yellow petals and with a purple tipped lip set on stems 60 cm tall, was noticeable in the sunnier and drier places surrounded by a rich, mixed vegetation of deciduous and ever-

green tree and shrub species. Here the pines gave way to *Abies delavayi* forest through which Rhododendrons *trichocladum, racemosum* and *sanguineum, Gaultheria forrestii* and *Pieris formosa* were the prominent ericaceous plants. At 3,350 m, SBEC 510 – *Paris polyphylla* ssp. *delavayi* with clear yellow tepals excited all the members of the botanical party, for clearly here was a new plant. It has proved to be so and is about to be named var. *alba* on account of its white ovary – the most stable character for, on checking herbarium material at Kew and the British Museum, specimens with yellowish-green and greenish-yellow tepals and white ovaries have been found.

Higher up in the bamboo thicket zone grew rhododendrons in vast numbers struggling up through the giant canes to gain the light. Here *Rhododendron cyanocarpum* in white and pink flowered forms grew together with *Rhododendron haematodes, neriiflorum, irroratum, selense, dichroanthum, sulfureum, lacteum* and *fictolacteum.* Beneath them in moist flushes hosts of *Primula sonchifolia* in blue and white flowered forms, *Bergenia purpurascens* var. *delavayi* with cherry-red coloured showy flowers, and here and there the rare *Primula calliantha* (Fig. 30), with beautiful purple flowers, were to be found. This last plant, as far as I can determine, is not in cultivation and, alas, has still to be re-introduced for no seed was available.

On rocky outcrops at 3,600 m, the creamy white flowered *Diapensia bulleyana* formed large carpets with its compact hummocks of tightly adpressed bottle-green leaves, and to all intents and purposes was like a giant variety of our own native species (Fig. 27).

Covering the slopes just below the Cangshan ridge and at an elevation of 3,850 m great drifts or swathes of rhododendrons greeted the eye. This was above the tree line and appeared as a monoculture as far as the eye could see. It was a pity that this was not the flowering season for it would have been a breathtaking scene. Here *Rhododendron taliense* and *Rh. balfourianum* grew together and mixed through them were all manner of hybrids, which could claim these species as parents, showing a great range of leaf characters. At this elevation spring had just arrived for amid the large snowfields only *Primula sonchifolia* braved the elements.

During the course of the month-long study every opportunity was grasped to unlock the secrets of soils and vegetation. Kingdon-Ward and Forrest regularly made mention of the rhododendrons growing on limestone rock. We did, in fact, encounter this at 3,100 m where we found *Rhododendron cephalanthum* (Fig. 28) growing on almost pure dolomitic limestone rubble. Our soil analysis* indicates that the calcium and

magnesium ions are not readily available to the plant. Although the pH reading is high at 8.14, this is not a true reflection of the growing condition. Moreover, humus and organic matter litter had built up over this bed rock and in most cases the roots did not reach the parent rock.

Two forms of *Incarvillea mairei* were found at different altitudes. The lower form was robust and grew to a height of 30 cm with several deep pink or red conspicuous flowers. Higher up the same hillside at 3,100 m growing among this same *Rhododendron cephalanthum*, the forms were dwarf, equally showy and with two or three flowers per stem. The current taxonomy relates to *Incarvillea mairei* and a robust, showier variety *grandiflora*. In the garden these are distinct plants. Whether our collected seed and plants will also prove to be distinct remains to be seen. If so, the variety *grandiflora* is simply a lower altitude form of the plant.

It is clear that only by visiting areas to study the plants *in situ* can explanations of altitudinal differences, natural hybridisation and soil conditions be described. Likewise by bringing back living specimens to grow on for botanical research other problems are made capable of solution.

Such was the case with *Pleione forrestii*. Plants currently in cultivation were raised from Forrest's pseudo-bulbs and by comparison with our plants it was established that the Forrest introduction is a hybrid. Our introduction is the first of the true *Pleione forrestii* and will be a valuable source of material for the plant breeder.

The joint Sino-British expedition was an undoubted success. It has established closer links between our countries and we shall continue to liaise on the subsequent taxonomic investigations and share information on the plants. The Chinese botanists have surveyed the vegetation of the area to assess the arguments for declaring it a Nature Reserve. Above all, we hope we have helped to encourage a greater understanding between Britain and China which will pave the way for further joint botanical expeditions. This is what international co-operation is all about.

* Soil analysis at the East of Scotland College of Agriculture by Dr. P. Crookes and Dr. D. Purves.

Plants of the Mediterranean –

Along the Donkey Paths of Greece

by W. IVEY

"STRANGE! is it not? – that of the myriads who
before us, passed the doors of darkness thro,
not one returns to tell us of the road,
which to discover, we must travel too."

HOLIDAYS are marvellous things – a short annual period in our rushing lives to stand still, to contemplate, to look around, and to do the things we want to do.

If we are very, very lucky then maybe that's what we'll do. But usually that brief precious breath of freedom is, in the end, its own destructive force, and we fall into the fatal habit of not returning to a specific place "for we've been there before" or, within our fortnight's freedom, we find a marvellous place but because there's always a better place around the corner, and time is of the essence, we go and maybe never return.

And, of course, it's never the same the second time anyway.

For the last two years, and for the first time in my life, I have had the chance to change that.

When I got the job of group leader with Ramblers Holidays, I found that I would be repeating for seven months each year, fortnightly trips to either the Peloponnese (Mani, Kalavrita and Olympia), the Pindus Mountains, the Cyclades and Sporades Islands, Olympus and Pelion. I would have the chance to see the same spots, and plants, on succeeding months and succeeding years.

I have now been to some of these parts of Greece many times and the pundits are correct – it isn't the same the second time – it's better.

Now that I've made many friends around these parts, got to know some of the customs and some of the countryside in detail and a better knowledge of the language, I long to return to some of those spots which over these recurring periods gave me so much pleasure. To walk again, in April, to the very tip of Cape Tenaeron, the wind howling, the sky hot and blue, through a solid carpet of *Scilla, Muscari,* orchids, alpine delphiniums, cornflowers, *Linum* and *Convolvulus.* To sit in the quiet

warm dusk of an Aegean evening, on the very crest of Alonissos, the ruins of the medieval castle, in front, catching the last orange light of the fast sinking sun. The Mediterranean surrounds you on all sides and the mysterious purple bulk of Skopelos, to the west, fades in another dying day.

There is another aspect of an older Greece that I have come to enjoy and respect through repetition, and that's the donkey paths of Greece. These cobbled paths, built by men long dead and maintained by each succeeding generation, were once the arteries of Greece, along whose wandering courses countless donkey caravans have travelled. Now, in this modern age of bitumen and combustion engines, they are almost forgotten, but still give a wandering nomad like me a marvellous medium through which to see Greece – and to think.

Now let's take to those donkey paths and repeat one or two of those walks and find again the excitements and questions to which they led.

Syros, the capital island of the Cyclades, has ship building and ship repair as its main industry. Maybe, partly because of this it is not my favourite island, but it has some beautiful spots, and Vari on the south coast is one of them. Out from the village the path skirts the sandy inlets and rocks along the shore and climbs some formidable cliffs.

By April, drought has already taken its toll, orchids and early bulbs are gone, but on the ledges and cracks of the cliff faces above the unbelievably blue sea are the purple and gold of the capitate thyme and *Scolymus hispanicus* and the white and silver of the caper and the innumerable tight bushes of *Convolvulus oleifolius* and *Convolvulus cantabricus.*

Time and again I've gone to these arid cliffs and wondered at the colour and the never changing constancy of those plants.

Before going out last year, I wrote to two accepted bulb experts, telling them of the areas I would be constantly travelling, and asking for any help they could give me on floral localities. They both answered and they both gave me the same spot, exact to the kilometre, where *Fritillaria davisii* may be found. This plant flowers February-March and I didn't reach the area till mid-April.

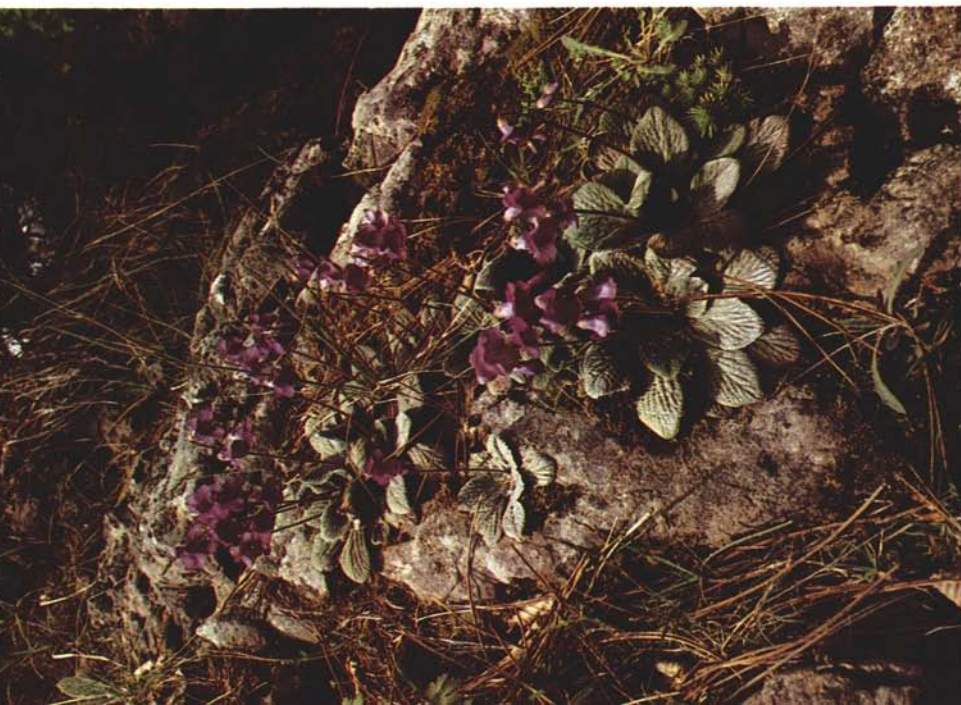
Now I have sixteen holiday hungry people to satisfy and flowers rarely rate highly in their priorities and, as far as *Fritillaria davisii* is concerned, for three separate fortnights I had to try to identify the spot while hurtling past in a local bus bound for Gerolimin.

On the last occasion, before leaving the Mani for the Cyclades, I got off the bus and hunted for such time as I could spare: "You can't miss

Fig. 31 – *Iris florentina* form (see page 142) Photo – W. Ivey

Fig. 32 – *Jankaea heldreichii* (see page 140) Photo – W. Ivey

This page was financed jointly by Ayr and East Fife Groups



them, they're right beside the road in an olive grove". There are a million olive groves and they are all beside the road – anyway I didn't find *Fritillaria davisii* and I hope I am wrong in feeling that where they are building a big new garage 7 kilometres from Areopolis is the site where it reportedly lives.

Bette and I revisited this site this year, and we found the olive grove where *Fritillaria davisii* grows – so the garage didn't ruin the plants – but the goats must have, for we found no seed capsules in the olive grove.

When ancient Sparta was finally conquered some 3,000 years ago, the conquering forces did an excellent demolition job on the civilisation and hardly a stone remains to tell of it. Present day Sparta, a mile from the ancient site, is very modern, square, and a bit unexciting. But it has a most wonderful hinterland of paths, gorges and mountain villages right up into the Taygetos mountains. The best time to visit this area is mid-April to the end of May.

A track that zig-zags frighteningly to 4,500 ft takes you from Sparta to the village of Torizo. From Torizo you can climb direct to the Taygetos mountain hut (a palatial affair) and so to Xelios, the highest peak, or another path, climbing more slowly to the east, ascends to a ridge to the main range where you can slowly descend, on the eastern side, a long valley by way of Anavriti, Faneromeni, Parori and back to Sparta.

In 1980, the flowers along this long walk were disappointing. There was nothing exciting at all. In 1981, however, it was a completely different story. Maybe the snows had receded quicker – maybe some of those plants in nature are biennial – maybe it was a wetter, drier, warmer, colder spring. I don't know, but I just couldn't have missed them, for the same gorgeous path was vibrant with colour – anemones, orchids, cyclamen, *Ornithogalum, Vinca,* violas.

Those I would give special mention to are firstly a large colony of *Tulipa boetica* at the edge of high pastures, so scarlet they could be seen a long way off. *Ornithogalum nutans* in its crystalline silver-green beauty, grew in thousands up the middle of the path as we walked. I sometimes think this is the flower described by Omar Khayyam when he says "And this delightful herb whose tender green fledges the river's lip on which we lean . . .".

At a sunny corner on the dry banking there was a massive patch of *Aubrieta* in full flower. I stopped to photograph it, and one of my party, using my stop for a welcome rest, asked me to come and look at "this funny little flower". There, on a grassy slope above the path, intermingled with *Cyclamen repandum* and *Anemone pavonina,* were hundreds of *Fritillaria graeca.*

All over this path there are large branches sticking in the ground, marking flowers I want to see again – like a form of *Anemone pavonina* with a definite white stripe down the centre of each petal.

Descending from the ridge above Torizo down the long valley to Faneromeni you come to the famous Parori Gorge from the top. Below Faneromeni, the valley has formed a shady hollow and the river sparkles down like a highland burn. Earlier in spring the snow melt waters must have thundered down carrying all before them, and now in the plant litter left behind by the erstwhile flood lie innumerable *Cyclamen* corms and other bulbs.

When I came to this point in the valley on my first tour, it was late in the afternoon and the sun was already casting long shadows. My map, such as it was, showed that the path we were on climbed up out of the valley and over to Trypi before descending to Mistras – another 12 kilometres away in a different direction. As it was, we could almost see Mistras from where we were above the Parori Gorge.

I remember Dr. Bacon's paragraph on the Parori Gorge in his book "Mountain Flower Holidays" where he wrote about a wealth of bright flowers growing in light woodland by the stream at the bottom of the gorge . . . "As I went up the valley, I met a vast flock of goats coming down". Where a vast flock of goats could go, my 16 could go! So, throwing caution to the evening breezes and assuring my sceptical group that there MUST be a path, I plunged into the pathless thicket.

We never did find a path. We did find a 15 inch wide concrete aqueduct taking water from the high valley down to the Sparta fruit fields. The aqueduct had been hacked out of a perpendicular cliff, and as we descended we could look down the sheer cliff straight into the thundering restricted torrent 1,000 feet below.

I was so relieved to get my party through the gorge (including a 78-year-old youngster) that I forgot the flowers, and to question how that vast flock of goats got down.

I have done this walk several times now and the memories that linger are the gorgeous forms of *Cyclamen repandum* that abounded and a vast acreage of tall vicious nettle we had to navigate – me first!

Several years ago Bette and I spent a few days at Metsovon, just west of the Katara Pass, en route from Olympus to Gamilla. The time was June and, apart from campanulas, *Anthemis chia,* clovers and *Chrysanthemum coronarium,* we were disappointed in the few flowers we saw. Last year found me back in Metsovon for five days and, although the time was similar, the flowers and the places I visited were very different.

In general the Greek terrain is very rocky with shattered limestone, but around Metsovon are many mountainous areas of rolling short turf, and one such to the east of the Mylea road and above the Katara Pass is more like Perthshire than Zagoria. Around the limits of the last dying patches of snow, on the bald crown of a rolling mountain summit, I came across the incredible mixture of *Crocus* and *Dianthus.* The *Dianthus* were small tight cushions with almost sessile flowers of various shades of deep pink to red and I suppose they were dwarf forms of *Dianthus haematocalyx,* and they starred the ground like daisies on our grasslands. The crocuses were lilac-blue with white throats and there were thousands all seemingly the same, and from my reference books they must have been *Crocus veluchensis.* I have been in Greece from mid-March to October, but this was the first time I had seen crocus blooming *en masse.* The height by my altimeter was 6,000 feet.

From the summit of this bald hill looking west over the Metsovon-Ioannina valley, in the golden light of a westering sun, the Lakmos mountain range with its peak of Peristeri was silhouetted, empurpled, in the dying light and I determined to get there next day.

From Metsovon to Peristeri, and return using the short-cut along the valley bottom is a thought provoking 50 kilometres and, except for the valley bottom, there is no shade. It is a marvellous walk, but I'd hate to have to do it unless I had already acquired a suntan.

There is a clear cold snow melt stream tumbling down from Peristeri, and it bubbles out of the ground about 1,000 ft. below the summit; right where it emerges amongst the boulders of the river bed I found one and only one *Viola delphinantha,* pink, long spurred, and very far away from its accepted home on Olympus. Another place to revisit just to see if there are more and if there are any variations.

Just below Peristeri, amongst a waste of desolate rock, I stumbled into a tiny grassy glade, grass was just visible between the carpet of annual campanulas and *Legousia* and, superimposed, was a flourishing stand of the Albanian lily. Obviously this little corner had been overlooked by the terrible goat.

The north-facing gorge of Mount Olympus is an obvious mecca for such as us and I have now wandered up and down and over it five times.

