



The JOURNAL of
THE SCOTTISH
ROCK GARDEN CLUB

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VOLUME XV Part 4
No. 61

SEPTEMBER 1977

Editor R. J. MITCHELL • University Botanic Garden • St. Andrews • KY16 8RT

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SCOTTISH ROCK GARDEN CLUB

48 St. Alban's Road,
Edinburgh EH9 2LU.
21st August 1977.

Dear Sir/Madam,

The ANNUAL GENERAL MEETING will be held at the McLellan Galleries, Sauchiehall Street, Glasgow, on **Saturday 5th November 1977**, at 2.15 p.m.

In accordance with Rule 4(a) the President retires annually. Having held office for one year only, the President, Mrs. K. S. Hall, is eligible for re-election and has been nominated.

In accordance with Rule 4(b) Alfred Evans, Esq., as immediate Past President, serves automatically on the Council as a Vice-President. Three Vice-Presidents to serve on the Council are to be elected annually from the list of Vice-Presidents. The following have been nominated:—

Archibald Campbell, Esq., W.S.

J. D. Crosland, Esq.

David Livingstone, Esq.

In accordance with Rule 4(a) all Executive Office-Bearers retire annually but are eligible for re-election. The following have been nominated:—

Secretary Mrs. I. J. Simpson

Treasurer L. N. Bilton, Esq., W.S.

Subscription Secretary R. H. D. Orr, Esq., C.A.

Editor R. J. Mitchell, Esq.

Publicity Manager A. D. McKelvie, Esq.

Publications Manager Dr. D. M. Stead

Curator of Davidson Slide Library R. S. Masterton, Esq., M.R.C.V.S.

In accordance with Rule 5, five Ordinary Members to serve on the Council for three years are to be elected. The following have been nominated:—

Mr. J. Dodds Miss R. Fothergill

Dr. J. Gosden Mrs. E. Ivey

Mrs. J. Stead

The A.G.M. will be preceded by a buffet luncheon and followed by the Clark Memorial Lecture and tea and biscuits. If you wish to attend the luncheon please fill in the attached slip and return with your remittance.

Yours faithfully,

ISOBEL J. SIMPSON,

Honorary Secretary.

To: Mrs. J. Drummond, "Auburn", Victoria Road, Brookfield, by Johnstone, Renfrewshire.

I wish to reserve.....places at the buffet luncheon (wine included) on

Saturday 5th November 1977, and enclose my remittance of..... (£1.25 per person).

Name

Address

.....
Please return this slip no later than 22nd October 1977

AGENDA

1. Minutes of the A.G.M. held in Edinburgh on 13th November 1976.
2. President's Review of the Year.
3. Presentation of Merit Medals by the President.
4. Consider for adoption the accounts for the year ending 30th September 1977.
5. Election of President.
6. Election of Mr. P. J. W. Kilpatrick as additional Vice-President.
7. Election of three Vice-Presidents to serve on the Council.
8. Election of Executive Office-Bearers.
9. Election of five Ordinary Members to serve on the Council.
10. Appointment of Auditor.
11. Intimation of Show dates for 1978 and of the Royal Horticultural Society's Joint Rock Garden Plant Committee meetings in Scotland in 1978.
12. Intimation of the date and place of the A.G.M. in 1978.
13. Any other competent business.

PROGRAMME

- 1.00 p.m. Buffet Luncheon (please send booking slip by 22nd October).
2.15 p.m. The ANNUAL GENERAL MEETING.
3.30 p.m. The Clark Memorial Lecture. R. S. Masterton, Esq., M.R.C.V.S., will speak on "Himalayan Plants in a Perthshire Garden".
4.30 p.m. Tea and biscuits. (The charge for this will be 15p).

-
- N.B. at 11.30 a.m. MEETING OF THE COUNCIL which will include discussion on the formation of the organising committee for the Joint Scottish Rock Garden Club / Alpine Garden Society Conference in 1981.
at 4.30 p.m. MEETING OF THE NEWLY-FORMED COUNCIL to appoint members of the Standing Committees.

Secretary's Page

September 1977

Date for your Diary:

5th November 1977: The Annual General Meeting will be held at the McLellan Galleries, Sauchiehall Street, Glasgow, at 2.15 p.m., followed by the Clark Memorial Lecture given by Mr. R. S. Masterton, M.R.C.V.S., whose beautiful garden near Aberfeldy is known to many members.

Thank you to a life member in U.S.A. who sent a donation to the Club ". . . for pleasure from the Club's Journals".

to the *Newcastle Show Committee* who gave a donation towards medals etc. for the Shows.

to the *East Fife Group* for a donation of £100 towards the Publication Fund.

A Christmas Present: A year's subscription to the Scottish Rock Garden Club would make a very acceptable Christmas present to a gardening friend or a young relative with gardening potential. An attractive Gift Token is available from the Hon. Subscription Secretary, R. H. D. Orr, C.A., 70 High Street, Haddington, E. Lothian (please enclose s.a.e.).

Visit to Chelsea Flower Show, 1978: This year's trip to the Chelsea Flower Show was such a success that it is hoped to arrange a similar tour in 1978. This time the tour will last longer, probably eight days, and will include visits to some smaller private gardens belonging to alpine enthusiasts. There will again be visits to a few Alpine Nurseries, including that of W. E. Th. Ingwersen Ltd. Further details are available from Mr. A. Evans, Royal Botanic Garden, Edinburgh 3 (please enclose s.a.e.).

Twice-yearly Competition: The second competition will be for plants of the genus *Crocus*. The plant can be in the wild, in the garden or in a pot. Once again you are asked to submit 1. A black and white photograph and/or 2. A line drawing. There will be a prize of £1 in each category (presented anonymously). The Editor reserves the right to reproduce any entry in the *Journal*. Entries to the Hon. Secretary by 30th April 1978.

Travelling Lecturer: This year Mr. Roy Elliott, F.L.S., V.M.H., will lecture at:—

Dundee, Mon. 10th Oct. 1977	Glasgow, Mon. 17th Oct. 1977
Edinburgh, Tues. 11th Oct., 1977	Kirkcudbright, Tues. 18th Oct. 1977
Inverness, Wed. 12th Oct. 1977	N. Northumberland, Wed. 19th Oct. 1977
Aberdeen, Thurs. 13th Oct. 1977	

Mr. Elliott is very well known as Editor of the *Alpine Garden Society Bulletin*. He is a skillful grower of rare and difficult plants, an excellent photographer and an entertaining writer. Do try to hear him speak at any of the above places.

Fund-raising Project: Are there any members who could make a contribution to Club Funds by doing paintings, drawings or embroidery of flowers, or by making dried flower pictures etc. to sell at the Discussion Week-end or at the Spring Shows?

Two enterprising members in Edinburgh made calendars with dried flower designs which sold well at the last December Group meeting.

Gifts and Legacies: The Club has benefitted in the past from generous bequests and gifts made by members, but these have been for a specific purpose and have not increased the general funds of the Club to any extent.

The level of the Club's reserves gives rise to concern as, in these days of inflation, we have all too little behind us. The Club enjoys charitable exemption from tax and any bequest or gift is free of Capital Transfer Tax to the donor and the Club. In the light of this advantageous position it is hoped that members will keep the needs of the Club before them. Further information and an appropriate form of bequest can be obtained on application from the Treasurer, Lewis Bilton, W.S., Kilmagadwood Cottage, Scotlandwell, Kinross (s.a.e. please).

Showing is Rewarding: How many times have you visited a Show and thought "I have a plant as good as that one"? In every Group there is at least one experienced exhibitor who would happily visit your garden some time before the Show to advise and help you. When ordering plants in the Autumn choose something you might be able to put into a Spring Show.

One of our Show Secretaries offers this advice: cover Primulas and Saxifrages with a piece of glass to prevent damage from rain. They will come into bloom about the same time as plants grown in pots or frames. Lift the plant gently and put into a clean pot with care. Snip out damaged leaves and withered flowers and top dress with sand, gravel or peat. You will hardly believe the result. Dig up and win!

Help wanted in the West: A member willing to type and/or duplicate notices would greatly ease the load of work of officials in the Glasgow area. If you can help please get in touch with Mrs. Joan Stead, Esk Hause, Bishop's Park, Thornton Hall, Glasgow.

Wanted: The book "Gentians for Your Garden" by Doretta Klaber. D. R. Holcombe, Ashleigh Road, Kingsbridge, Devon.

Exchange of Plants: Wanted—*Androsace wulfeniana*, *Dianthus simulans*, *Dicentra peregrina pusilla*, *Dionysias* (all species), *Jankaea heldreichii*, *Narcissus cantabricus petunioides*, *Paraquilegia anemonoides*, *Thalictrum orientale*, *Viola delphinantha*. Can offer many rarities in exchange. L. Kreeger, 91 Newton Wood Road, Ashstead, Surrey.

Postage Problem: Club officials particularly enjoy receiving queries which are accompanied by a s.a.e. It costs nearly £1 to post fourteen letters.

Suggestions: The Secretary would be happy to include in this page any ideas from members.

Contributions to the next Secretary's Page should be in the hands of the Hon. Secretary not later than 1st March 1978.

Club Lapel Badges: Would members note that the price of the Badge is now 55p each obtainable from Group Conveners, or 65p each post paid from the Treasurer.



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Obtainable from
Dr. D. M. Stead, Esk Hause, Bishop's Park, Thorntonhall, Glasgow, G74 5AF

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Auditor
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SRGC PUBLICATIONS

A SET of the available *Journals* provides information on rock garden plants and their cultivation comparable with the current in-print books. At present there are 42 issues in stock—the number varies from time to time—and a SPECIAL DISCOUNT of 25% is offered to new members who order over 40 *Journals*. The 42 available *Journals* would cost less than £12, which is remarkable value. No discount on any of the 100p *Journals* when available. Overseas members must pay £1 (\$2.50) extra postage because two parcels are necessary.

Current availability and price to Members

<i>Journal</i>	<i>Pence</i>		<i>U.S. Dollars</i>
1-6	150	when available	3.75
7, 8, 11, 14-17, 21, 27, 29, 35	100	„ „	2.50
9, 36-53	30		0.75
10, 12, 13, 18-20, 22-26, 28, 30-34, 54-59	40		1.00
60	60		1.50
George Forrest book	125	post free	3.12
Index <i>Journals</i> 1-19	15	„ „	0.37
Index Vols. VIII, IX, X & XI	15 each,	post free	0.37

Postage contribution 5p (12½ cts.) per *Journal* up to a maximum of £1 (\$2.50).

Waiting lists are kept for the scarce *Journals* (list closed for *Journals* 1-6) but waiting list members must now pay all postage costs.