When Bette and I first visited the gorge in mid-June 1977, it snowed on our trek upwards to Refuge 'A' Hut, and flowers were our last concern. Next morning, however, the mountain warden, Kirios Kostas Zolotas, introduced us to *Jankaea heldreichii,* a single forlorn rosette high out of harms way on a rock face.

For the next two days we found this plant in abundance and in considerable numbers right along the sides of the well-used, main gorge path. At one point, just off the path, we found many silver rosettes nestling at the bottom of deep horizontal cracks in a horizontal slab of rock, obviously being inundated with water every time there was a downpour in the gorge (Fig. 32).

We left Olympus for Gamilla but returned to the gorge for a last look before flying home from Thessalonika. Most of the *Jankaea* rosettes along the pathside had withered completely away in the searing heat of the previous fortnight.

Since these far off days I have visited the gorge on two different occasions. Where we saw *Jankaea* in such profuse numbers in 1977, there now are none, and their place has been taken by *Allium heldreichii.* The rosettes along the pathside have mostly disappeared too.

This path is used not only by walkers and climbers reaching for Refuge 'A' Hut, but by motorists and bus-loads of trippers who struggle for a half mile up the path from the car park at Prioni and then return. This is far enough to come upon the lowest of the *Jankaea* rosettes.

I spent an hour or two on a sunny knoll watching people passing a group of *Jankaea* right by the pathside, and although 200 people passed not one showed a spark of interest.

Anyway, on other rocks deep in the wooded precipices of the Olympus Gorge *Jankaea* flourishes in abundance. I haven't seen a white one yet! I have seen more rosettes growing in the tussock grass at the bottom of cliffs than on the cliffs themselves and must assume that the movement of the plants is occasioned by the wind-blown seed.

To see, however, so many *Jankaea,* seems to remove them from the rare category. While talking about this and other plants with a Greek botanist friend, I learned that there are four lovely rare plants, endemic to Greece on Olympus and I have since tried to find them but except for one, the least rare, I have completely failed.

They are *Corydalis parnassica,* very dwarf with white tinged lilac flowers, *Rhynchosinapis nivalis; Veronica thessalica;* and the not so rare plant, which I had earlier photographed without realising its identity – *Acinos alpinus.*

These four are all mentioned in the new book "Wild Flowers of Mount Olympus". I wonder why I haven't heard "hint nor hair" of them before.

Apart from *Jankaea,* and of course *Viola delphinantha,* the most dramatic sight in the gorge in 1981 was the utter devastation of the pine trees in the upper gorge caused by a massive avalanche in the winter of

1980. Thousands of smashed trees pack the bottom of the gorge, and the path has been re-routed over the top of these fallen giants.

"AH, LOVE! could thou and I with fate conspire
to grasp this sorry scheme of things entire.
Would not we shatter it to bits – and then
remould it nearer to the hearts' desire."

Now, of course, the flora on the ground has taken a new lease of life by the increase of light and space and this is a first class reason to return.

Time passes – and since I first wrote these pages, Bette and I have been again to Greece – and again I've walked the donkey paths of the Taygetos mountains, and again experienced the feeling of wonder when a well known path is made mystic by the change in the flower cycle.

In the mid-mountain reaches, orchids were everywhere, but none to beat the beauty of the pink butterfly orchid.

Dwarf irises were just fading and a mountain pasture just above Anavriti was scarlet with the flowers of *Tulipa hageri.*

But the impression indelibly printed in my mind is of our coming into the shady hollow below Faneromeni and above the Parori Gorge and seeing in flower the thousands of cyclamen corms lying loose beneath the litter of the Parori Burn.

For sheer numbers of flowers and for the joy of hill walking, the part of the northern Peloponnese bounded by the Corinth-Argos and the Argos-Tripolis-Patrae roads, which encloses the Kyllini, Aroania, Erymanthos and the Panaxaikon mountain ranges, is as near to heaven as your walking boots will take you. To the west of centre of this area, at the head of the Bouraixos Gorge in a green and lush valley lies Kalavrita, a small modern town, its modernity revealing that it has survived two massacres in the name of independence, but nevertheless has the grace to give you a warm smile of welcome.

Here, high in the hills, above the vine terraces and the warm resinous pines, in the close proximity to snowcapped Xelmos, the highest peak in the Aroanian range, you can lie in the short turf made springy with the carpet of dwarf *Prunus prostrata* and marvel at the mountain ridges, like the Spartan hoplites of ancient times, marching, phalanx upon phalanx into the vanishing distance.

I want again to walk the Aroanian ridge, among the pines and peaks with the orchids and anemones and the lovely pink-blue *Geranium tuberosum* vying with the grass to colour the earth. To shelter under the umbrella of a thick pine while a sharp snow shower brushes the ridge

with white, and find myself sharing the shelter with a dense colony of *Fritillaria messanensis.* To walk the Katafygeion path, and from the rocky edges of the path, to realise you are being watched by the myriad bells of the overhanging *Fritillaria graeca* in company with anemones of every patriotic hue and colour. On the same path, just below the snow limit, in May, in the fertile soil below the summit, to be left speechless at the display of anemones; *Corydalis solida,* purple, lilac and white; gageas, crocuses, blue, white and yellow; scillas, tulips, just colouring; and orchids.

On a homeward path in the late afternoon heat, to stop for a well earned rest on a large pathside rock, and find the rock encrusted with the soft grey cushions and pink elongated trumpets of *Asperula suberosa,* and to hunt feverishly, rest forgotten, at every other rock in the hilly vicinity to discover that they exist only on the rock you chose to rest on.

But I'll never forget the sight of part of the grassy slopes just above Kalavrita covered with the pure white *Iris florentina* or, on the south facing side of a lesser rocky peak of Xelmos, of a clump of irises about 10 inches tall, pale blue standards, deep purple falls and golden tongue. Maybe just a variety of the common iris, but a most uncommon and beautiful sight to me (Fig. 31).

There are still so many incidents to share that must be left unsaid . . . *Saponaria graeca,* irises, and orchids on the pathsides above Gytheion, and my first sight of *Orchis papilionacea* in the same area. (I was so excited I forgot to lift my 100 mm macrolens – and found it again a fortnight later exactly where I left it); the almonds of Alonissos; the plums of Skopelos; the pancratiums, sternbergias, colchicums on the Pelion; the massive "snowdrops" in a swamp in Skiathos; the paeonias and onosmas of Crete; the linums and arums and orchids, and that wonderful spring tree *Cercis siliquastrum* on Samos; and the cafes along the waterfronts in the warm nights after a hard day, foot-sore but happy; all bring back memories. It's time to close.

"And when thyself with shining foot shall pass
Among the guests star-scattered on the grass,
And in thy joyous errand reach the spot
Where I made one – turn down an empty glass."

All quotations are taken from the first and fifth editions of Edward Fitzgerald's "Rubaiyat of Omar Khayyam."

Spring Flowers on the Island of Corfu

by CHRIS and MARIE NORTH

THE Island of Corfu or Corfou (Kerkira or Kerkyra in Greek) now vies with the Costa Brava for position as the most popular Mediterranean resort for British tourists. In addition to its attraction as an enchanted island to escape to for sunshine and beaches it is also one of the best places to visit for an introduction to the wild flowers of the Mediterranean. Exposure to winds from the Adriatic give it a gentler and less drying climate than that of most other Greek islands and these favourable conditions ensure that there are not only many different species to be found there – the plants often occur in profuse numbers.

Plant hunters need not fear large crowds of sun-seekers, most of whom go in summer, for the best time to see the flowers there is from mid-March to mid-May. Indeed, the popularity of the island as a tourist centre has some considerable advantages for the plant hunter. Corfu boasts its own international airport, so that one can fly there direct from Britain and thus avoid the inconvenient, and often lengthy, change at Athens that is necessary when travelling to most other Greek islands. There is also a fairly extensive and adequate road system and, since the island is quite small (approximately 65 km long and no more than 25 km wide in the widest part of the north), it is quite possible to drive from one end to the other and back in a day. Most places are accessible with a Vespa scooter, which is cheaper to hire than a car and adequate – one took us both to the top of the highest point, Mount Pantokrátor (914 m), on two occasions. During our two weeks stay (April 19th-May 3rd) we were able to examine the area fairly extensively. The accompanying map (Fig. 33) shows the roads we travelled in solid lines and other roads in dotted lines.

Much of the island is covered by impressive and cherished olive groves and olive oil is the main export, though other crops such as lemons are of considerable importance. One special feature of the landscape is the number of tall narrow cyprus trees. Although the wild form of *Cupressus sempervirens* is a native, the columnar type – which is so much a feature of the Italian landscape – is not often met with in other parts of Greece. By no means all of the island is covered with trees; there are many grassy areas and garrigue, especially in the north and around the coasts, and these are particularly good places to look for plants.

We stayed at Paleokastritsa on the north-west coast and the woods and roadsides around there were rich in wild flowers including:

Alyssum saxatile
Allium subhirsutum
Anagallis arvensis
Aristolochia rotunda
Bellis annua
Calendula arvensis
Cerinthe minor
Convolvulus altheoides
Coronilla scorpioides
Cistus salvifolius
Ecballium elaterium
Erythraea sp.
Euphorbia dendroides
Fumaria capreolata
Geranium robertianum
Geranium molle grandiflorum
Helianthemum lavandulifolium
Lavatera arborea
Lamium amplexicaule
Oxalis pes-caprae
Ophrys lutea
Plantago coronopus
Salvia triloba
Serapias lingua
Smyrnium perfoliatum
Strachys lanata
Scrophularia peregrina
Tordylium apulum

Nearly all of these are illustrated by Polunin and Huxley (1965) and Huxley and Taylor (1977). Two of them are especially worth singling out. The *Convolvulus* represented was *Convolvulus altheoides* ssp. *tenuissimus,* which is less common than the type species with more divided silvery leaves and pink instead of mauve-pink flowers. It used to be called, appropriately, *Convolvulus elegantissimus.* Another plant which took our fancy was *Smyrnium perfoliatum,* an interesting though not showy umbellifer after the fashion of a *Bupleurum* – the sort of plant described in catalogues as 'desired by the flower arranger'.

A few kilometres to the south of Paleokastritsa, around banks and verges of cultivated fields near the village of Liapádes, we saw:

Crepus incana
Dipsacus fullonum
Lunaria annua pachyrhiza
Malcomia maritima
Muscari comosum
Orobanche crenata
Malope malacoides
Ornithogalum montanum
Orchis morio picta
Orchis italica
Orchis simia

Orchis simia – the "Monkey Orchid" is similar to *Orchis italica* – the "Naked Man Orchid", and these two species are sometimes difficult to distinguish, especially because they hybridise with one another at times. Typical monkey orchids have red 'arms' and 'legs' and unspotted leaves,

Fig. 33—Map of Corfu (see page 143)

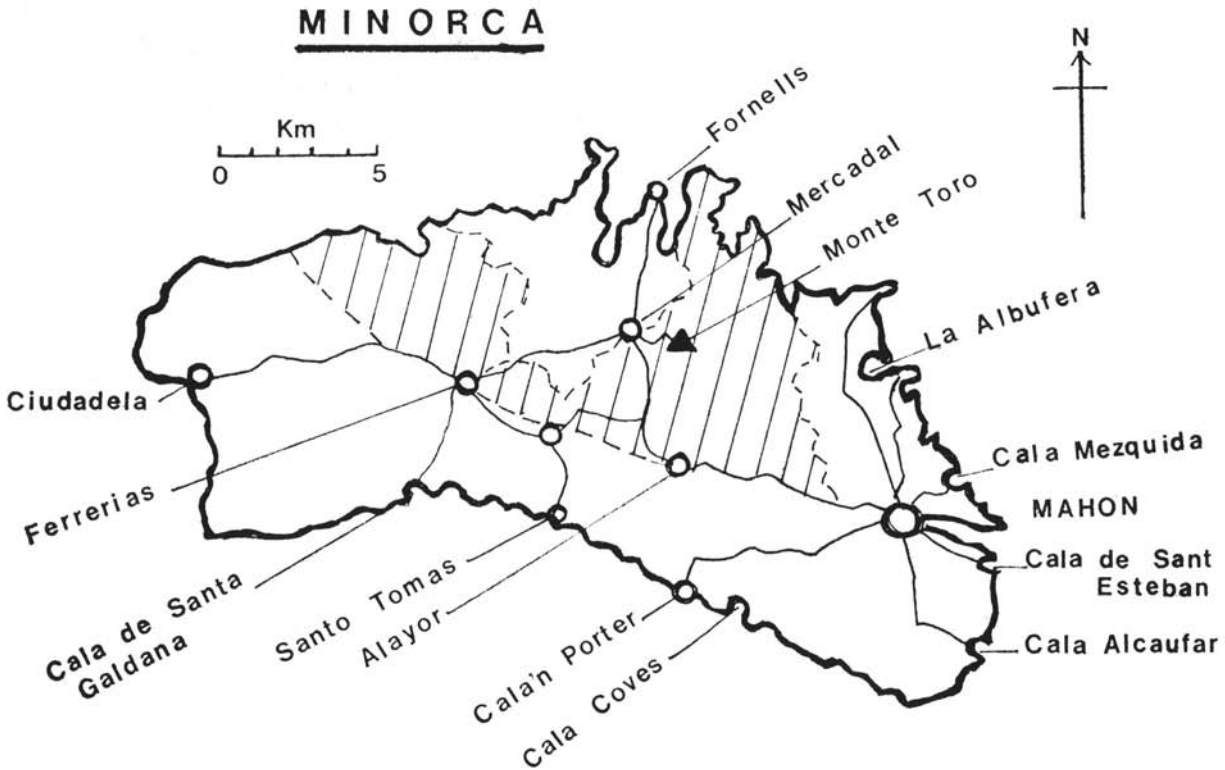


Fig. 34—Map of Minorca (see page 150)

Fig. 35 – *Ophrys* x *kallista* (see page 152) Photo – Chris North

Fig. 36 – *Iris planifolia* on Sicily (see page 156) Photo – Chris North

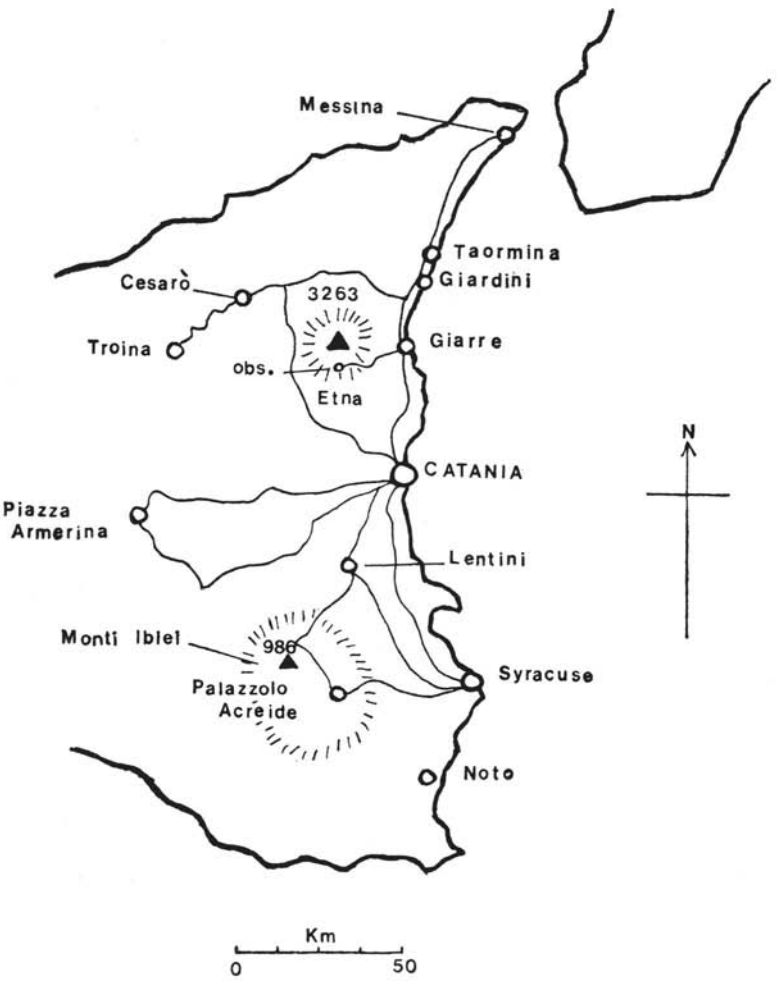


Fig. 37—Map of Sicily (see page 155)

whilst the naked man orchid usually has spotted leaves with wavy margins. One of the plants listed above that we saw for the first time was *Malope malacoides* and we were impressed by the delicate shell-pink colour of its flowers.