The Club would be very glad to receive or buy any *Journals* up to No. 35 (except 9), paying postage and, if required, up to half the above prices. Copies of *Dwarf Conifers* by Hillier are also wanted.

All correspondence about *past Journals* should be addressed to the Hon. Publications Manager: Dr. D. M. Stead, Esk Hause, Bishop's Park, Thorntonhall, Glasgow G74 5AF.

SPECIAL PUBLICATIONS

Dr. Richards' article on "Petiolarid Primulas (*Journal* 60) is available as a separate booklet—very handy for taking into the garden for identification purposes—from the Hon. Publications Manager at 75p, post free.

REPRINTING OF JOURNALS 1-6

The provisional orders received were insufficient to meet the minimum costs of reprinting, so the project has regretfully been abandoned.

Other Scottish Collectors

by Dr. BRINSLEY BURBIDGE

INTRODUCTION

Two out of three words in this title require some explanation: the word "Scottish" is used in the very broadest sense to embrace anyone who by accident of birth or residence could consider Scotland to be their botanical home; "other" allows us to discuss anyone but George Forrest who would otherwise dominate articles on plant collectors. In 1973 the centenary of Forrest's birth stimulated a number of articles in this *Journal* concerning his introductions (see Vol. XIII part 3 no. 52, March 1973).

George Forrest does, however, give us a model of the "ideal" plant collector with whom others can be compared. He was firstly a naturalist and a countryman, a good shot and a fisherman used to taking care of himself but also was adaptable and readily accepted by most people with whom he came into contact. His knowledge of medicine and a willingness and aptitude to learn languages and dialects helped him greatly when travelling, as did a great endurance and tenacity, but above all this a boundless curiosity and a real planstman's feel for good garden-worthy plants made him one of the great plant collectors of all time.

A formidable array of attributes indeed, and yet Scotland has produced a good handful of collectors of similar merit giving rise to the far-ranging collections of David Douglas, and also the more limited collections, but nevertheless important contribution of Peter Barr to the history of the daffodil. Peter Barr's contribution was purely to horticulture, but David Douglas, like most other collectors, returned with herbarium material of plants for scientific study as well as good garden plants. Those who only brought back scientific material are outside the scope of this article. For references to other publications and for an exceptionally well-researched account of horticultural exploration, I can do no better than to suggest a consultation of the 400 or so pages of Alice Coats' "The Quest for Plants" (Studio Vista, 1969) and I quote here a brief statement from the introduction to this book. "There is a certain inevitability about the entry of really first class plants into cultivation; if one man does not bring them, another will. There are few instances where the first introduction was also the

only one; but gardeners probably owe more to the person who established a plant in cultivation, than to its first discoverer”.

The great phase of horticultural introductions into Britain was brought into being initially by the trading companies and then sustained and encouraged by patrons of science such as Sir Joseph Banks (b. 1743) who finally ensured that plant collectors were specifically employed to collect plants and were not, as was the case so frequently in former times, ships’ surgeons working frantically in their off-duty hours. In addition to the name of Banks, a much travelled man and for many years President of the Royal Society in an excellent position to assist and finance plant collections, the name of Hooker must rank as an equal. The Hookers, father and son, were scientists rather than horticulturalists, but both in their turn became Director of Kew Garden and contributed greatly to horticulture by their own expeditions, but more by their patronage and encouragement of others. W. J. Hooker, born in Norfolk in 1785 and a great friend of Banks, became Regius Professor at Glasgow and was an immense success, attracting many students including his son and Lord Kelvin to the science of botany. He became Director of Kew in 1841 on the resignation of W. Aiton. J. D. Hooker graduated from his father’s class with an M.D. in 1839 and then served an almost traditional apprenticeship for a nineteenth-century scientist—he became an assistant surgeon on one of Her Majesty’s Ships, the *Erebus* (compare the beginnings of Darwin’s and Huxley’s careers). In 1845 his application for the Professorship at Edinburgh was rejected in favour of that of Balfour, and after many voyages and publications he succeeded his father at Kew in 1865. We will return to J. D. Hooker later when we look at exploration in India. We must now turn to exploration in particular areas, the Sino-Himalayan region and North America for obvious climatic reasons contributing more to Scottish horticulture than other parts of the world. South America and the large number of plants of horticultural merit in the Andes comes bottom of the list of collected areas. Only two Scottish collectors of note have been involved, James Tweedie and George Gardner, but they confined their attentions to the Argentine and Brazil respectively, returning largely with plants for the tropical house.

THE FAR EAST

James Cunninghame, a Scottish surgeon in the service of the East India Company in the early seventeen hundreds, was able to take

advantage of new trade agreements with China to do a little exploring and become the first collector in China, though nothing of horticultural importance came of his collections. He did report for the first time on tea cultivation and among his dried collections were the first specimens of the *Camellia* to arrive in Europe. Conveying live plants home was very difficult, specimens usually being carried in Wardian cases (like miniature glasshouses) and hopefully these would be placed on the poop deck out of the salt spray. They were heavy and took up much room and so were always first overboard should the ship need to be lightened because of rough seas or for military purposes. Voyages were long, particularly those into the Pacific or Indian Oceans with sailings of six months or more, half of the time in tropical waters. It seems remarkable that any plants arrived at all. Two Scots, James Main and William Kerr, who both collected in China at about the same time, typify many of the problems of this period of collecting.