Not far from this area we came across eight flowering plants of the impressive *Scilla hyacinthoides* growing to one metre tall with racemes of numerous, pale-blue, star-shaped flowers held at right angles to the scape on thin, bright-blue pedicels. This is not a common plant though it is found throughout the Mediterranean and ranges from Portugal to Iran. The last report in literature on its occurrence on Corfu seems to have been in 1885 in the park of the Monrepos Villa near Corfu town (Speta 1980). The site where we found it was on the other side of the island where it grew in short grass accompanied by *Asphodelus albus, Allium roseum,* and *Phlomis fruticosa.*

The obvious area for a plant hunter to make for in Corfu is Pantokrátor – the 906 metre mountain in the north-east of the island. We went there twice, approaching it from Paleokastritsa via Gouviá, Piryi and Spartilas. On the way to Gouviá one passes some marshy areas coloured purple with thousands of flowers of the tall *Orchis laxiflora* accompanied by the familiar yellow flag iris *Iris pseudacorus.* Later, as we began to climb towards Spartilas, there were many showy plants, notably *Gynandiris sisyrinchium* which does not open its flowers until midday and is difficult to identify in the morning since the foliage resembles the grass amongst which it grows. Other plants included *Galium cruciata (Cruciata levipes), Orchis quadripunctata* and a large-flowered form of *Ophrys ferrum-equinum* which could pass as *Orchis sphegodes spruneri* and may be that species but we intend to stick to our identification in this article. Higher up the road, about Strinilas, one reaches the area where the winter is too cold for olive trees and the flora changes. Here were brilliantly coloured patches of *Geranium molle grandiflorum* spangled with *Ornithogalum montanum, Anthemis chia* and what looked like a species of *Cerastium.* Higher up still, in scrub dominated by the dwarf cochineal oak, *Quercus coccifera,* we found *Fritillaria messanensis*; there were many plants but not all were producing flowers. This is one of the few species we collected and it has grown reasonably well in trough. With it we unwittingly imported the little aroid *Biarum tenuifolium* which has adapted well and spread profusely. In our garden it produces leaves in November to live through the winter and these have survived frosts of −20°C without damage. The purple rat-tail-like spadixes appear in September or October before the leaves and they give off a disgusting

smell which is attractive to flies that swarm around. After two or three days individual spadixes wither and shrivel away; they are replaced by others, each tuber producing some three or four inflorescences in succession. Growing with the *Fritillaria* were *Muscari neglectum, Anemone hortensis stellata, Aceras anthropophorum, Orchis quadripuntata* and an *Iris,* probably *Iris graminea.* Our naming of the *Anemone* is in slight doubt; it had fairly large narrow-petalled flowers of pink or mauve colour and more resembled the ones we had seen in Sicily and identified as a form of *Anemone hortensis* than the typical *Anemone pavonina* of mainland Greece and the Aegean. By the gravelly road surface, and on it in places, there was a tall bugle – *Ajuga orientalis,* with very hairy, mauve inflorescence bracts and small but significant dark purple flowers. It has grown quite well in our garden but is damaged by severe frosts and tends to be biennial, though it occasionally re-sows itself. Other plants near here included:

Ceterach officinarum	*Cynoglossum creticum*
Euphorbia myrsinites	*Geranium lucidum*
Lycopsis arvensis	*Parentucellia latifolia*
Ranunculus rupestris	*Saponaria calabrica*
Senecio vernalis	*Stachys lanata*

The *Senecio* is a large-flowered showy groundsel whose blossoms were frequently visited by a greyish butterfly, *Carchadorus alceae* – the "Mallow Skipper".

The road continues right to the summit of Pantokrátor, which is topped by a small monastery, itself straddled by a large, ugly broadcasting mast. Here a friendly monk, in full robes, was repairing the road with gravel and tar. Unfortunately he spoke only Greek, but he indicated the extensive view of the island and over the narrow straits to the snow-capped mountains of Albania. It was very windy and quite cold at the top. Most of the plants here were of species we had already encountered on the way up; however, sheltering amongst rocks was *Lamium garganicum* – a 40 cm dead nettle with large pink flowers. It makes a good garden plant, flowering over a long period, though it can be a little invasive and the foliage has a noticeably rank smell, even when it has not been disturbed. There were a few specimens of *Anemone blanda* still in flower but of a weak colour and not as decorative as the selected forms we grow in gardens at home. There was also more of the *Fritillaria* and *Saxifraga rotundifolia* and three crucifers: *Matthiola*

fruticulosa, a white-flowered *Arabis* and a yellow wallflower – possibly *Erysimum taulinii.* The *Matthiola* was a form with flowers of an extraordinary dirty brown colour and well deserved its earlier name *Matthiola triste.* No doubt the petals reflect ultra-violet light and appear more attractive to insects than to human beings. Two final plants we have to report, and shamefully admit we could not identify, were a beautiful dwarf *Veronica* with large blue flowers and a plant with 30 cm inflorescences of white flowers looking like a *Francoa.* Whilst observing these we saw a shepherd followed by his sheep. He was an old man and carried a transistor radio blaring at full volume, wafting 'The Beetles' music over the hills. Our visits to Pantokrátor were happy days; we are only sorry that we were unable to locate some of the other specialities such as the autumn-flowering snowdrop – *Galanthus corcyrensis, Crocus boryi, Crocus biflorus,* and *Sternbergia sicula graeca.*

If, instead of turning off to Pantokrátor at Piryi, one continues round the rocky north-east coast to Nissáki, one comes to short lush grass near the sea at Kassiópi. We went there once by road and once by boat from Corfu town and we also continued further along the coast to Ag. Spiridon and Róda. The turf was full of orchids, expecially *Orchis papilionacea, Serapias cordigera* and *Serapias lingua,* and also in places the "Horned Orchid", *Ophrys cornuta* (sometimes classed as a subspecies of *O. scolopax* or *O. fuciflora,* but quite distinct from typical plants of either of these species), *Orchis coriophora fragrans,* a pale-flowered *Orchis morio* and *Anacamptis pyramidalis.* Here too grew a form of *Celsia arcturus (Verbascum arcturus)* with coppery flowers, a species of flax, *Echium plantagineum,* and *Kohlrauschia velutina* which is like a tiny bladder campion with small pink flowers on stiff stems. To give atmosphere, there were two hefty iron cannons from a ship-wrecked British Man-of-War, half buried in the sand and surrounded with "Samphire" *Crithmum maritimum* and the "Sea Daffodil" *Pancratium maritimum,* though the latter was not yet in flower. Further on, at Ag. Spiridon, grew more *Iris pseudacorus* in a marshy area accompanied by *Gladiolus byzantinus* on higher ground and very tall plants of the species we identified as *Ophrys ferrum-equinum.* In the marsh itself there were many birds such as squacco herons, grey herons and pratincoles.

Another area we explored was the north-west part of the island. From Paleokastritsa this is best approached by taking the road to Corfu town then doubling back at a junction near Sgómbou in a north-westerly direction to cross the hills at the Troumpéta pass. At the highest point where the road makes several sharp bends and amongst scattered bushes

of *Arbutus* there were many fine forms of *Anemone stellata* still in flower, groups of *Ophrys lutea, Phlomis fruticosa* and wild *Antirrhinum majus.* Where we stopped to eat, lower down in an old olive grove, there was a lot of bracken looking much as it does at home. In partially grazed areas amongst *Asphodelus* and a *Cyclamen* we found *Ajuga pyramidalis,* which occurs in Britain, though it is not common. Near Sidari on the north-east coast there are interesting cliffs of different coloured layers of compressed sand. Here grew a bright-red form of *Anthyllis vulneraria, Buglossoides purpurocaerulea, Trifolium stellatum, Hedysarum coronarium* and a blue *Polygala,* probably *Polygala niceaensis.* The orchids *Anacamptis pyramidalis* and *Orchis coriophora fragrans* were plentiful here. Large green lizards ran through the undergrowth and in some flooded areas, thick with the white flowers of a water buttercup, there were swarms of croaking frogs being hunted by grass snakes. On the way back from Sidari, just north of Paleokastrista near the bay Ormos Ag. Georgiou we found more interesting plants. Amongst bushes of *Cistus incanus* there grew large numbers of *Ophrys cornuta,* some with very small flowers, many different coloured forms of *Ophrys coriophora fragrans* and a few plants of *Ophrys bombyliflora* still in flower. We saw one plant of our own "Bee Orchid", *Ophrys apifera,* and one of *Platanthera chlorantha* – a giant with a 30 cm stem carrying at least 50 flowers. There were also two legumes, *Astragalus cicer* with pale yellow, elongated clover-like flower heads and a blue lupin, *Lupinus angustifolius.*

We made a few trips to the south of the island, reaching as far as the salt pans at Aliké. It was stormy when we were there and we sat in shelter and enjoyed the local wine from the barrel. It was cheaper than Coca Cola, but we saw relatively few plants. Apart from the brilliant-red poppies the only other plant we noted was the "Henbane" – *Hyoscyamus albus.* On the return we visited the sand dunes around the lake Limni Korission on the west coast. In the dunes, and especially in the wetter slacks, grew:

Alisma plantago	*Lithospermum diffusum*
Lycopus europaeus	*Medicago marina*
Lythrum junceum	*Plantago coronopus*
Lagurus ovatus	*Parentucellia viscosa*

The *Parentucellia* is an uncommon *Bartsia*-like plant superficially resembling the common Mediterranean species *Bellardia trixago,* but with yellow, not pink or white, flowers. There was also an interesting orchid like *Orchis morio picta,* but with paler, more 'opened out'

flowers. It might possibly have been a hybrid between this species and *Orchis laxiflora,* which has been called *Orchis* x *alata.* At the bay Ormos Ermónon, further up the west coast on the way back to Paleokastritsa, we watched stilts flying in formation just above the surface of the sea. Their wings are black on the upper surface and white below and it was fascinating to see them apparently change colour as they twisted and turned in flight.

Right up to the last day of our stay in Corfu we were still finding more species in flower. A last minute visit to the garrigue near Paleokastritsa revealed *Legousia speculum veneris, Ornithogalum narbonense,* seeding plants of the giant orchid *Barlia longibracteata,* and a large-flowered *Serapias* with a pale orange-brown lip, probably *Serapias neglecta* (syn. *Serapias vomeracea neglecta*). Sundermann (1975) mentions its occurence on the two other Ionian islands of Cephalonia and Zante, but not on Corfu.

Finally, it must be pointed out that Corfu is thought to be the island that Shakespeare had in mind when he wrote "The Tempest". One day at Ormos Ermónon we saw the sky cloud over and the light become a lurid orange colour which was reflected from the waves. The wind blew from Italy, the waves lashed up white, there was thunder and lightning and torrential rain. Within twenty minutes the sky was blue again and the horned orchids and the blue lupins glistened with raindrops like a puckish comment. The report of this storm should not, however, put off intending plant hunters, for Prospero arranges the spring weather of the Enchanted Isle to be, on the whole, as good as that of our summer here.

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Minorcan Wild Flowers

by CHRIS and MARIE NORTH

OUR introduction to the spring flowers of the Mediterranean began in 1972 when we visited Minorca (Menorca in Catalan) from April 17th to

30th. This island was chosen simply because it was one of the few venues available on a last minute package holiday booking. However, it turned out to be a good place to go for a start on Mediterranean plant hunting as it is small and easily accessible (one can fly direct to Mahon from Britain), relatively quiet and not over developed and quite good for flowers – especially some orchids which are plentiful there.

Although Minorca is the second largest of the Balearic islands it is less than a quarter of the area of Majorca and roughly 48 by 12 km. It is a relatively 'low' and rather exposed island afflicted at times by the 'Tramontana' wind and retains its greenness during the summer better than most parts of the Mediterranean – hence its main export is cheese from cows which look like Friesians. A geological fault follows a line approximating to that of the road from the capital Mahon in the east towards the old capital Ciudadela in the west but swinging away to the north-east at Cala Algayerens. South of this line is limestone and the place for orchids and north of the line there are areas of Devonian rocks (hatched in the accompanying map) where ericas and some other lime-hating plants can be found. South of the fault there are many interesting remains of neolithic towers and Stonehenge-like stone constructions, the builders having erected them there presumably because they found the local rock to be especially amenable to their primitive tools. The history of this island and its tough, resourceful inhabitants is well described in a book by Foss (1975).

The flora of the Balearic Islands has been fairly well annotated in literature. One of the earliest works is that by Marès and Vigineix (1880) which we were unable to see before we left but consulted at the museum in Mahon. Most of our notes were from Knocke (1921) consulted at the Edinburgh Royal Botanic Garden. Both of these are in French. A very helpful small book by Bonner (1977) is available on the Balearics; it is in Catalan, the native Balearic language but with a knowledge of French and some Spanish it is not difficult to understand most of the text. Of course we took our copy of Polunin and Smythies (1973) guide "Flowers of South-West Europe", which illustrates many of the species mentioned in this article.

We were centred at Mahon and travelled around the island on foot, by bus, hired car and a little hitch-hiking. There is an excellent bus service between Mahon and Ciudadela which stops at villages on the way. Our journeys are shown on the accompanying map in which the names follow the Spanish of the Firestone sheet T26 rather than the local Catalan names (Fig. 34).

Our first sorties were on foot to Cala de Sant Esteban. Around Port Mahon there were the usual colourful Mediterranean weeds, especially attractive when seen for the first time:

Anagallis arvensis
Bellis annua
Calendula arvensis
Galactites tomentosa
Malcomia maritima
Oxalis pes-caprae
Silybum marianum

Other plants we saw on our first day were *Allium triquetrum* which is common in the Balearics and often grows in carpets under trees and shrubs where it has the superficial appearance of a stand of white bluebells, *Asphodelus microcarpus* and the dwarf *Asphodelus fistulosus.*

Out of the town one soon comes into what might be called typical Minorcan countryside with stone walls, small patches of bushes, rock outcrops and intervening areas of short grass looking frequently like a tidy, well-landscaped rock garden. In places there are groups of prickly pear *Opuntia ficus-indica,* frequently the spineless form. On and around the walls grows the spiny *Smilax aspera,* some plants with berries in spring for they flower in late summer, and the evergreen *Clematis cirrhosa* occasionally with its white bell-shaped flowers but more often with fluffy fruiting heads fruiting in March. Other plants include the spiny *Asparagus stipularis* and *Asparagus acutifolius* whose shoots are collected by locals on week-end outings as a much-prized vegetable, *Vinca difformis* a periwinkle growing by walls with large, seemingly twisted blue flowers, the greyish leaved *Artemisia gallica* and the charming small *Arisarum vulgare* – "Friars Cowl" or "Frare Bec" (Friar's nose) in Catalan. By the roadside one sometimes finds the conspicuous spiny bushes of *Solanum sodomeum* with flowers like those of a potato and tomato-like fruits that are dark-green when unripe and pale-greenish-white with a darker-green back when mature. Another interesting plant is *Ephedra fragilis* like a shrubby horsetail.

Arriving at the bay Cala de Sant Esteban one comes to garrigue mainly of *Pistacia lentiscus, Cistus monspeliensis* and the mauve-flowered *Cistus albidus* – the main western Mediterranean species of *Cistus* which is not found east of Corsica. Amongst the bushes grew the orchids *Orchis tridentata, Ophrys lutea* var. *lutea, O. bombyliflora* and *O. tenthredinifera.* These all preferred the moister lush areas and in drier parts the charming little *Ophrys speculum* occurred in quantity though it was not easy to see at first sight. In the local Catalan dialect it is called 'Sabateta del bon Jesus'. In similar places the ground was covered with wild leek

Allium ampeloprasum and there were groups of the large half-buried bulbs of *Urginea maritima* which blooms later in summer with tall inflorescences of small, white flowers.

A slightly longer sortie on foot was to another bay, Cala Alcaufar. By the roadside grew the native *Lobularia maritima* which is the white 'Alyssum' of our summer bedding schemes, "Borage" *Borago officinalis, Euphorbia helioscopia* and *Reseda alba.* On reaching the garrigue by the shore we saw for the first time the three shrubs; *Phillyrea angustifolia,* the dwarf spiny wild olive *Olea europaea* ssp. *sylvestris* and the myrtle *Myrtus communis* which was just beginning to produce its sweet-scented flowers. In addition to the orchids we had seen previously there were *Ophrys fusca* and *Anacamptis pyramidalis* which in the Mediterranean has flowers that vary much in colour from dark-red to white – the paler forms being the most common.

A somewhat longer sortie from Mahon was to Cala'n Porter which is too far to go comfortably on foot and we were obliged to hire a car. From here we travelled a short distance eastwards to Cala Coves, an interesting area with may troglodytic caves. Amongst garrigue mainly composed of *Juniperus phoenicea, Pistacia terebinthus,* and *Rosmarinus officinalis* grew many of the orchids we have seen earlier, particularly *Ophrys fusca* and in addition the beautiful *Ophrys bertolonii,* an uncommon species confined to the western Mediterranean. It has a large dark-violet 'mirror' on the dark lip and when the flower is observed closely in side view it can be seen to deserve aptly the Italian folk name "l'ucellino che si taglia allo specchio" – the little bird considering its reflection in the mirror. There was also a group of about six plants of a fine orchid we identified as a hybrid between *Ophrys bertolonii* and *Ophrys tenthredinifera* which has been recorded previously as *Ophrys* x *kallista* (Fig. 35). With the orchids grew:

Allium roseum	*Helichrysum stoechas*
Bellardia trixago	*Muscari comosum*
Bellis sylvestris	*Orlaya grandiflora*
Calendula arvensis	*Orobanche ramosa*
Evax pygmaea	*Smilax aspera*

The *Orobanche* is a broomrape which here had nearly gentian-blue flowers though in some places its colour is washed-out purple. In a cool shady area we found *Cyclamen balearicum* in bloom; it is a white-flowered species similar to *Cyclamen repandum,* confined to the Balearics and a few areas in the south of France. In short, grazed turf by

the sea there were many plants of a *Romulea,* with very small white flowers, possibly a form of *Romulea columnae* and fruiting plants of *Merendera filifolia.*

About half way along the coast south at Santo Tomas, the beach was littered with the black seeds of *Pancratium maritimum,* the "Sea Daffodil" and they looked like flakes of charcoal. Here were imposing rosettes of a mullein we identified as *Verbascum undulatum* though this species usually occurs further east in Greece and Yugoslavia. We made our way westwards to Cala de Santa Galdana and as we approached it along the road from Ferrarias there were some very lush grassy areas with many orchids, *Muscari comosum* and fine clumps of *Arum italicum.* Here we watched scarab beetles rolling their balls of cow manure. The female does most of the work, the smaller male hops on and off the ball in sheer excitement and seems generally to impede progress. Approaching the bay, amongst the rocks with much *Cistus albidus* we saw a few plants of a very large-flowered form of the white *Cistus salvifolius* which is evidently not common on the island. On the sand at the bay were numerous firm fibre balls looking as though they were hand-made but they are, in fact, produced naturally from broken off pieces of *Posidonia oceania* blowing around the shore and collecting hairs from other pieces of the plant's own debris. It is an interesting flowering plant which grows in salt water like a seaweed and in places fouls the shore with deep carpets of evil-smelling litter.

Travelling along the main road from Mahon to Ciudadela one passes through Alayaor and then to Mercadel and just outside this village there were large quantities of *Narcissus tazetta* in flower in the ditches and fields. Those in the latter area may have been planted as a crop and could have been the cultivated triploid form and amongst them were seeding plants of what might have been *Narcissus papyraceus.* The summer snowflake *Leucojum aestivum* grew in profusion along the ditches; it is the Balearic subspecies *pulchellum* which has smaller flowers and blooms earlier than the type. Just before Mercadel there is a turning off to the north which takes one along a good but winding road to Monte Toro which, at 357 m, is the highest point on the island and is surmounted by a monastery. Amongst the boulders near the summit grew the mauve-flowered *Phlomis italica* and *Euphorbia characias.*

Mercadal is on the western edge of one of the acid rock areas where there are many pine trees, two tree heather species and much rosemary. A road north from the village takes one to the charming small fishing port of Fornells. Here on the shingle by the sea shore we found the

endemic *Senecio rodriguezii* which is like a small cineraria with pink flowers.

We made two sorties along the east coast which is north of the geological fault but of mixed basic and acidic rocks. One can walk from Mahon to Mezquida and here was windswept garrigue composed of:

Cistus monspeliensis
Cistus albidus
Erica lusitanica
Erinacea anthyllis
Helichrysum stoechas
Myrtus communis
Phillyrea angustifolia
Pisticia terebinthus
Ruscus aculeatus

On exposed slopes there were prickly bushes of the endemic *Teucrium subspinosum* and in sheltered places on the cliffs a few isolated plants of *Narcissus tazetta, Leucojum aestivum* and non-flowering plants of the "Dragon's Mouth" *Helidiceros muscivorus* which is much more common on Majorca. We also saw plants of the foxglove *Digitalis dubia* that has beautiful orange flowers but was not yet in bloom. It is a desirable perennial species for the garden, but not reliably hardy. By the shore grew *Tamarix gallica.* A few miles further north by La Albufera near El Grau we saw little egrets but the only other noticeable birds, apart from an occasional hoopoe, were the kites which circled overhead.

Minorca is a charming island to visit and has much to offer. We missed some of the interesting plants we had hoped to see such as *Orchis longicornu* and *Daphne rodriguezii.* Should the weather be poor there is plenty to see in the towns and it is worth visiting the local industries, many of which have been kept to the traditions set by the occupying British a hundred years ago. They include high-quality hand-made shoes, furniture, cheese, and spirits. A form of gin is made according to an old recipe which fell into disrepute in Britain because of the damage it did to old ladies in the gin palaces of London. It is excellent and when we were there it was sold in one litre hand-made stone bottles each with a label depicting Admiral Lord Nelson.

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Sicily 1980

by CHRIS and MARIE NORTH

SICILY is a fairly large island, each side of the 'triangle' being more than 100 miles in length, and it was only possible in a short visit to study a small part of the flora of this area of the Mediterranean. We chose to make our base at Giardini because a convenient package holiday was offered there (see map, Fig. 37). This small town near Taormina lies on the east coast approximately half way between Messina and Catania and we went there for the last three weeks in April. Unfortunately the weather was unusually wet and rather cold, as it was in many parts of the Mediterranean that year, but it cleared up towards the end of our stay.

In the hills behind Giardini we sometimes had magnificent views of snow-capped Mount Etna. Around cultivated patches here grew many of the colourful Mediterranean weeds including *Oxalis pes-caprae,* the blue form of *Anagallis arvensis, Fedia cornucopiae, Vicia hybrida* – a vetch with fairly large creamy-yellow flowers – and the brilliant-red *Hedysarum coronarium.* Another plant which was plentiful, and one which we had not seen before, was *Linaria amethystea,* a charming small annual with grey-green leaves and typical toadflax flowers of pale-mauve with a bright-orange throat-boss. On uncultivated rocky bluffs there were patches of a very good form of *Cistus salvifolius,* the shrubby *Teucrium fruticans, Calicotome spinosa* and a marigold, *Calendula suffruticosa.* The last of these is an uncommon woody-based perennial with rather large and beautiful flowers of an especially vivid-orange. Unfortunately, it is not reliably hardy in the British Isles. On rock faces grew an interesting shrubby scabious, *Scabiosa cretica,* the violet-flowered cabbage, *Moricandia arvensis,* and some wild antirrhinums similar to, but different from the garden *Antirrhinum majus.* All these were especially plentiful on the cliffs to the west of the coast road between Giardini and Messina.

We hired a car and drove round and up Etna on the road from Giarre to the observatory but we were unable to get to the top because the way was still blocked by winter snow. As one approached the snow-line there was little vegetation amongst the unweathered volcanic rocks except the endemic Etna broom, *Genista aetnensis,* which is a tall graceful shrub, but it was not yet in flower. Lower down there was another but smaller leguminous shrub which we thought might be *Cytisus triflorus*: it was in full bloom with bright-yellow flowers. In coppiced hazel woods, still

lower down, we found the mauve-flowered form of the orchid *Dactylorhiza sambucina romana* (sometimes called simply *Dactylorhiza romana*), the annual *Lycopsis variegata* with showy blue-flushed-red flowers and a mauve-pink *Arabis* which we have not been able to identify.

Most of the lower slopes of Etna are cultivated, especially as vineyards, but there are some remote, treeless and desolate areas such as around the villages of Troina and Cesaró on the edge of the Nebrodi Mountains and some 30-40 km north-west of Etna summit. Here we saw wild *Narcissus tazetta* still in flower, a pale-mauve form of *Anemone coronaria* and the interesting, large honeywort *Cerinthe major* with pale-yellow *Onosma*-like flowers and leaves decorated with lighter-green circular spots. One exciting find on a cold, wet, north-facing slope was *Iris planifolia* (Fig. 36) – the only European representative of the Juno group of *Iris*. We had seen many plants of it growing in stony turf in other parts of Sicily and near Ronda in Andalucia but never before in flower; it usually blooms in January or February. It is a truly magnificent *Iris* with large purple, yellow-splashed flowers on short stems, every bit as beautiful as the other species of the group which grow in wild places of Asia. Unfortunately we know from experience of plants collected in Spain that it is not at all easy to grow in Britain, even in a specially prepared bulb frame.

From a plant hunter's point of view the area around the Monti Iblei, which are limestone hills near Syracuse, is more profitable than around Etna; they are mainly grazed and not covered by garrigue. Unfortunately, if one is based at Giardini then it is necessary to pass through Catania, a city the size of Edinburgh, in order to get to this region. Even after we had become skilled in the competitive technique of local motorists it took us about an hour and a half to drive there and, having made the journey several times, we wished we had chosen a base south of Catania. On these limestone hills and beside the road-sides there grew many plants of a good form of *Anemone hortensis,* usually with bright mauve-pink flowers, and a *Romulea bulbocodium* with the largest flowers we had seen of this genus. The two irises, *Hermodactylus tuberosus* and *Gynandiris sisyrinchium,* were fairly common and in places there were spectacular clumps of *Iris chamaeiris,* both the bicolour and purple forms, which seemed to look much more attractive there than they do in the garden.

Orchids were not as plentiful as we had hoped but some large clumps of *Barlia longibracteata* grew by the roadside, suggesting that this species

may frequently multiply vegetatively by producing more than one replacement tuber each year. It was especially plentiful near the site of the Roman mosaics at Piazza Armerina near Enna (an absolute 'must' for all visitors, even those who claim no interest in classical remains) and often occurred in company with *Asphodeline lutea.* On bare limestone hills grew *Orchis tridentata,* many of which looked like ssp. *lactea,* and a few plants of the "Sawfly Orchid" *Ophrys tenthredinifera.* Near Sortino we saw *Ophrys sphegodes* ssp. *panormitiana* – a rather robust form of the species said to be exclusive to Sicily and sometimes referred to as *Ophrys spruneri* ssp. *panormitiana,* the sub-specific name referring to the Latin for Palermo.

The relatively common Mediterranean grape hyacinth – *Muscari neglectum,* was plentiful and in a wet area near Sortino there were thousands of plants of a less common relative *Bellevalia romana* (Fig. 38). This species has rather dirty-white flowers enhanced by bright-blue anthers. Later we discovered another similar plant, *Bellevalia dubia,* near Palazzolo Acreide with blue flowers and not unlike the "Tassel Hyacinth" – *Muscari comosum,* but without the tuft of blue sterile florets at the top of the raceme. It was growing near the exciting, but isolated archaeological site with classical Greek, Byzantine and Roman ruins.

The end of our journeys southwards was usually Syracuse – a very interesting city – and once one of the largest classical Greek communities in the Mediterranean. There are several interesting archaeological sites there including an almost perfectly preserved Greek temple which has been converted into a church and is still in use. Near the harbour, in a fresh water spring, grows the Papyrus plant *Cyperus papyrus* left by a homesick Egyptian princess in classical times.

On our return we felt that Sicily had been somewhat disappointing, largely because the area we were in does not have many donkeys or goats and other familiar trappings of the Mediterranean, and the weather was poor. However, little has been written in the popular press about the flora of this large island. Before we left for Sicily we had searched for relevant literature and consulted Tornabene (1887), but this work is in Latin and the taxonomy is now somewhat out of date so that it is quite difficult to be sure of the identity of some of the species which are quoted. There is another, and more up-to-date, book (Eberle 1965) dealing with the flora of the Mediterranean, especially that of Sardinia and Sicily, but we were unable to consult a copy before we left. There are obviously many exciting plants to be found in this large island; for example, at least two interesting and showy orchids special to the region, namely *Ophrys lunulata* and

Ophrys fuciflora oxyrrhynchos – a distinct form of the species, often with yellow flowers. Although bird and insect life is unlikely to be a great bonus to the naturalist on holiday in Sicily, some of the classical sites are amongst the most exciting to be seen anywhere. Next time we go there it will be to a base on the south coast, probably Noto, which is a convenient place from which to explore the Monti Iblei.

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Like Topsy It 'Growed'

by JOYCE HALLEY

IT seemed a pity to allow the Jubilee Journal to go to press without a progress report on the seed exchange although it is far from its jubilee. This was the brain child of Mr R. S. Masterton, mooted in 1947, and started the following year with 30 contributors and 285 items in the list. In the Review of 1949-50 Mr Masterton mentions and thanks 6 people for their assistance with the seed. He handed over a growing concern in 1955, and there have been 6 managers since then.

Last year we had 460 contributors, 176 of these from overseas from 18 countries, and 3,220 items with 2 supplementary lists. Twenty-two local members packeted seed, plus 2 furth the group, 10 shared the work of making up orders and we have 2 indefatigable typists.

It is surprising how many of the items in the 1949 list are still being listed today and I haven't the slightest doubt that many of them will be in the seed exchange jubilee list in 1998. I won't see it, but I hope that there will be more overseas contributors from some of the countries that are not yet represented and the interest that links all gardeners will have spread a bit further and there is some peace in this presently troubled world.

Show Reports – 1982

Morecambe – 20th March

by DAVID MOWLE

THE winter of 1981-82 had been long and cold but by the time of the Morecambe Show a bright, dry spring was already emerging.

One of the first large pans to catch the eye on entering the hall set the tone of this year's show, which was notable for the many beautifully grown and staged old favourites rather than for its new introductions. This most attractive pan was of *Hepatica* x *media* 'Ballardii' (J. Richards) perhaps best described as resembling a vigorous *Hepatica transsilvanica* with leathery leaves of three rounded lobes below a spread of lovely, soft mauve flowers. The sub-divided petal-like sepals result in a much fuller and more striking flower than the regular, six-petalled form of its parents. *Hepatica* x *media* 'Ballardii' arose from a deliberate crossing of *Hepatica triloba* with *Hepatica transsilvanica* in the second decade of the present century and similar natural crosses have since been reported from the wild in Romania. It is a first class plant for the woodland garden, flowering at the first mild weather of the spring.

Nearby, the class for large pans of saxifrages was made notable by a well-flowered plant of *Saxifraga burseriana* shown by E. Watson, with the whiteness of its large flowers heightened by a neighbouring pan of the rich deep purple *Saxifraga oppositifolia* (W. Kirby).

The Farrer Medal for the best plant in the Show was awarded to *Rhododendron pemakoense,* a popular and frequently grown plant. Alan Furness had noticed the particularly heavy load of buds on the plant in his garden, a fortnight before the Show and, knowing the sensitivity of these buds to frost, had wisely potted it up. On the twelve-inch wide mat some four inches high every wide purple-pink trumpet was freshly open making a wonderful sight. Among Alan Furness's other exhibits was a fine example of *Primula macrophylla* H78 raised from seed and altogether his plants won him the Michael Roberts Memorial Trophy for the most points in Section B.

At this early Show, we also had the opportunity to compare several good plants of *Paraquilegia grandiflora* with flowers varying from nearly

white to a rich mauve-blue, nodding over the mounds of ferny glaucous foliage. The rare *Paraquilegia afghanica* GFL 0624 (Eric Watson) was here too and beautiful in quite a different way, with the foliage reduced to a flat group of stemless, almost succulent leaves, on which were large upward facing white buttercups; an exquisitely compact high alpine species, collected originally at 3,650 m on the Salang Pass in Afghanistan.

Among many delightful androsaces, particular note was made of a large plant of the Nepalese *Androsace delavayi,* shown in a plastic pot by Brian Burrow, reminding us of the moister conditions generally required by the Nepalese species. The Caucasian *Androsace albana* was shown by John Richards, a robust plant with a tight head of good pink flowers held four inches above the rosette of pale green leaves. A closely related newcomer to the show bench caused much excitement, *Douglasia gormanii* is found in the loose screes of the Richardson Mountains in the Yukon Territory in the Arctic Circle and was shown as a compact mat holding up its deep pink, cup-shaped flowers for our inspection. It was Geoff Rollinson who had brought along this highly saxatile species and we have come to associate him with these fascinating compact cushions. He showed us once again his continuing success with the difficult *Dionysia lamingtonii* and won the Hollett Trophy for the most points in the Open Section.

Few exhibits were seen of plants from the continent of America, but one which attracted attention was *Townsendia rothrockii* (Ray Johnstone), with violet blue daisy flowers over foliage reduced in size almost to a cushion. This plant comes from west Colorado.