James Main left Britain in 1792 and after a visit to Francis Masson in South Africa wasted a lot of time when his ship was commandeered to take part in the siege of a French-owned port. Travel in China was still severely restricted but he procured a number of Chinese garden plants including Magnolias, Tree Paeonies and *Spiraea crenata*. On the return journey many of his plants which had been consigned to other ships died of neglect, his own collection was drastically reduced by storms, and a collision in the English Channel, within sight of home, brought the ship's main-mast down on top of his plant cases. Main found that his patron had died while he was away and he never received payment for his work.

William Kerr was sent from Kew to China in 1803 by Sir Joseph Banks with the traditional £100 per year gardener's salary. Again few plants survived the journey back to Britain even though Kerr sent trained Chinese gardeners back with his collection. In 1810 he became Superintendent of the new Ceylon botanic garden and subsequently did little serious collecting. *Kerria japonica* was named in his honour by De Candolle in 1816.

As a result of the 1840 opium war Britain gained Hong Kong and better trading conditions. The Horticultural Society of London responded immediately by sending the 31-year-old Robert Fortune to China in 1843. Fortune, whose travels are well covered in his own writings (see "Three Years' Wanderings in the Northern Provinces of China", 1847), trained at the Royal Botanic Garden, Edinburgh, and had an eye for good garden plants. Like Cunninghame 100 years

earlier, tea was high on the list of plants he was especially ordered to collect and he wore Chinese dress, shaved his head and grew a pigtail in an effort to remain inconspicuous when travelling more than the permitted 20 miles from a treaty port in search of better varieties for the British colonies in India. This also enabled him to collect far more wild origin material than collectors before him, though he is probably best known for the many plants which he found already in cultivation, e.g. *Wiegela rosea* from the Mandarin's garden in Chusan.

In 1854 Fortune made a short visit to the Spanish-held port of Manilla and found the orchid *Phalaenopsis amabilis*, which the Horticultural Society desperately wanted in cultivation. Despite the new treaty regulations Fortune's journeys were far from safe and on many occasions he seems barely to have escaped with his life. In one incident, though suffering from fever, he repelled single-handed an attack from six pirate ships by using his double-barrelled gun at very close range.

His return with some 200 living plants, including Chrysanthemums, Camellias, Azaleas and other now commonplace species such as *Jasminum nudiflorum* and *Anemone hupehensis*, but at that time making their debut outside China, was a triumph. His almost immediate appointment as Curator of the Chelsea Physic Garden was equally rapidly followed by a return to China on behalf of the East India Company. From this journey came almost 20 cases of tea plants for India, as well as *Exochorda racemosa* (fig. 55), *Clematis lanuginosa*, *Skimmia reevesiana* and other plants of note. His third trip was dogged with even more problems and dangers than the first two, and *Rhododendron fortunei* collected in seed and first seen in flower back in Britain is the best-known introduction from this voyage. His fourth and final visit to the Far East ended in Japan where he spent some time with John Veitch, another noted plant collector, and both their collections returned to Britain on the same ship. *Primula japonica* and *Lilium auratum*, both collected from Japanese nurseries, returned with him to Britain where he spent a comfortable retirement on the proceeds of the sale of objets d'art collected during his travels.

With the exception of George Forrest, already mentioned and excluded from this article, the great phase of Chinese collecting concluded with the joint travellings of Frank Ludlow and Major George Sherriff. A monumental work of scholarship, "A Quest of Flowers" by H. R. Fletcher (published by Edinburgh University Press) covers in great detail their travels and collections. A glance through this book shows hardly a page without a mention of a real "plantsman's plant".