The lateness of the spring after the severe winter weather was clearly indicated by a beautiful pan of the early flowering *Iris bakeriana* shown by David Riley. This slim flowered and elegant reticulata iris can be recognised quite easily by its eight-sided leaves, which are present during flowering. The tip of the falls was deep violet with an inconspicuous, solid white ridge. The upper parts of the flower, made up of the standards and styles, are a uniform lilac blue. Several plants of *Iris aucheri* were exhibited so different colour forms could be compared. Pale blue, turquoise blue and near-white forms were to be seen, with variation also in the extent of leaf development. The pale blue of the form shown by Jack Brownless seemed to the writer to contrast most pleasantly with the yellow ridge on the falls but other growers would no doubt stoutly defend their own form! Another juno *Iris* quite close to *Iris aucheri* was also on the bench, *Iris graeberiana* (David Riley) was shown as a smaller, rather brighter coloured species, perhaps two-thirds the general size of *Iris*

Fig. 38 – *Bellevalia romana* on Sicily (see page 157) Photo – Chris North

Fig. 39 – *Callianthemum anemonoides* (see page 161) Photo – D. Wilkie

Fig. 40 – *Soldanella carpatica* (see page 162) Photo – H. Esslemont

Fig. 41 – *Trillium grandiflorum* 'Plenum' (see page 168) Photo – H. Esslemont

Fig. 42 – *Cassiope wardii* (see page 176)

Photo – H. Esslemont

Fig. 43 – Capillarity (see page 180)

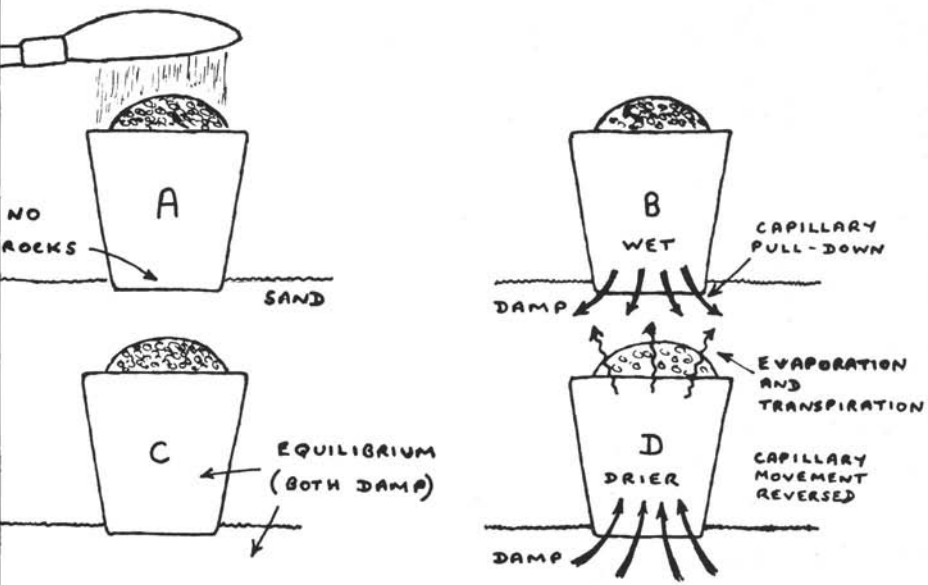


Fig. 44 – *Corydalis curviflora* var. *rosthornii* (page 184) Photo – R. J. Mitchell

Fig. 45 – *Gentiana melandrifolia* (see page 185) Photo – R. McBeath

aucheri, with its blue flowers rather more intense in colour and set off by a white crest surrounded by deep blue streaking. This species is from central Asiatic Russia, much further than the locations of *Iris aucheri* in Iraq, Iran, Syria and Turkey.

Surprisingly few fritillaries were staged but we were able to see *Fritillaria caucasica* which is not widely in cultivation. It is a small plant, some five inches high, with a single pendant bell of a more robust bell shape than *Fritillaria armena* with which it is grouped taxonomically. Its colour is deep rich plum-crimson unrelieved by any other external colour. Internally the bell is a yellow green.

This year, a new trophy had been presented (by the Chairman of the local group Mr Reginald Kaye) for competition in the section for exhibitors who have won less than ten first prizes. It was won by Dr. D. Walkey of Warwickshire, who led off with a 3 pan exhibit of *Primula allionii* 'Crowsley', *Saxifraga ferdinandi-coburgii* and *Saxifraga* x *kestonensis*, all three compact and well flowered. This last plant is a Kabschia hybrid of considerable age and reputation but usually in the old literature referred to among the white-flowered cultivars. The beautiful plant shown here was, however, yellow flowered and some further research into this apparent contradiction could be worthwhile.

To anyone with less than fifteen years of show viewing *Synthyris lanuginosa* var. *pinnatifida* will also seem an old favourite, appearing occasionally to charm us. Stan Taylor's plant, with its immaculate silver-white leaves justly won him the W. Kirby Cup for the best foliage plant.

The Show Hall was once again decorated by a series of evocative photographic prints of the High Pyrenees, staged for our enjoyment by Mr J. C. Leedal. The high quality, both artistic and technical of these huge enlargements gave pleasure to our many visitors and earned Mr Leedal a deserved Gold Medal.

Stirling – 27th March

by SANDY LEVEN and EVELYN STEVENS

THE Forrest Medal was awarded to a magnificent plant of *Callianthemum anemonoides* exhibited by Mr Jim Jermyn of Edrom Nurseries on his trade stand. As far as I can gather this is the first time that *Callianthemum anemonoides* (Fig. 39) has been exhibited at an S.R.G.C. show, and few people who stood in the large crowd round the plant had ever seen it

before. A member of the Ranunculaceae, to the untrained eye it seems to have the 'daisy' flowers of a composite. The flowers are of a distinct opalescent pearly white colour with a pinkish tinge. More than anything else they resemble small one inch single chrysanthemums. It is a native of the Eastern Alps of upper and lower Austria where according to Farrer it is found among damp rocks in the zone of the pine woods up to 3,000 feet. The plant on show was grown from a division given to Mr Jermyn by Mr Schacht of the Munich Botanic Garden. It was grown in a trough where it grew too large and is on its way to a scree. We were fortunate that its owner brought it to Stirling while it was between homes. It is of interest to note that Mr Jermyn has been unable to get seed to germinate.

A superb pan of *Primula* 'Beatrice Wooster' exhibited by Mr W. Kirby from Preston was awarded a Certificate of Merit.

Three plants grown from seed by Mr H. Esslemont were awarded Certificates of Merit.

(a) *Soldanella carpatica* – a twelve inch pan was filled with more than 150 fringed lilac bells, grown from seed collected by J. C. Archibald in 1972. This magnificent plant was awarded the Ben Ledi Trophy for the best European plant in Section I (Fig. 40).

(b) *Dionysia viscidula* – a six inch cushion, carried many large, white-eyed, lilac flowers.

(c) *Dionysia freitagii* – like *Dionysia viscidula* was grown from Grey-Wilson seed. This plant had pale lilac flowers, with an inner darker purple ring and a yellow eye.

The genus *Dionysia* was well represented at the show. Mr Eric Watson's *Dionysia aretioides* 'Paul Furse' was a ten inch dome, with foliage almost invisible under the large golden yellow flowers. *Dionysia tapetodes* shown by Mr Harley Milne, though a smaller plant had blooms of a very pleasing golden yellow colour. Mr Watson also showed *Dionysia bryoides* grown from his own seed. Other species included *Dionysia michauxii* and *Dionysia curviflora.*

The Institute of Quarrying Quaich for the best non-European plant went to Mr Malcolm Adair for his huge well-flowered pan of *Arcterica nana.* This ericaceous plant is native to Asia, including Japan and was covered with tiny, cream, lily-of-the-valley flowers. Dr. Evelyn Stevens was awarded the Fife County Trophy for the most points in Section II. Among her plants were a nicely flowered *Phyllodoce caerulea, Primula marginata, Pulsatilla vulgaris, Primula* 'Linda Pope' and a small *Arcterica nana* which has to grow for a few years to equal the size of Mr Adair's plant.

Eight species of *Fritillaria* were to be seen including the very rare *Fritillaria alburyana* from north east Turkey. This tiny three inch plant had three very large flattish pink flowers. Two rhinopetalum fritillarias were *Fritillaria bucharica* (Mr Watson) which is white and *Fritillaria gibbosa* (Mr Esslemont), which is pink. Dr. J. Cobb exhibited the five inch high yellow flowered *Fritillaria aurea* and Mr and Mrs Taylor the beautiful *Fritillaria michailovskyi* in impeccable condition. Others were *Fritillaria citrina, pineticola, pontica* and *bucharica.*

Mr and Mrs Taylor exhibited the rarely seen *Viola crassiuscula,* which grows at 10,000 feet in the Spanish Sierra Nevada. The flowers are white with a yellow centre and a slaty-coloured reverse. There is also a blue form.

The class for plants 'grown from seed' was won appropriately by Miss Joyce Halley, the Seed Distribution Manager, with a large plant of *Soldanella montana* which had about 100 flowers.

Gentiana oschtenica (Mr Watson) was second. This plant had eight yellow flowers four inches high, over a diffuse mat of pale green foliage. Third, went to Dr. D. Hardy's own hybrid *Primula marginata* Inshriach Form x *Primula allionii* Barker's Form. It is a beautiful hybrid.

Scoliopus bigelovii is a Californian native rarely seen in this country. It has upward facing flowers with three green petals striped dark purple and should be grown in a damp peaty place. It was exhibited by Mrs Jill Sleigh.

Mr Kirby's *Sagina* x *boydii* won the native to Scotland class. One of the rarest plants in the show was Mr Kirby's *Nassauvia revoluta* (C & W 5221) from the Andes. One of only two plants surviving in this country, it is a very difficult plant to propagate. It grows in lava dust and has white flowers.

Mr A. Leven exhibited the albino form of *Sisyrinchium douglasii* from British Columbia. This had eight-inch rush-like unbranched leafy stems and a succession of almost translucent white flowers.

As with the first Stirling Show last year there were abundant entries of superbly grown, well-flowered plants in the Primula classes as well as Mrs Joan Stead's magnificent *Primula sonchifolia,* which was first in the class for open ground plants.

She also won the class for two pans of different species of Primula with another fine *Primula sonchifolia* and *Primula petiolaris* x *ooothii* L. and S. 19856, so covered with dark flowers that the foliage was virtually unseen.

Other Asiatic primulas included a lovely specimen of *Primula aureata*

forma shown by Dr. D. Hardy and the rare (both in nature and cultivation) *Primula kisoana* from Japan with its very slightly hairy, wavy-edged leaves.

The European primulas numerically far out-numbered the Asiatic ones. Mr Kirby exhibited his own fine seedling *Primula* x *pubescens* in the two pan class with *Primula* 'Beatrice Wooster'.

Mr and Mrs H. Taylor won the class for three pans of different species or hybrids against strong opposition with lovely plants of *Primula hirsuta, Primula allionii* and their own *Primula* 'Linda Pope' x *Primula allionii* hybrid.

Another memorable plant was a specimen of *Primula marginata* Inshriach Form one foot across, shown by Dr. Hardy and making him the winner in the class for one pan of Primula other than Asiatic. There were a number of other pans of *Primula marginata* on the benches including the pleasing forms 'Holden Clough' and Prichard's Form.

Mr and Mrs Bezzant won the class of one pan Primula hybrid with *Primula* 'Barbara Barker'.

A twelve inch pan with ten spikes of *Iris graeberiana* with its pale blue and lilac flowers won its class for Dr. Cobb.

Mr and Mrs R. J. Bezzant showed *Narcissus juncifolius,* one of the nicest of dwarf narcissi, with over 20 dainty fresh flowers, and *Cyclamen pseudibericum,* both in excellent condition. Their *Pleione forrestii* with its large yellow flowers, blotched with brown was much admired.

The Stirling group would like to thank all the exhibitors, our judges Mrs Lynn Bezzant, Mr Jack Drake, Dr. Dennis Graham, Mr Ron MacBeath, Mrs Sheila Maule and Mr Mike Stone, and the Royal Botanic Garden, Edinburgh for the specimen plants which they exhibited.

Newcastle – 17th April

by PAUL MATTHEWS

THE weather is always a major topic of conversation amongst gardeners and this year's severe winter was certainly no exception. Despite the ravages of winter, an early dry spring provided a good display of colour at the Newcastle Show. Although the A.G.S. Show at Nottingham was held on the same day a total of 239 entries from 35 exhibitors was recorded.

The show alternates between S.R.G.C. and A.G.S. rules and this year

S.R.G.C. rules applied. The award for the best plant in the show, the Forrest Medal went to a fine plant of *Rhododendron calostrotum* 'Gigha' shown by Mr A. Furness of Hexham.

The A.G.S. Medal for Class 1, 6 pans rock plants went to Dr. A. J. Richards whose entry included *Meconopsis integrifolia, Pulsatilla albana flavescens, Primula rotundifolia,* and a fine pan of *Cassiope* 'Muirhead'. Mr J. R. Johnstone the Show Secretary and Mr A. Holman of Milnthorpe also contested this class. Nearly all the 3 and 6 pan classes were well supported.

The R. B. Cooke Plate for the highest aggregate of points in Section One was awarded to Mr W. Kirby whose fine display of plants included *Raoulia bryoides, Raoulia grandiflora, Pleione limprichtii, Sanguinaria canadensis* 'Flore Pleno' and *Allardia tomentosa,* a little seen silver foliage exhibit. Mr Kirby's entries also secured him the A.G.S. Medal for Class 25, *Saxifraga flagellaris* ssp. *flagellaris, Raoulia grandiflora* and *Draba dedeana* being amongst them.

European primulas seemed in short supply but Dr. A. W. Davison of Hepscott produced a fine 12 inch pan of *Primula* 'Rufus'. Asiatic primulas on the bench included *Primula aureata, rotundifolia* and *gracilipes* exhibited by Mr P. Matthews, *Primula muscarioides* owned by Mr E. Pinnington, and *P. griffithii* shown by Dr. A. J. Richards and raised by him from seed. Mr R. A. Hodgson exhibited a pan of *Primula barnardoana* a recently available species belonging to section Rotundifolia and producing delicate creamy-yellow flowers.

Also in Section One, some fine plants were exhibited by Duncan Lowe. These included *Primula kitaibeliana,* entered in the new or rare section, *Saxifraga flagellaris* ssp. *sikkimensis* and *Androsace vandellii.* The show produced a total of 15 pans of *Androsace vandellii* on the benches. Only two plants appeared in the Dionysia class with Mr E. Watson taking first place with *Dionysia microphylla.* Not surprisingly very few Cyclamen were exhibited this year.

The Gordon Harrison Cup, awarded for the highest aggregate in Section Two went to Mrs R. W. Walker whose entries included *Primula modesta, Androsace vandellii, Androsace sarmentosa,* and a fine pan of *Vitaliana primuliflora* ssp. *praetutiana.* Mr W. Carr of Wide Open produced a large, well flowered plant of *Polygala chamaebuxus* 'Purpurea' while Mr A. Furness took another first with a well flowered *Rhododendron orthocladum* var. *microleucum.*

Mr L. Clarkson of Blackpool was awarded The Cyril Barnes Trophy for the highest aggregate in Section Three; *Androsace hirtella, Primula* x

steinii (bileckii form) and *Gentiana verna* were some of the plants which gained him the award. A large, well flowered pan of *Narcissus rupicola* was shown by Mr J. E. Fuller in Class 88 which was well represented this year.

Mr and Mrs Huntley from Hartside Nursery and Mr Jermyn from Edrom Nursery supported the show with trade stalls; as usual the local plant sale attracted much attention. Dr. Stead and Norman Woodward staged the S.R.G.C. and A.G.S. book and publicity stalls. Thanks must be given to all of these and the many who helped with refreshments, sold admission tickets and plants and all those who aided the smooth running of the show. Finally, we must thank the judges and exhibitors, some travelling considerable distances to make the show another success.

Perth – 24th April

by JOHN B. DUFF

AFTER the record breaking winter frosts it was no surprise that entries for Section I were the lowest for many years but it was encouraging to find that enthusiasm in Section II maintained the high level of recent years. Quality throughout was remarkably high as instanced by the fact that the judges awarded six plants Certificates of Merit.

The L. C. Middleton Challenge Trophy awarded to the member gaining most points from first prizes in Section I was won by Miss G. L. Blackwood.

The Alexander Caird Trophy for six pans of rock plants went to Mr Fred Hunt of Invergowrie for *Armeria caespitosa, Lewisia tweedyi, Lewisia cotyledon* hybrid, *Sarcocapnos crassifolia, Daphne petraea* 'Grandiflora' and *Lithospermum oleifolium.*

Keen competition in Class 2 saw the Dundas Quaich for three pans go to Dr. Peter Semple from Glasgow whose entry was quite outstanding and consisted of *Gentiana verna angulosa* (which won the Forrest Medal), *Andromeda polifolia* var. *macrophylla* (awarded a Certificate of Merit) and *Daphne petraea* 'Grandiflora'. Second prize in this class was won by Mr H. Esslemont whose entry included a fine plant of *Cassiope wardii* which was awarded a Certificate of Merit.

Mr and Mrs Chambers again proved their skill in growing rhododendrons by producing the winning plant for the E. H. M. Cox Trophy for the third time in its four years of existence with their dwarf *Rhododendron microleucum.*

Mr David Martin's large and well flowered *Vitaliana primuliflora* ssp. *praetutiana* was awarded a Certificate of Merit, and also won the Murray-Lyon Trophy for the best plant in the Show, exhibited by a member resident in Tayside Region.

The Bronze Medal for the most points in Section II was won by Mr and Mrs M. De Haan who also received the Perth Trophy awarded to the member of the Perthshire Group gaining most points in the Show.

Two Certificates of Merit went to Mr M. Adair from Glasgow for large and very well flowered plants of *Cassiope selaginoides* and *Andromeda polifolia* var. *macrophylla.*

A new competitor at the Show, Mr M. Constable from Abernethy made a promising start with his *Primula wigramiana,* which was a first prize winner in Section II, and attracted much attention not only from visitors but also from the judges who awarded it a Certificate of Merit.

Non-competitive Certificates of Merit were awarded to Mr Lawrence Greenwood for a delightful exhibit of his latest flower paintings, to Dr. and Mrs Almond for a photographic study of the genus of Orchid, *Ophrys,* growing in the wild, and to Mr R. Russell of Gardencare and Landscapes who staged a decorative display of rock plants.

Trade stands by Glendoick Gardens and Hartside Nursery Garden where plants could be bought were a popular innovation for Perth. Mr Bob Brien gave his usual support by selling plants for the Show Funds.

The success of the Show was a great credit to Miss Rhoda Fothergill and all her willing helpers.

Aberdeen – 1st May

by A. D. McKELVIE

ABERDEEN 1982 was the Show to beat all records – a record number of plants, exhibitors and visitors. More than 1,100 people paid to see the Show which was most gratifying to the organisers.

With four entries in the 6 Pan Class some excellent plants were on view. Mr Crosland won the Forrest Medal with a large pan of *Pleione forrestii* (now considered to be a hybrid) and also showed the rare *Primula rotundifolia* from Nepal, 10 cm tall with pale purple-pink rounded petals. Mr Esslemont was awarded a Certificate of Merit for a magnificent 50 cm pan of *Kalmiopsis leachiana* lifted from the open ground. He also exhibited a lovely x *Phylliopsis hillieri* 'Pinocchio' which

was admired by many, a floriferous *Cassiope wardii* and the superb double form of *Trillium grandiflorum* (Fig. 41). Mr Crosland showed the unusual shrub, *Hormathophylla reverchonii* with its striking globular heads of white flowers.

Classes for cushion plants showed interesting variations in condition within the same species. Plants of *Haastia pulvinaris* and *Raoulia* x *loganii* showed variations from those in immaculate health to, dare we say it, some dead plants. *Androsace vandellii* shown by Mr Crosland and *Androsace villosa* by Mrs Sleigh were good examples of the cushion growers' art.

Cassiopes were generally lacking but Mr Aitken won with a 50 cm pan of *Cassiope* 'Muirhead' in tip-top condition. This variety must rank as the finest *Cassiope* in cultivation, not all that easy to keep immaculate in the garden and lift for a Show. *Corydalis cashmeriana* suffered in the winter but Mr Kent exhibited a lovely plant, with clear blue flowers, to win Class 22.

Pleiones were in abundance and judging them could only have been a matter of personal preference. The wide range of specific and varietal names seems somewhat arbitrary when they are exhibited together and the differences appear to be very slight.

Rhododendrons were mainly past but Mr Kent won Class 20 with a well flowered pot of 'Curlew' which is surely the most reliable dwarf, yellow-flowered variety in cultivation.

Primulas were also scarce but Mr Holmes had an excellent pan of *Primula deorum* from Bulgaria with drooping umbels of rose-pink flowers. Many Cyclamen had been lost in the severe winter but Mrs Craig's *Cyclamen repandum* had come through unscathed to be a worthy winner of Class 35.

Ranunculus paucifolius from New Zealand is a rare and difficult plant of which Mr Crosland showed a splendid specimen. Its single flowers surrounded by erect, stiff, grey, deeply-lobed leaves gave it a look of a species left behind by evolution.

As always the Aberdeen Show excelled with superb pans of *Lewisia* in several varieties and species. Easy though they may be in northern Scotland they are nevertheless attractive and garden-worthy plants. Most people's *Rhodohypoxis* perished in the winter so it was all the more pleasant to see Mr Benham's 'Fred Broome' which he had brought all the way from Brodick to exhibit.

The Walker of Portlethen Trophy for the highest number of points in Section I was won by Mrs Craig with Mr Aitken a close second.

In Section II Mr Constable won the Aberdeen Quaich with a fine pan of *Primula wigramiana.* The wax-like pure white heavily scented pendant flowers on a 20 cm scape were breath-taking. This plant certainly deserves wider cultivation. Mrs McKelvie won the Special Prize in Section II with a deep blue *Oxalis laciniata* and an elegant *Iris bucharica* while Mr Martin won the Bronze Medal for the most points in Section II.

This was not a Show of the highest quality but the colourful display and the enthusiasm of new exhibitors made it a memorable occasion. The Show benches were enhanced by displays from the Cruickshank Botanic Gardens, John Aitken with alpine and show auriculas and Aberdeen Leisure and Recreation Department with plants from the Victoria Park Alpine House. Jack Drake, Edrom Nurseries and Mrs McMurtrie set up attractive commercial displays while Glenbuchat Pottery had a splendid selection of pots for sale.

Thanks are due to the Show Judges, Mr Evans, Mr Jermyn and Mr Duncan (Section I) and Mr Crosland, Mrs Cormack and Mr Aitken (Section II) and also to everyone who assisted with the Show, particularly Mrs Sylvia Simpson, the Show Secretary.

Glasgow – 8th May

by CHARLES SIMPSON

THE effect of the severe winter of 1981-82 and the summer weather of late April and early May was reflected in a general drop in the number of entries throughout the Show; only Section II held its own. As in 1981, Ericaceae were badly hit and for the second year running there were no entries for Class 4 – three pans of dwarf Rhododendrons. Generally speaking, however, the plants shown were well up to standard and proved of great interest to the large number of visitors. In every way the new venue, Milngavie Town Hall, proved to be a great success and has already been booked for 1983.

The Dr. William Buchanan Memorial Rose Bowl for six pans was won by Fred Hunt of Invergowrie with *Lewisia cotyledon, Oxalis* 'Ione Hecker', *Calceolaria darwinii, Edraianthus (Wahlenbergia) serpyllifolius* 'Major', *Phlox* 'Chattahoochee' and *Sarcocapnos crassifolia.* The *Edraianthus,* a magnificent plant, was awarded the Forrest Medal for the best plant in the Show.

Mr Hunt also took the Henry Archibald Challenge Rose Bowl with

pans of *Androsace cylindrica, Raoulia* x *loganii* and *Calceolaria darwinii.*

The William C. Buchanan Challenge Cup for three pans rock plants, new, rare or difficult was awarded to Mrs Joan Stead for fine plants of *Viola cazorlensis, Cypripedium parviflorum* and *Celmisia philocremna.*

In Class 7, Mr A. Leven won the Ian Donald Memorial Trophy for the best plant native to Scotland with a large plant of *Salix reticulata.* Mr Leven also won the Crawford Silver Challenge Cup.

The James A. Wilson Trophy for the most points in Section II was awarded to Mr Tucker of Kilmarnock. Karen Taylor, daughter of Margaret and Henry Taylor, came a close second. There was unfortunately no competitor with sufficient points to merit the award of a Bronze Medal.

Among the many interesting plants shown were a fine *Cyclamen pseudibericum* from Mrs Bezzant, *Omphalogramma vinciflora* from Mr and Mrs Bremner and *Ranunculus parnassifolius* 'Nuria' from the Taylors. Mrs Stead had *Ranunculus amplexicaulis, Corydalis cashmeriana, Erigeron aureus* 'Canary Bird' and *Raoulia buchananii,* Mr Hunt had the rarely seen *Fritillaria recurva,* Miss J. Halley, *Dianthus callizonus,* Mr Adair *Silene hookeri* and *Dionysia involucrata. Primula aureata* in two forms was shown by Mrs Stead and by Mr and Mrs Bremner. A particularly good *Rhododendron* 'Curlew' was shown by Mr and Mrs Chambers in Class 46.

Due to the unfortunate late arrival of Mr Cumming the Rhododendron Section was almost completely dominated by Mr and Mrs Rutherford of Rosneath who took the Urie Rhododendron Challenge Cup and Sir John Stirling Maxwell Trophy. The only exception was the first in Class 27 for Mr and Mrs Bell of Milngavie. Given better weather it is hoped that we will see more exhibitors in this section in 1983. A separate exhibit was later made of Mr Cumming's rhododendrons for which he received a well deserved Certificate of Merit.

The trade was well represented by Hartside and Holden Clough Nurseries.

Thanks are due to the exhibitors without whom there would have been no show, to the judges for their application in allocating the prize tickets, to all those involved in catering and running the various stalls and to the many who laboured from the setting up of the show to the final clearing of the hall.

Edinburgh and Midlothian – 29th May

by J. HARLEY A. MILNE

THE Edinburgh and Midlothian Show was held in St. Ninian's Church of Scotland Hall, Corstorphine on Saturday, 29th May, 1982.

Even after the severe winter and early spring the quality of the exhibits was superb and our thanks go to all the exhibitors for making this such a wonderful show. We are also obliged to Mr J. T. Aitken and Mrs Betty Craig for organising the Show.

In Class 1 for three pans rock plants of different genera, Mr W. Kirby of Preston reigned supreme and was awarded the Henry Archibald Rose Bowl. His exhibits were *Phlox nana* var. *ensifolia* – awarded a Certificate of Merit – *Ramonda myconi* 'Grandiflora' – the Forrest Medal plant and *Ptilotrichum spinosum* var. *roseum*. All were superb.

The Forrest Medal plant *Ramonda myconi* 'Grandiflora' was a mass of flat, dark green rosettes with corrugated dentate leaves from which rose 27 stems each with 2-3 flat rounded wide-petalled sky-blue flowers.

The Elsie Harvey Memorial Trophy, awarded for three pans rock plants, new, rare or difficult also went to Mr W. Kirby for *Raoulia grandiflora, Nassauvia revoluta* C&W 5221 and x *Gomiocharis calliantha* (the generic name is invalid and should now be x *Brigandra*). Reference is made to this hybrid in the AGS Bulletin vol. 50 p. 16.

Other plants in these two classes were *Campanula zoysii, Phlox triovulata* and *Viola dubyana* shown by Mr and Mrs H. Taylor, Invergowrie, *Phlox nana* var. *ensifolia, Raoulia* x *loganii* and *Dicentra peregrina* shown by Mr F. Hunt, Invergowrie, *Raoulia buchananii* and *Viola cazorlensis* by Mr H. Esslemont, and *Dicentra peregrina pusilla alba* and a well-flowered pan of that shy to flower *Pleione yunnanensis* shown by Mr J. Crosland. This was a wonderful collection of plants that a few years ago would have been premier award winners.

In the Lewisia classes there were some interesting plants. The three pan class was won by Mr F. Hunt with large well-flowered pans of *Lewisia rediviva* 'Jolon Strain', *Lewisia cotyledon* 'Pinkie' and *Lewisia* 'Trevosia'.

In the one pan class a very large flowered *Lewisia rediviva* with beautiful deep rose-coloured flowers was the winner for Mr and Mrs Taylor. Also on view were very good forms of *Lewisia columbiana* var.

wallowensis and *Lewisia pygmaea* ssp. *longipetala.*

Plants raised from seed attract much attention and in the three pan class *Lilium nanum* from Sikkim and Tibet, a rare dwarf with lilac flowers speckled with purple, was awarded the Henry Tod Quaich, for the best bulb, corm or tuber; it was shown by Mr and Mrs M. Stone, Fort Augustus. *Dicentra peregrina* and *Heuchera hallii* made up their three pans to collect the A. O. Curle Memorial Trophy. An interesting entry of three pans of *Pedicularis* RKB5, *Potentilla* RKB15 and *Androsace* RKB4 from seed collected at 12,000-14,000 feet in the Langtang Valley, Nepal, by R. Brinklow was shown by Mr and Mrs Taylor.

The harsh winter and the long dry windy spell were reflected in the number of rhododendrons on view and Mr and Mrs Bremner from Langbank, on the west coast were successful in both classes and were awarded the Midlothian Vase with *Rhododendron serpyllifolium, Rhododendron campylogynum* var. *cremastum* and a very large well flowered *Rhododendron* 'Mucronatum'.

Mr and Mrs Bremner were also successful in the Primula Class and the K. C. Corsar Challenge Trophy was awarded to them for their sweetly scented *Primula reidii* var. *williamsii* and *Primula cortusoides,* that lovely Siberian *Primula* with soft hairy leaves and umbels of rose-pink coloured flowers. The latter was awarded the R. E. Cooper Bhutan Drinking Cup for the best Primula in the Show.

In the two pan dwarf conifer class Mr W. Kirby was winner with two large pans of *Chamaecyparis obtusa* 'Nana Lutea' and *Pinus sylvestris* 'Beuvronensis' while in the one pan class *Abies balsamea* var. *hudsonia,* a huge symmetrical dome filling a 15 inch pot, was winner for Mr R. Brown, Hexham.

Dwarf shrubs were well represented with *Daphne jasminea* featuring prominently in the two classes, Mr B. Russ, Ormskirk being winner in both. The runner up was a well flowered *Genista pilosa* shown by Mrs J. Wyllie.

Mr and Mrs Bremner were winners in the Ericaceae and Vacciniaceae class with *Menziesia ciliicalyx* while *Tsusiophyllum tanakae,* a dwarf shrub of tangled woody stems and small hairy leaves with recurved margins from Japan, brought honours to Mr and Mrs Bezzant in the Ericaceae class for a pan not to exceed 7 inches.

The class for plants native to Scotland always produces surprises. *Oxytropis halleri* brought first prize to Mr and Mrs Taylor, a perfect cushion of *Sagina* x *boydii,* second to Mr W. Kirby and the rare *Moneses uniflora* with its tiny tufts of round dentate leaves third to Mr and Mrs Stone.

A magnificent cushion of *Bolax gemmifera* filling a 12 inch pan was winner for Mr W. Kirby while *Dianthus erinaceus* shown by Mr B. Russ was a good second in the class for cushion plants. Mr W. Kirby also won the class for saxifrages with a large pan of *Saxifraga pubescens* ssp. *iratiana.* This beautiful plant, not often seen at our shows, was most attractive with white flowers veined with red and having red anthers.

Convolvulus boissieri (nitidus) a plant from Spain and the Pyrenees with lovely silver mats won the class for silver foliage plants for Mr and Mrs Taylor. Other 'silvers' to attract attention were *Senecio leucophyllus* from Mr B. Russ, and the North American gem *Lupinus lyallii* shown by Mrs B. Craig, Edinburgh. Mrs Craig also won the class for a plant grown from seed with a well filled pan of *Primula scotica,* the seed coming from a plant purchased at one of our autumn discussion week-ends.

In the Iris class, the rare North American dwarf *Iris cristata* var. *alba* was awarded first prize for Mrs J. Wyllie.

Dactylorhiza fuchsii, the common spotted orchid was winner in the orchid class for Mr A. Leven.

In the class Polemoniaceae, there were some wonderful plants of *Phlox* 'Chattahoochee' in a variety of sizes. A lovely pan exhibited by Mr and Mrs Taylor was relegated to second place by a superb 15 inch pan of *Phlox nana* var. *ensifolia* in excellent condition and beautifully presented by that acknowledged plantsman from Newcastle, Mr Eric Watson. Also in this class was *Onosma albo-roseum* with pendant white flowers tinged with pink over tufts of narrow silvery-haired leaves, shown by Mr D. Martin, Scotlandwell. Mr Martin was successful in the class for Ranunculaceae with *Anemone alba* and he was runner up to Mr F. Hunt in Scrophulariaceae. Both showed pans of *Calceolaria darwinii,* a plant that always attracts attention.

Compositae were well represented. Placed in the following order were *Leontopodium alpinum* shown by Mr and Mrs Bezzant, *Raoulia grandiflora* from Mr W. Kirby and *Helichrysum frigidum* exhibited by Mr D. Kirby.

That choice species from the Carpathians *Dianthus callizonus* shown by Miss K. Taylor, Invergowrie, was worthy winner in the class for Caryophyllaceae. This is not an easy plant to keep and as Karen won this class last year she has obviously solved the problem.

Physoplexis comosa took honours in Campanulaceae for Miss J. Halley. *Ramonda myconi (pyrenaica)* 'Wisley Rose' and *Ramonda myconi* were placed first and second for Mr and Mrs Stone and Mr B. Russ in the class Gesneriaceae.

The Boonslie Cup for a miniature garden was awarded to Mr R. Brown and the Kilbryde Cup for an arrangement of cut flowers was won by Mrs V. Turvey, Uphall, who was exhibiting at our Show for the first time.

The Reid Rose Bowl for most points gained in Section I was awarded to Mr W. Kirby, Preston.