Fig. 55—*Exochorda racemosa*
See page 240

Photo Dr. B. Burbidge

Fig. 56—*Uvularia grandiflora*
See page 242

Photo Dr. B. Burbidge



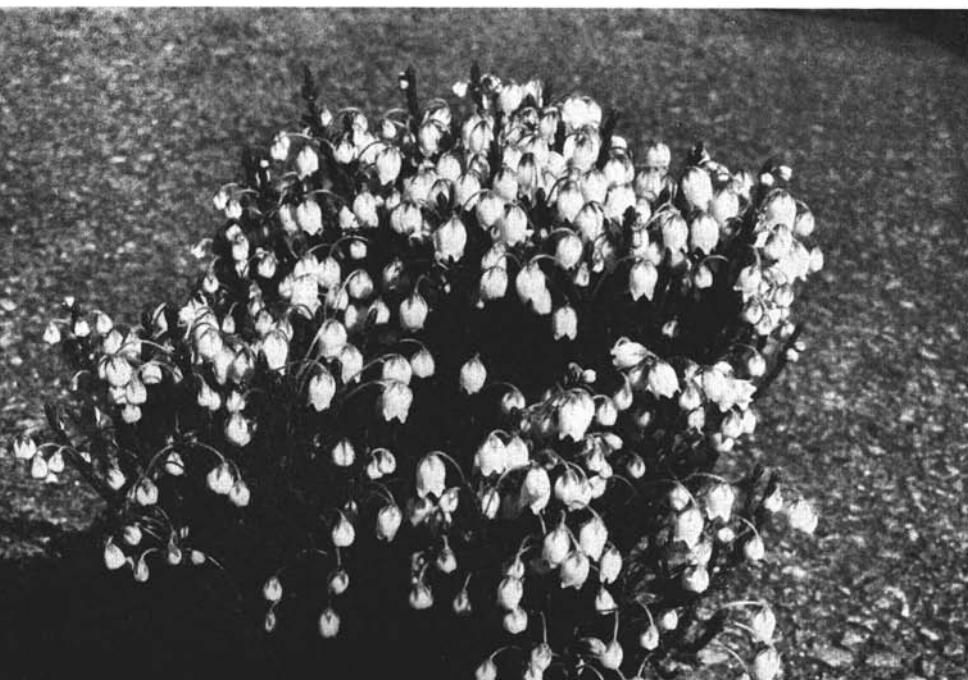


Fig. 57—*Embothrium coccineum*
See page 244

Photo Dr. B. Burbidge

Fig. 58—*Cassiope selaginoides* L. & S. Form
See page 282

Photo J. D. Crosland



Those privileged to have visited Mrs. Elizabeth Sherriff's garden at Ascreavie in Scotland will have seen in one place a living monument to the industry of these two collectors. Apart from those species which bear the epithets *sherriffii* and *ludlowii* are such gems as *Primula ioessa*, *P. muscoides*, *P. kingii* and *P. sandemaniana*, *Corydalis cashmeriana* (previously known but established by Ludlow and Sherriff) and many species of *Meconopsis*. Many of these plants were sent back by air, increasing their chances of survival many-fold, but this in no way diminishes the remarkable achievements of these two collectors.

CENTRAL AND WESTERN HIMALAYAS

William Roxburgh went to India as a surgeon for the East India Company in 1776. His introductions were almost exclusively from lowland India and consequently were plants for the tropical house. It was not until the arrival of Dr. Joseph Hooker on the Indian scene in 1848 that more hardy plants began to arrive back in Britain. Hooker travelled to Sikkim with Dr. Archibald Campbell, the political agent in Darjeeling. They had many troubles with petty officials despite the Rajah of Sikkim's blessing on their explorations and on one occasion were imprisoned for over six weeks. Lord Dalhousie's annexation of Sikkim was an almost direct result of this incident. They added 33 new species of *Rhododendron* to those already known.

After Forrest and Kingdon-Ward, the insatiable Bulley's nursery applied in 1913 to Edinburgh for a further collector. R. E. Cooper, who had already worked at the botanic gardens in Calcutta and Darjeeling, was then at the Royal Botanic Garden and he was immediately sent out on an exploratory trip to Sikkim. His second trip the following year was to Bhutan and despite the necessity of visiting a great many governors and the Maharajah himself he managed to collect a great deal of material, much of it herbarium material for scientific study. *Viburnum grandiflorum*, *Cotoneaster cooperi*, *Primula eburnea* and *Buddleia cooperi* were among his living introductions. Cooper, like Forrest, frequently used local collectors to assist him. His later years were spent as Curator at the Botanic Garden in Edinburgh.

AFRICA

The vast majority of hardy introductions from this continent come from the south and the Aberdonian, Francis Masson, is well-known for his introductions from the Cape. Masson was the first official collector sent out from Kew and once again it was Banks who was

responsible. He travelled out as far as the Cape with Cook on his second great voyage in 1772. He soon met Thunberg and they frequently travelled together despite no common language except for an extensive knowledge of Latin. (Masson was a regular correspondent of Thunberg's fellow countryman Linnaeus). It was in South Africa that Masson's life-long passion for succulent plants began and his "Stapeliae Novae" (1796-7) is still a classic and important work on this group of plants. As well as 40 Stapelias he introduced around 70 Mesembryanthemums (in the loosest use of that generic name), nearly 100 Ericas, *Nymphaea caerulea*, *Ixia viridiflora* and many fine oxalises, pelargoniums and so on.

After two expeditions to the Cape, Masson returned to Britain in 1795. At 56 years of age he had no pension to look forward to and eventually secured a post as a collector in Canada. This conveniently carries us on to North America, with only a passing reference to James Niven, who collected many Cape Ericas and *Gazania pavonia*.

NORTH AMERICA

Masson was unlucky and unsuccessful in Canada. On the voyage out his ship was attacked by a French pirate and he arrived in poor shape after changing ships twice. Many of his consignments of seeds to Banks were lost on the voyage back, but *Trillium grandiflorum* is a notable result of his explorations in the area to the north of the Great Lakes.

Thomas Drummond was the owner of a nursery near Forfar and travelled on Sir John Franklin's second Arctic Canada expedition in 1825. He split off from the main expedition and crossed by canoe and horse to the eastern side of the Rocky Mountains. He spent the whole of the winter of 1825-6 in a brushwood shelter without a companion or even a book to read, dependent only on what he could shoot for food. He used his vasculum as a rattle to scare off grizzly bears and made no reference to his solitude except to admit that he was a little lonely. His voyage back the following year was also dogged by hardship and winter again set in before he could reach a comfortable haven. He arrived back in Britain in 1827 with David Douglas.

John Fraser and John Lyon, both Scots, had been working separately on the eastern side of the States. To Fraser we owe *Allium cernuum* and *Uvularia grandiflora* (fig. 56) and to Lyon, *Iris fulva*, but it is to David Douglas that we turn for a really outstanding collection of North American plants. Douglas was born at Scone, near Perth, in

1799 and, like Forrest, was a man far happier out of doors. He was a poor pupil but a great naturalist and worked well in various gardens, firstly in the service of the Earl of Mansfield, then at Valleyfield, near Culross, Sir Robert Preston's garden, and finally in the Glasgow Botanic Garden. The Horticultural Society had him in mind as a collector for China but political problems diverted him to the Americas. His first trip resulted in little of importance except some fruit trees, but in 1824 he left on the long voyage round Cape Horn, via the Galapagos Islands, and finally arrived at the mouth of the Columbia River on America's western coast in 1825. Almost immediately *Ribes sanguineum*, *Gaultheria shallon* and *Rubus spectabilis* were "in the bag" and destined for our gardens. Further exploration quickly added *Clarkia pulchella*, *Purshia tridentata*, *Eschscholzia californica*, several lupins and a number of penstemons. A list of Douglas's best plants alone would take many pages and his explorations make one of the most exciting adventure stories of all time, though as yet there is no truly "botanical" biography available. As mentioned earlier, he and Drummond returned to Britain together. Drummond's excellent scientific collections caused barely a stir, but Douglas's horticultural tour-de-force with more fine plants than had ever arrived in Britain at one time caused an immense sensation. Many conifers, including the Douglas Fir, *Mimulus moschatus* (now almost a "British native"), *Cornus alba* and *Mahonia aquifolium* made their first appearance over here.

At home he became increasingly irritable and was glad to be sent out to America again in 1829. This time he went as far south as California (then part of Mexico) sending back *Limnanthes douglasii*, *Delphinium cardinale*, *Garrya elliptica*, that odd member of the poppy family, *Dendromecon rigidum* and many more.

The tragic end to this trip in a bull pit in Hawaii is part of botanical legend.

AUSTRALIA AND NEW ZEALAND

Many Scots play very important roles in exploration and discovery at the "bottom end of the world", but very little of horticultural merit has come from their travels. Robert Brown, a "straight" scientific collector, travelled with Matthew Flinders from 1802 to 1805. Allan Cunningham went out from Kew and with Oxley made outstanding discoveries in Australia in the early 1800's (the number of times the name Cunningham crops up on maps of south-eastern Australia is

testimony to this). He decided that he could blend discovery and botanical research, but he never had time to work on his collections before he was off on another journey. Acacias and Grevilleas are among his introductions.

Allan Cunningham turned down the post of colonial botanist in favour of his brother Richard, who sailed for Sydney and arrived at the beginning of 1833. Unlike his brother, Richard was no explorer, had a poor sense of direction and was endlessly getting lost. His headstrong nature and poor route finding resulted in his wandering for many days until his horse died. He was found by a group of aborigines, but his delirious irrational behaviour alarmed the natives, who killed him. His travels resulted in *Fuchsia procumbens* from New Zealand and little else.

Later on Allan returned to Australia but he found the post of colonial botanist and the extra duties such as growing vegetables for the Governor little to his liking. *Clianthus puniceus* is probably the most spectacular discovery of his second time in Australia, where he died in 1839.

James Drummond, after a number of different government botanical posts went "freelance" and in 1835 bought a 3000 acre farm in Western Australia. He exchanged regular letters with and sent specimens to Hooker at Kew, who published many extracts from his letters. He made many major journeys into the interior, often for months at a time. The climate of Western Australia could only produce glasshouse or, at the best, very delicate material. *Boronia megastigma*, *Chorizema varium*, *Pimelia spectabilis* and *Anigozanthus pulcherrimus* (the kangaroo's paw) are among his introductions.

As a student at the Royal Botanic Garden, Edinburgh, H. F. Comber made many abortive efforts to become an assistant to George Forrest in his Chinese journeys, but his destiny lay in other parts of the world. From Chile and the Argentine he brought such gems as *Embothrium coccineum* (fig. 57), *Azara integrifolia* and *Pernettya leucocarpa*, then went to Australia. His introductions were far from hardy, but *Gaultheria hispida* and *Richea scoparia* have a place in our gardens.

EUROPE

Bringing us down to earth we cannot finish even a short article on Scottish collectors without mention of one of the most colourful figures in Scottish horticulture, Peter Barr. Chapter 4 in Mea Allan's excellent book "Plants that changed our Gardens" (David & Charles, 1974)

covers his life and plants in detail. Barr, born in Govan in 1826 and eventually known as "the Daffodil King", had a succession of jobs in seedsmen's firms, eventually owning his own firm. He did an enormous amount to re-popularise the tulip in Britain, but Narcissi were his passion. He was responsible together with J. G. Baker and F. W. Burbidge for the 1884 R.H.S. Conference on Narcissus naming. This conference came out with the provocative dictum "Garden varieties of Narcissi, whether known hybrids or natural seedlings should be named in the manner adopted by florists and not in the manner adopted by botanists". He travelled in search of Narcissi in southern France, northern Spain and Portugal and brought back bulbs in prodigious quantities—"11,900 of a small *corbularia*" and so on, and his journals are full of remarks such as "in this area very few bulbs remained undug, so we went in search of other habitats".

In his later life he went on a world tour to popularise the daffodil and at the age of 81 he began an enthusiasm for primulas and started a collection which reached several thousand plants.

CONCLUSION

As early as 1927 E. H. Wilson said that plant collecting was at an end and that the world's flora was an open book. Perhaps the pioneer days have now gone, but many fine plants have been lost and are worthy of re-introduction. Air travel, the polythene bag and the Land Rover all makes this more possible now and the high mountains of South America are still barely touched. Maybe the most spectacular plants are now in cultivation: Everest has been climbed, but I haven't noticed a decline in mountain climbing.