In Section II the Bronze Medal for most points gained was awarded to Mr H. C. Shepherd, Bolton and his pan of *Asplenium (Ceterach) officinarum* was awarded the Midlothian Bowl for the best plant in this Section. His other plants included *Picea abies* 'Little Gem', *Helichrysum* sp. and *Sempervivum hirsutum*. Other plants in the Section were *Edraianthus pumilio, Androsace pubescens* and *Primula geraniifolia* shown by Mrs E. Armistead, Edinburgh, who won the class for two pans of rock plants. *Saxifraga cochlearis* 'Minor' was winner of the cushion class for Mrs Tucker, Kilmarnock, and fine pans of *Rhodohypoxis* 'Pictus' and *Lewisia pygmaea* ssp. *longipetala* were winners in their class for Mr T. G. Sprunt, Bridge of Allan. A new exhibitor to our Show, Mr G. Collie, East Linton, was successful in a well contested class for sempervivums with a large pan of *Sempervivum ciliosum* and Mrs A. Chisholm, Edinburgh, took first prize in the class for a plant raised from seed with *Primula beesiana*.

Also on display were drawings and photographs in the twice yearly competition. The subject was Asiatic Primula and the winning entries were:

Black and white drawing: *Primula ioessa* – Heather Salzen.

Black and white photograph: *Primula aureata* – Mike Almond.

Water colour painting: *Primula whitei* – Anne Chambers.

Colour photograph: *Primula bhutanica* – Jim Christie.

The Trade was represented by Jack Drake's Nursery, Holden Clough Nursery, Ponton's Nursery and Hartside Nursery. These stands were popular with members of the Club and the public and the nurserymen reported good sales. Mr Boyko, Glenbuchat Pottery had a great collection of pots, pans and containers and Stockbridge Bookshop, Edinburgh, assembled an excellent stand of gardening books. We thank them all for their support but in addition we are grateful to all who worked so hard at our own plant stall at the door, the tea ladies who never faltered and the judges for their difficult, and, at times, unenviable task.

Royal Highland Show – 21st to 24th June

by A. D. McKELVIE

FOR the first time in many years the Scottish Rock Garden Club set up an exhibit at the Flower Show in the Royal Highland Show at Ingliston from 21st to 24th June, 1982.

The display of alpine plants was 6 m long and contained almost 200 plants lent by members, principally from the Edinburgh, Stirling, Glasgow and Aberdeen Groups. The end of June in a hot dry summer is not the best time to expect members to dig plants out of their garden or even remove from the alpine house but the excellent response was a tribute to the keenness of members. Because of problems of logistics, plants from Aberdeen were away from home for four weeks.

The display was very varied with pans of *Lewisia, Rhodohypoxis, Ourisia, Iris,* conifers, *Saxifraga, Lilium* and *Primula* to name but a few. Sunk into a landscape built up of peat the plants were arranged so that the pots were completely hidden thus forming an attractive 'rock garden'.

Having laboured from 2-9 pm in the Marquee on the day before the Show opened, the organisers were delighted next day to find they had been awarded 1st Prize for the best display of alpine plants and the Publicity Manager received a handsome cheque from Lady Clydesmuir.

In addition to the floral display there was a display of Club books and literature while 1700 packets of seed were sold.

No praise is too high for the many members of the Club who manned the stand over the four days of the Show. Particular mention must be made of the members who set up and organised the exhibit; Mr East, Mrs Wyllie, Dr. and Mrs Stead, Mrs Sleigh, and Mr John Sleigh, and Mr and Mrs MacGregor. Thanks are due to all members who lent plants and to Mrs McKelvie who packeted and labelled all the seed.

The Joint Rock Garden Plant Committee

PERTH – 24TH APRIL 1982

Awards to Plants

First Class Certificate:

To *Cassiope wardii* as a hardy plant for flower on the rock garden or in the alpine house. Exhibited by Mr H. Esslemont, 9 Forest Road, Aberdeen (Fig. 42).

To *Andromeda polifolia* 'Macrophylla' as a hardy plant for flower on the rock garden. Exhibited by Dr. P. Semple, 103 Southbrae Drive, Glasgow.

Award of Merit:

To *Ranunculus paucifolius* as a hardy plant for flower on the rock garden or in the alpine house. Exhibited by Mr E. G. Watson, 1 Ewesley Gardens, Woodlands Park, Newcastle upon Tyne.

Awards to Exhibitors

Certificate of Cultural Commendation:

To Mr H. Esslemont, 9 Forest Road, Aberdeen for a pan of *Cassiope wardii.*

To Dr. P. Semple, 103 Southbrae Drive, Glasgow for a pan of *Gentiana verna angulosa.*

To Dr. P. Semple for a pan of *Andromeda polifolia* 'Macrophylla'.

EDINBURGH – 11TH SEPTEMBER 1982

Awards to Plants

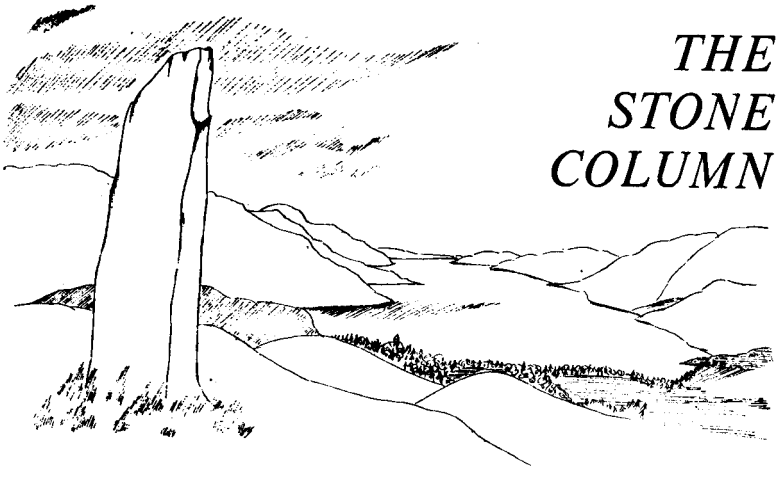
First Class Certificate:

To *Calluna vulgaris* 'Kinlochruel' as a hardy plant for flower on the rock garden. Exhibited by Mr F. Hunt, 34 Morris Place, Invergowrie, Dundee.

Award of Merit:

To *Gaultheria itoana* as a hardy plant for flower (fruit) on the rock garden. Exhibited by Dr. D. C. Graham, 447 Lanark Road, Edinburgh.

To *Origanum* 'Kent Beauty' (*Origanum scabrum* x *Origanum rotundifolium*) as a hardy plant for flower on the rock garden. Exhibited by Mr F. Tindall, 48 Fir Road, Paddock, Huddersfield.



THE STONE COLUMN

MEMBERSHIP

According to a trade survey 60% of the adult population indulge in gardening to some extent and no less than 22% spend an average of at least 6 hours per week cultivating their patch.

Six hours is a large proportion of the average person's available leisure time; so one may assume this 22% are keen and interested. The question we must ask ourselves is, why do we attract so few into the S.R.G.C.: our current membership is only about 0.1% (1 in 1000) of the Scottish adult population. Clearly we must consider carefully what alpine gardening has to offer that is not found to the same extent in other forms of gardening. Personally we feel it is in the almost endless variety of plants grown as alpines. Our byline should run something like: "Gardeners, are you becoming a little jaded performing the same task with the same plants year after year? Join the S.R.G.C. and meet the world of alpine plants where there is always a fresh challenge; new and exciting plants to exercise your skills!"

Seriously, we are not so naive as to believe that the S.R.G.C. could, or should, attract a mass membership; but if we could double our numbers the club would be on a much sounder financial footing. Success breeds success: more members, better services; and better services, more members.

It has become a cliché that leisure must increase; the robots are coming, the robots are coming! The increasing tendency towards early retirement presents the S.R.G.C. with an opportunity we should not miss; after all, rock gardening can be a very inexpensive hobby, especially in terms of cost per unit time.

It was with the above in mind that we asked a relatively recent 'convert', Fred Hunt of Invergowrie, for his comments and here is his reply:

WHY ALPINES?

"Having been a dedicated grower and exhibitor of that specialist flower, the chrysanthemum, for some five years to 1974 and then deciding to call it a day, thereby enjoying more free time, I am frequently asked why I chose to grow alpines, especially if more free time was the objective.

Well, the answer lies mainly in the fact that the space created by the waygoing of the chrysanths would have to be filled somehow, so rather than the conventional patch of grass and bedding plants, etc., I thought it might be an idea to follow along similar lines to the front garden which some years previously had been planted up with a mixture of dwarf rhododendrons, heathers, conifers etc, providing pleasure and not requiring too much attention. There was also a 12 ft by 8 ft greenhouse, equipped with electricity and water, to be considered. This had previously housed November flowering chrysanths.

My mind now made up on the form the garden was to take, I set out to find which plants would be suitable, so books were consulted and plant names noted, as were the names of such as Ludlow and Sherriff, Farrer, etc, and their magical introductions to cultivation.

Surely these must be worth inquiring into further, so attendance at the excellent winter lectures of the Angus group helped stimulate further interest after witnessing such a wide and colourful variety on slides. But these awful botanical names – I thought I'd never get to grips with them, far less remember them (Do they tend to deter some potential recruits?). This problem didn't arise with chrysanths as they frequently carried the names of the raiser or relatives and were therefore straightforward.

Anyway reassurances from members on this point allayed fears and in any case those enthusiastic neighbours, Margaret and Henry Taylor, whose well-known collection of plants I often admire, are always on hand to advise willingly.

Membership of the S.R.G.C. and A.G.S. duly followed and I very much look forward to receiving their literature.

But what of that empty greenhouse —— tomatoes? No, it is much easier to buy them at the supermarket, but perhaps a pan or two of spring flowering bulbs would justify its existence? However, it wasn't long before the benches were filled with many of the charms associated with the alpine house, providing a touch of colour throughout most of the year and giving a great deal of pleasure.

Might not some more keen gardeners, like myself, who until recently knew little of these rewarding plants, be attracted if some way could be found to persuade them to come along to shows where plants are seen to advantage?

Would the placing of a couple of adverts in the local press do the trick, or does the question of expense arise? One object of most societies is to increase membership and thereby offer more in return, therefore I am of the opinion if more members of the public could be introduced to alpines, particularly at show time, then more might join the ranks.

When one considers the magnitude of the gardening industry at present, what with garden centres all round and T.V. coverage, etc, the present time may be 'ripe' for further recruitment and like myself many more may buy supermarket tomatoes and convert their greenhouses to alpine houses."

WILD FLOWERS IN THE GARDEN

We recently happened by chance to hear an item in B.B.C. Radio 4's weekly environmental programme, "Groundswell" on the increasing popularity of 'Wild-flower' seeds at garden centres. Sold mainly as turf mixtures for low maintenance areas of the garden, they could well allow owners of large gardens, and especially Local Authorities, to cut costs while doing their bit for conservation. One problem mentioned by the radio speaker lies in prevailing upon Park superintendents to leave the sward uncut until the majority of seeds have been shed; long grass is equated with untidiness. The idea is not new, Christopher Lloyd mentioned it many years ago in his "Well Tempered Garden," and really it's only an extension of the long-established practice of growing bulbs in grass. One of the few happy consequences of the recent Government spending cuts has been the less frequent mowing of roadside verges, and subsequent resurgence of wild flowers including orchids. Incidentally it is very noticeable, when driving along Loch Ness-side in spring, that primroses (*Primula vulgaris*) are absent from the neighbourhood of each layby, but present in quite large numbers on the roadside where multiple bends makes stopping dangerous, or above the steep rocky outcrops produced when the road was blasted out of the hillside in the 1930s.

If native wild flower seed becomes widely available in the gardening trade, it may take some of the pressure off the remaining natural stands; providing of course that the companies supplying the seed do not raid the countryside themselves, but raise the parent plants in cultivation. There is a great difference between the careful collection of a little seed for our

exchange and wholesale plundering for commercial gain, as many writers have frequently pointed out.

Who knows, a gardener may come to prefer primroses to petunias, from where it is but a short step to appreciating other *Primula* species, and we've made another convert.

CAPILLARY BUFFERING

Several visitors to our garden have expressed surprise at our exclusive use of plastic pots; one even added to a compliment by saying "... and all grown in plastic pots too!" We suppose the inference was that growing in plastic is more difficult; something we cannot comment upon, never having used clay pots. We have found plastic perfectly satisfactory providing certain precautions are taken. Firstly, as goes without saying, use a well-drained compost with a high proportion of grit or coarse sand. Secondly, no crocks in the bottom to break capillary contact with an air space. Thirdly, screw the pot base firmly into a bed of sand, not just a scattering, but a good bed of an inch or two.

Most members will be familiar with the idea of capillary watering: pots taking up water from an irrigated sand-bed, or specially designed mat. They may not have considered, however, that capillary movement of water can occur both ways; if the pot is wetter than the underlying sand, water will be pulled out of the pot (Fig. 43). If anyone doubts this capillary pull-down effect they can try a simple experiment. Fill two identical plastic pots with the same type of compost, and water until thoroughly soaked, with water running out at the base. Stand one on a hard impermeable surface such as concrete, the other screw firmly into sand. After 24 hours, the former will still be saturated, and there may well be puddles underneath. The latter is usually just nicely damp. Finally, one must be very careful when transferring techniques from clay to plastic and vice versa. Eric Watson has described a criterion for deciding whether a pot requires watering, in the S.R.G.C. Journal No. 64 page 170. Basically, his pots stand on gravel, and if there is a damp patch underneath, don't water. Since we often find it difficult to decide whether a pot with a deep top-dressing of chips requires water, we decided to try Eric's procedure one winter. It was a disaster; the gravel broke the vital capillary contact and, with no evaporation through the sides of our plastic pots, they stayed far too wet, for too long, after watering. It was our own fault, we hadn't noted Eric's clear statement on page 168; "I only use clay pots." Anyone who has attended one of our shows knows how well the method works for Eric himself.

As for us, we're back to sand beds in the frames, poking our finger through the top-dressing to see whether *Androsace helvetica* needs water.

MOSS ON TUFA

During the latter part of August 1982 we spent a few days visiting gardens in the north of England. Although we always have reservations about leaving our garden during the growing season, once we've taken the plunge, we always enjoy our trips immensely: gardeners are such hospitable people, and one learns so much by seeing how other people react to their problems of cultivation. In the course of our travels, we were given a most generous gift of several pieces of Derbyshire tufa by a member living in the county. Less homogenous than the usual Welsh variety, and in general harder, they were none-the-less rather mossy, having been part of an old rock garden. How lucky to take over an extensive garden, complete with its own 'tufa-mine'!

Later in our travels we called on Duncan Lowe, and he happened to notice (a slight under-statement!) the largest piece lying in the back of our Land Rover. We asked him if he knew any way of removing the moss. Because of the porous nature of the tufa, we were very dubious about using any chemical moss-killer which might remain in the sponge-like matrix for a long period. His reply was simplicity itself: "Pour a kettle of boiling water over it."

On our return home, we tried it, and it works! It also killed some tiny tufts of *Poa annua,* and probably didn't do any further weed seeds any good either. The pieces were placed under cover for a few weeks for the moss to shrivel and the surface to dry out. A few minutes work with an old toothbrush completed the job.

We should like to stress the obvious point that this technique is ONLY suitable for UNPLANTED tufa. Round one to the gardener; but once out on our troughs the moss will soon be back. If any member knows a method of discouraging it, other than by mechanical removal, we'll no doubt be wanting to hear from them. And the dreaded bryophytes love full sun in this garden!

HIMALAYAN HARDINESS

Any discussion on the hardiness of a plant is bound to be controversial as the term 'hardy' means so many different things to different people. Others may overwinter their *Pleione* or *Cyclamen* in the spare bedroom and use heat in their alpine houses, that is their choice. We prefer to

overwinter all our plants outside. The only concession to protection that we make is against winter-wet. Thus by a hardy plant we mean one that will survive the winter temperature régime extant at Fort Augustus. Using this definition of 'hardy' we have recently noticed that some high alpines from the Himalayas are less hardy than their European and American counterparts. More surprisingly, plants from over 4,000 m (13,500 ft) are in some cases less frost resistant than those from 3,000 m in the same area. *Androsace delavayi* is an extreme example; in Nepal it is only found very high, 4,600 to 5,300 m (15,000 to 17,500 ft) and yet it shows symptoms of frost damage here on the top of the cushions, completely distinct from 'rotting at the collar'. We are not at all sure why this should be and put forward the following as a suggestion only. The higher one goes (in general), the longer snow lies. Towards the limits of vegetation in Nepal, the snow may well still be covering the high alpines when the monsoon arrives. Thus it could be the rain which melts the snow, not sun; the plants may never experience a substantial frost at all, deep snow cover or pouring rain. Not for them, perhaps, the radiation frosts, frequent on clear spring nights, which are tolerated by many European alpines in full flower. (Written with feeling, we had −4°C on May 6-7th this year!)

Footnote: P. J. W. Kilpatrick writes that he *always* expected 12-13 degrees of frost (Fahrenheit) on 12th or 13th May at West Linton, Peebleshire.

MECONOPSIS 'ASKIVAL IVORY'

Since we do what is, for a private garden, quite a lot of seed raising we suppose that it was inevitable that we should wish to try our hand at hybridising. When trying something new it is always a good idea to consult an experienced practitioner of the technique involved. Consequently while Margaret and Henry Taylor were visiting, we asked Margaret for a practical demonstration. Many rock gardeners feel that hybrids should have little or no place in the alpine garden. We ourselves generally do prefer species, but are the first to admit that certain hybrids are undoubtedly better garden plants than their parents, *Saponaria* 'Bressingham Hybrid', for example. Even purists could not quibble at Margaret's attempt at *Primula integrifolia* x *hirsuta:* this occurs naturally and is described in "Farrer" under *Primula* x *heerii.* Unfortunately, we had only 2 thrum-eyed plants available and although seed was set, as sometimes happens, it did not germinate. Now we have a pin-eyed *Primula integrifolia* available, so can try again if it will flower; but that's another story.

Casting around the garden for a suitable guinea-pig on which to try our own hand, we applied two criteria: *1* there must be a definite, hopefully gardenworthy aim in view; *2* the flower should have large and obvious 'working parts'.

Meconopsis certainly satisfies the second criterion, and when a blue species is crossed with a yellow one such as *Meconopsis integrifolia* the result is often an attractive ivory-white or cream, completely distinct from the parents. By crossing *Meconopsis integrifolia* with *Meconopsis quintuplinervia* we hoped to produce a moderately sized perennial plant. As *Meconopsis integrifolia* sets seed more readily than *Meconopsis quintuplinervia,* the former was chosen as the seed parent. Using a pair of sharp pointed surgical scissors, dating from Poll's time as a nurse, the petals and immature stamens were cut away from an unopened bud. A long thin muslin bag was placed over and fastened with a tie to exclude insects. A few days later, when the stigma appeared identical with those of fully opened mature flowers, pollen was applied by simply picking a fresh flower of *Meconopsis quintuplinervia,* checking that the pollen was shedding, and liberally dusting. This was repeated on the next two days as a 'belt and braces' philosophy. The muslin bag was left in place for a week or two by which time it was obvious that the pod was swelling.

The seed was ripe by the end of June 1980, presenting us with a dilemma. In our experience *Meconopsis quintuplinervia* has not germinated unless sown straight from the plant in August. This may well be general as this species had an unwarranted reputation of sterility in cultivation. On the other hand *Meconopsis integrifolia* is better sown later; early sowings germinate in autumn and tend to vanish here during the winter. In the end we compromised by sowing part in June and the rest in November 1980. Next spring, 1981, only the latter germinated; we have no idea why. It is now our established practice to grow on *Meconopsis,* Asiatic primulas, *Nomocharis,* etc in batches in 7 in × 7 in × 5 in square pots rather than singly in the usual 3 in pot. The compost is not critical providing it satisfies the seemingly conflicting requirements "well-drained but moisture retaining." We find that these plants love leaf-mould. After growing on for a year, helped by an occasional very dilute liquid feed, they were planted out in April 1982. We practise crop rotation in our borders, and they took over an open sunny position from *Primula gracilipes,* the latter being due for division. The soil was enriched with about a barrow-load of leaf-mould per square yard. Now their toes could stretch they grew very rapidly, and about half of them flowered towards the end of May.

It is difficult for us to be objective about the attraction of our own raising, but visitors who saw them pronounced them quite beautiful and most distinct from any other *Meconopsis* they'd seen. The single flowers were carried like those of *Meconopsis quintuplinervia,* but were rather larger and perhaps not quite so nodding. The petals were an ivory colour, slightly veined on the inside, with the merest hint of purple at the base. A few plants managed more than one flower stem, and most have multiplied their rosettes. Thus we have every hope they could be perennial, but will they survive the coming winter? We have our fingers crossed.

SOME NEW PLANTS FROM THE TALI RANGE

In the last few years, the door leading to the "richest temperate flora in the world," in western China has opened a little, and a few western expeditions have been permitted. Our own Editor, Bob Mitchell was instrumental in organising one such in the spring of 1981, to the Tali or Dali range in Yunnan. It was most appropriate that the Scottish connection was strengthened by the presence of Peter Cox of Glendoick; his father E. H. M. Cox journeyed to China with Farrer, and had written a most interesting survey of plant hunting in China. The expedition succeeded in reaching the summit ridge at over 4,000 m (13,000 ft) and were permitted to collect both living plants and seed. Since the latitude is only 26°N from the equator, *Rhododendron* scrub was still present on the top. We were indeed fortunate to have been entrusted with some of the seed of Ericaceae, including several dwarf rhododendrons. After their release from quarantine, we were also given three living plants, in spring 1982, to grow on and hopefully propagate for wider distribution.

CORYDALIS CURVIFLORA VAR. *ROSTHORNII* (Fig. 44)

In this garden *Corydalis* have always done much better when planted out, so as this was dormant on receipt, we decided not to keep it in a pot. We were told it had been collected from a rich limestone scree, so we chose to put it in a limestone trough, one of those we cover in the winter. Upon unpotting, we discovered a rootstock like a miniature *Eremurus;* a tiny central growing point, with slightly swollen storage roots radiating like the spokes of a sharply-dished waggon-wheel. Nothing in the garden has ever been planted more carefully; an oversized hole was excavated, a cone-shaped mound formed in the centre and the roots spread out down its flanks. The dormant growing tip was set just at the interface between

the scree compost and the top-dressing of limestone chippings. Within a week, typical *Corydalis* dissected leaves started to appear, carried on fairly lengthy petioles which lie on the ground for part of their length of about 10 cm (4 inches). The flower spike followed soon after and was intermediate in size between *Corydalis ambigua* and *Corydalis cashmeriana.* In colour it was at least their equal, a piercing electric blue; and as the name suggests had slightly curved spurs. We hand pollinated, but only 1 seed was set. This was sown on the trough beside its parent. The plant continued to produce leaves at odd intervals throughout the summer, long after the flower spike had died down. We understand a plant at R.B.G. Edinburgh flowered twice during the summer of 1982. We are not sure yet whether the root-stock will multiply. If not, at least we know it can set seed.

GENTIANA MELANDRIFOLIA (Fig. 45)

This species was completely unknown to us prior to obtaining it, and we can find little information. David Wilkie in the classic Gentian book simply includes it in a table; and Clay describes it briefly in one sentence. From the root-stock arise a loose group of central rosettes made up of spathulate (spoon-shaped) leaves about 10 cm (4 in) long. Picture slightly smaller, non-fleshy and matt *Lewisia tweedyi* rosettes. The decumbent flower stems are quite different, being leafy and carrying up to five flowers, one terminally the rest axially, all near the end forming a loose cluster. The stems are reddish, up to 10 cm long (4 in) and hang down the side of the pot. It is really a somewhat larger version of *Gentiana stragulata,* but without the latter's shy flowering habit, at least this year. The individual corallas are about 4 cm (1.5 in) long and open fully even on dull days, to about 3 cm (1 in) across. It is very difficult to describe the colour, there are so many different shades: the lobes basically brilliant turquoise with faint green spots, the plicae a darker royal blue. The outside is two-tone blue with olive green. Two cuttings of non-flowering shoots rooted easily. Flowering very late here, September-October, we don't think it will manage to set seed. We did, however, see 2 plants in flower in the alpine house at R.B.G. Edinburgh rather earlier; perhaps these will set. One had flowers of a more purplish blue. The flowers on our plant remained open for six weeks. Thus it is really a much superior plant to the *Aptera* gentians, *Gentiana decumbens* and the like, with their long stems and tight groups of small purplish flowers. *Gentiana melandrifolia* belongs to the much classier *Frigida* section along with the *Ornata* gentians, which gives me a lead into the following.

GENTIANA TERNIFOLIA

Here we have a much more familiar-looking plant, clearly one of the *Ornata* clan. So far with us a medium-sized plant, roughly half-way between *Gentiana hexaphylla* and the usual *Gentiana sino-ornata.* In fact it has more than a little of the look of the *Gentiana hexa-farreri* hybrids, and is also very similar to a wild-collected Nepalese *Gentiana ornata* we are growing. Precisely on what grounds Franchet determined *Gentiana ternifolia* as a species we don't know. Like the others it divided easily in the spring, the one original making five good plants this year. So far it appears to grow well: less temperamental than *Gentiana hexaphylla,* it didn't mind the hot spell this summer. There is every hope therefore that it will soon be readily available. The flowers are a soft blue, with the usual external stripes of green and white. A charming addition to autumn gentians.

Erigeron dacicus

by JAROSLAV KLIMA

I MET this species for the first time blooming at an elevation of 2,500 m on a southern slope of Vikhren in the Pirin Mountains, Bulgaria. The plants inhabited a broad crevice in very hard marble. At first sight I thought I was looking at something unknown. Was it an *Aster?* A very good form of *Aster alpinus* or what could it be?, greyish, entire leaves in pretty rosettes, the stalk some 5 cm high bearing one shining, rose-violet flower. The stalks were numerous!

Yes, it was *Erigeron dacicus!* and I collected seed at lower elevations. The seed gave a goodly number of seedlings. None of my friends asked for it – "Erigerons are too common in cultivation", they said and I was not able to persuade my friends in Czechoslovakia to plant the seedlings in their rock gardens. Only I was such a fool to plant an *Erigeron.* In late April this year I entered my rock garden and looked around. I saw something shining in a rose-violet shade, "Who could have given me such a gem?" I asked myself. "It had not been among Messrs. Zvoláneks, Haldas, or Holenkas etc. gifts to me". I went nearer to see the label – *Erigeron dacicus.* It was growing in scree and was about the same height and rosette diameter, with the same large flowers as in the wild. Not long afterwards, my bed of spare plants of potted *Erigeron dacicus* shone with hundreds of flowers.

"What is it?" asked my friends and visitors. *"Erigeron dacicus",* was my

reply. "Could I have, it?". "Yes, but it is too easy for you! It grows without any care!" "But I would like to try it!"

Everybody tends to the alpine gardener's philosophy of growing the rarest and most difficult plants, giving up the easier species which will be no bother and, which he will notice only when they are in bloom.

Editor's Note: This plant seems to be considered as a variant or clone of *Erigeron uniflorus* but is obviously quite distinct.

Book Reviews

The Collingridge Book of Bonsai by Anne Swinton. £7.95. 1982.
That rock-gardeners are great bonsai enthusiasts is evident for so many of them grow plants in pots, and 'bonsai' means literally 'plant-in-a-pot'. First exhibited in London in 1909, having originated in China and extended to Japan, bonsai have remained rather a curiosity for the few till now. This new Collingridge Handbook by Anne Swinton, with long experience of growing and showing at Chelsea, should do much to make the craft more widely known to gardeners looking for a means of artistic and horticultural expression.

Every aspect is fully explained from how to start a collection to choosing suitable plants, cultivating them from seed, cuttings or wild seedlings or from partly-developed bonsai bought from a grower. It is all here, step by step, through the months and years. Training techniques are explained with good clear diagrams. Twisted and contorted specimens being less admired today, the aim is more for a well-shaped or wind-swept effect with a single little tree or group of trees, nicely displayed, in an attractive pot. The photographs are good, each with a little story about its subject and the end papers showing temperature and rainfall charts around the globe will find favour with all growers of alpine plants.

One thing only is missing – *where* to find the lovely pots and trays without having to go to Japan!

M. I. C. HARBORD

Growing Irises by G. E. Cassidy and S. L. Linnegar. 1982.
Croom Helm Ltd. £7.95. ISBN 07099 07060.
The publication of a second British book on irises, so soon after Brian Mathew's (*The Iris*, Batsford, 1981) indicates an encouraging increase of interest in this unjustly neglected genus. Messrs. Cassidy and Linnegar are stalwarts of the British Iris Society, an organisation primarily devoted to the bearded iris hybrids of the herbaceous border, but also interested in other groups, including the Pacific Coast irises; and containing a group which is presently compiling a descriptive index of all iris species.

Growing Irises is an excellent introduction to the genus. It provides a comprehensive guide for newcomers, and distributes the space equitably between the easier border and woodland irises, the water garden and, of most interest to readers of this journal, irises for the rock garden, scree, bulb frame and alpine house. Cultivation of each group is clearly described, and the text is illustrated with 37 line drawings (adequate, but not outstanding) and 19 coloured photographs. The six appendices include lists of recommended species and hybrids, sources for plants, diagnosis and control of pests and disease, and a classification of the genus, with terse descriptions of most of the species. I can wholeheartedly recommend this book as good value for anyone interested in growing these lovely flowers.

JOHN GOSDEN

Wild Flowers of Scotland by Mary McMurtrie. Heritage Press (Scotland). £95. 1982.

Few illustrated books of the Scottish flora are likely to have more impact than *Wild Flowers of Scotland*. To me it is one of the finest books I have seen for many years and is the work of one of our own members – Mary McMurtrie of Balbithan House, Aberdeenshire. Those of us who visit the Aberdeen Show will know of Mary's paintings and of the range of old fashioned plants she grows so well.

This book brings a considerable knowledge of botanical detail with a great love for plants which shines from each page.

George Taylor in his foreword states that this is a welcome addition to the literature and should stimulate appreciation of the beauty of the wild flowers of Scotland. This it certainly does.

Wild Flowers of Scotland is divided under headings such as Woodland Plants, Roadside Flowers, Pasture, Meadow and Waste Ground, Streams and Lochs, Marshes and Bogs, Hills and Mountains, and Sea Shore Dunes and Cliffs; each is painted in due season and ending with a selection of Trees, Wild Roses and Thistles with an appropriate text including quotations and plates. All the plants have been sought, visited and painted by Mary McMurtrie for, not only is she an artist of distinction, a grower of fine plants, but also a very good field botanist and has been so all her life. It is this factor together with her skills with the paintbrush and her knowledge of plants that together have produced a most memorable book and a fitting volume to appear on the botanical scene as the Scottish Rock Garden Club reaches its Golden Jubilee.

Wild Flowers of Scotland is a book to be treasured and is limited to 450 numbered copies. To mark the importance of this volume an exhibition was held during the Edinburgh Festival in the Malcolm Innes Gallery.

R.J.M.

Gardening with Native Plants of the Pacific Northwest by Arthur R. Kruckeberg. University of Washington Press. 264 pp. £17.50. ISBN 0.295 95893-6 1982.

Arthur Kruckeberg is Professor of Botany at the University of Washington and specialises in the flora of the Pacific northwest. He is therefore well able to evaluate and to identify the plants which are of garden value. The area covered by the title extends from southern British Columbia to northern California and is bounded on the east by part of the Rocky Mountain range. A great diversity of terrain, climate and altitudinal range is found in this large area producing a similar range of plant growth and forms.

In all 250 plants of ornamental value are described ranging from conifers and broad leaved trees to shrubs, ground cover plants and herbaceous perennials which include ferns, ground orchids and bulbous plants.

This book is intended for growers in the Pacific northwest for it divides the area into vegetation zones and plant hardiness zones in a more detailed manner than is found in Rehder's *Trees and Shrubs* which covers the whole of north America.

The author recognises areas of garden potential and relates this to climate, soils and gardening conditions. He then discusses methods of propagation to assist in establishing the plants in the garden without recourse to uplifting them from the wild. I fully support this objective for although this is a rich botanical area, many plants are rare and uncommon and it would be a tragedy if they were lost by wholesale uplifting.

The early history of plant collecting is briefly covered and it is interesting to note Professor Kruckeberg's comment on David Douglas – "No-one since has made a greater contribution to the use of northwest plants in the gardens of the world".

I certainly recommend this book to growers in Britain who share an interest in this rich flora. There are full descriptions of plants with their natural growing conditions which is always valuable information. There are plenty of illustrations and line drawings throughout the text and four exquisite colour pages and the price not too expensive for a fine volume of good quality.

R.J.M.

The American Rock Garden Society

Probably most members are aware of the existence in the U.S.A. of a Society comparable with our own. Some members may have wished to join this Society, but have been deterred by the apparent difficulty of transmitting their subscription. We understand that this difficulty is not insuperable. In practice it would probably be best to consult one's Bank, which could supply advice and the appropriate forms.

The annual Subscription is 9 dollars, and the Secretary, who will send further particulars, is:

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In addition to its *Quarterly Bulletin,* the American Society has a Seed Exchange scheme in operation.

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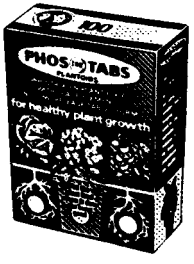

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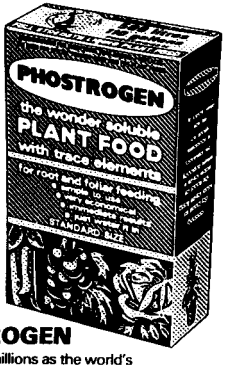

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This journey into the high mountains, from Ordzhonikidze along the Georgian Military Highway to Kasbegi and thence by way of Tbilisi to Erevan, is dramatic indeed and a rare experience for both the ardent traveller and the botanist. Enough time is spent at each one of the three main centres to appreciate the profusion and variety of the local flora and, at Tbilisi, a day in which to visit some of the fine museums and art galleries for which it is famous.

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