Joint Rock Garden Plant Committee

ST. ANDREWS—2nd OCTOBER 1976

AWARD TO PLANT

CERTIFICATE OF PRELIMINARY COMMENDATION

To *Cyclamen cilicium* 'Alpinum Album', as a flowering plant for the alpine house. Exhibited by Mrs. B. B. Cormack, 199 St. John's Road, Edinburgh.

AWARDS FOR EXHIBITS

CERTIFICATE OF CULTURAL COMMENDATION

To Mr. A. Holman, 34 Park Road, Milnthorpe, Westmorland, for a well grown plant of *Cyclamen hederacifolium*.

To Mr. J. D. Crosland, Treetops, Torphins, Aberdeenshire, for a well grown specimen of *Raoulia eximia*.

EDINBURGH—26th MARCH 1977

AWARDS TO PLANTS

FIRST CLASS CERTIFICATE

To *Soldanella minima* as a flowering plant for the rock garden and alpine house. Exhibited by J. R. Johnstone, Esq., 22 St. Agnes Gardens West, Ryton, Tyne and Wear.

AWARD OF MERIT

To *Pygmaea pulvinaris* as a flowering plant for the rock garden and alpine house. Exhibited by D. F. Mowle, Esq., 16 Peacock Lane, Hestbank, Lancaster.

To *Dionysia michauxii*, as a flowering plant for the alpine house. Exhibited by E. G. Watson, Esq., 1 Ewesley Gardens, Wideopen, Newcastle upon Tyne.

To *Dionysia lamingtonii*, H1909, as a flowering plant for the alpine house. Submitted by E. G. Watson, Esq., 1 Ewesley Gardens, Wideopen, Newcastle upon Tyne, and by the University Botanic Garden, St. Andrews.

CERTIFICATE OF PRELIMINARY COMMENDATION

To *Primula tyrolensis*, as a flowering plant for the alpine house. Exhibited by E. G. Watson, Esq., 1 Ewesley Gardens, Wideopen, Newcastle upon Tyne.

AWARDS FOR EXHIBITS

CERTIFICATE OF CULTURAL COMMENDATION

To E. G. Watson, Esq., 1 Ewesley Gardens, Wideopen, Newcastle upon Tyne, for well grown plants of *Dionysia freitagii*, *Dionysia michauxii* and *Dionysia lamingtonii*, H1909.

To J. R. Johnstone, Esq., 22 St. Agnes Gardens West, Ryton, Tyne and Wear, for a well grown plant of *Soldanella minima*.

To the University Botanic Garden, St. Andrews, for well grown plants of *Dionysia bryoides* and *Dionysia lamingtonii*, H1909.

Spanish Mountains in Summer

by BRIAN HALLIWELL

THE SIERRA NEVADA, a range of mountains rising to 11,370 ft. in Mulhacen, is in Southern Spain running parallel to the Mediterranean coast and close to Granada. Most of the range is composed of siliceous rocks with only a few relatively small areas of limestone; one of these is the Cerro Trevenque. On the lower slopes of the mountain are areas of cultivation with the occasional farm. Along the sides of the road, between fields and on the sides of ditches, were many interesting plants.

Probably the most common and very showy was the Spanish Oyster Plant, *Scolymus hispanicus*, which had spikes of bright yellow flowers reminiscent of vertical dandelions amongst and above spiny leaves. Phlomis of several species were numerous. A shrubby species, *P. lychnitis*, had narrow white-felted opposite leaves with stems about 12 inches in height and in the upper leaf axils were whorls of a few yellow flowers. *P. crinita*, with similar leaves and of the same height, had whorls of milk-chocolate-coloured flowers. The most impressive was *P. herba-venti*, which was much branched with only slightly hairy grey leaves but with whorls of many flowers of a pinkish purple.

Other grey-leaved plants were the Lavender Cottons, small compact bushes with felted leaves and just producing their yellow button flowers. The most common was probably *Santolina rosmarinifolia*, although the rare *S. elegans* is to be found in the region. On the banks of the road side were the fading pink flowers of *Astragalus monspessulanus* together with the curious silvery bracts of *Paronychia aretioides*.

There were also odd clumps of shrubs familiar to most gardeners, in full flower; these were Spanish Broom, *Spartium junceum*. What a good plant this is for summer flowering and yet it is so often despised because it is easy to grow. There were occasional trees to provide some shade from the intense heat, such as old olives which always seem gnarled and so suggest great age. Another tree which seemed familiar was the hawthorn, which proved to be but a form of the common kind, *Crataegus monogyna ssp. brevispina*. In the shade of these trees were a few clumps of the attractive *Paeonia broteroi*. These were about 18 inches in height with biternate leaves which were a glossy green above and glaucous beneath, above which seemed to float pink goblets 4 inches across.

The road started to climb up through groves of Maritime Pine, *Pinus pinaster*. Probably because the soil was shallow, trees were small of stature and well spaced. As an undercover, especially near the road, were a number of kinds of *Cistus* and *Halimium* both with similar flowers, but in the former they were white or pink and in the latter yellow. There were several kinds of leguminous shrubs, some were spiny, but the most beautiful, which was not spiny, was one of medium size with silvery leaves and large bunches of yellow flowers, *Adenocarpus decorticans*. The trees began to thin and give way at about 6000 ft. to scrub of roses, blackthorn and *Berberis*. In between, the grass was transformed by masses of rock roses, both white and yellow, which were probably *Helianthemum apenninum* and *H. hirtum*.

A mat-forming trefoil was *Lotus glareosus* with flowers of two colours; they opened to a clear yellow but with age turned to a reddish-orange. Of a rather startling shade of pink were tiny clumps of a Centaury, *Centaureum erythraea grandiflorum*. Somewhat taller, but most numerous and with flowers of several colours—pink, lilac, white and yellow, set in inflated calyces was an Alpine Milkwort, *Polygala boisseri*. Where limestone poked through the turf and grass was thin were occasional plants of Toadflax; sometimes it was the reddish-brown-flowered *Linaria aeruginea* or the yellow *L. verticillata*. In the shade of the pine scrub were taller herbaceous plants. There was an unspectacular long-stemmed Thrift, all of two feet in height, with rather dirty white flowers, *Armeria alliariifolia*, but of a purer white was a buttercup, *Ranunculus aconitifolius*, whose double-flowered form is better known in gardens. A change of colour was provided by a tall Mountain Avens, *Geum heterocarpum*, with pale yellow flowers, and for contrast were the blue and green flowers of a tall Columbine, *Aquilegia nevadensis*. The most attractive plant in nature's herbaceous border was another peony similar to that already described, but this was *Paeonia coriacea*.

Continuing the upward climb, the scrub began to change and two low-growing but spreading junipers began to appear in some quantity. One which had grey spiny leaves was *Juniperus communis* ssp. *nana*, whilst the other with soft dark green scale-like leaves was *J. sabina* ssp. *humilis*. Much more spectacular though was the great expanse of Hedgehog Broom, *Erinacea anthyllis*, which formed hummocks of interlacing leafless spiny green branches within whose protection were the mauve-blue pea-shaped flowers. Sometimes seen as an isolated bush on a rock garden, here it was covering acres.

Another spiny shrub, though with leaves and crowned with yellow flowers, was an unusual crucifer, *Vella spinosa*. In amongst all this scrub were the remains of the spring display now ripening their seed pods. A Tulip would almost certainly have been the yellow-flowered *Tulipa australis*, a Fritillary probably the chocolate-red *Fritillaria hispanica*, and a squill which may have been *Scilla ramburei*. The only bulbs still flowering were the inevitable blue Grape Hyacinth and a white-flowered Star-of-Bethlehem; a non-bulbous plant somewhat similar to the last plant also with white flowers and only a few inches high was *Anthericum boeoticum*.

Continuing upward the scrub thinned and hummocks of *Thymus granatensis* began to appear, well covered with pink flowers. There were the fading deeper pink flowers of *Prunus prostrata* sitting on the prostrate branches which seemed to lie on the ground. Of similar shade of colour were globose maroon blooms of a flowering onion, probably the Wild Chives, *Allium schoenoprasum*. A complete contrast was provided by the graceful clumps of the beautiful blue-mauve flowers of *Linum narbonense*. Forming mats of greyish hairy leaves on and amongst limestone rocks was *Pterocephalus spathulatus* with pink flowers two inches in diameter and almost stemless.

If nothing else had been interesting on the trip, all would have been worthwhile just to see that almost mythical plant, a paragon amongst a genus of desirable plants, *Convolvulus nitidus*, about which Farrer in his 'English Rock Garden' enthused. How better to conclude this article than to quote his description of this plant: 'One of the loveliest of all—this treasure forms enormous wide and perfectly light masses in dolomitic fissures, dry stony places, and barrens in the sub-alpine and alpine regions of the Sierra Nevada between 6000 and 7000 ft. (as on the summits of Dornajo, Trevenque and Aquilones) but nowhere is common. The cushion is built of ovate, blunt, folded little leaves marked with nerves and gleaming brilliantly with a plating of the finest silver sheen, soft and silky. Upon this springs stems so short as to be no stems at all, each carrying from one to four large ravishing cups of rosy white seeming to be scattered upon the surface of the mat; and in their general effect giving the casual eye a notion that a clearly blushing *Oxalis enneaphylla* (such as the eye has never seen) must have stuck its blossoms over a dense high alpine mat of *Potentilla nitida*. (It seems an awfully shy flowerer.)'

Some Dwarf American Irises

by JEAN G. WITT

OF APPROXIMATELY two dozen species of iris native to North America perhaps half could be classed as dwarfs—here are eight of the most popular and widely grown ones, four from eastern United States and four from the Pacific Coast.

Iris setosa var. *canadensis* or *I. hookeri*, the Atlantic counterpart of the Alaska Wild Iris, inhabits river banks, seashore meadows and rocky headlands from Labrador and Nova Scotia to Quebec and Maine. In the forms with which I am most familiar, the flowers are a soft striated blue, occasionally with six falls instead of three. The leaves are deciduous and the plants form low tufts of stiff bloom stalks to about eight inches. Not all east coast forms are small, and one needs to watch for strains listed as 'dwarf' or 'nana'. The most floriferous plants I have seen are growing in poorly drained clay at the top of a low north-facing wall. Gravelly soil is also suitable if well watered. Possibly this is not a long-lived species—in any event, it comes readily from seed and can be renewed every few years if necessary. Plants recover more quickly if divided in early spring just as growth is starting, rather than in the fall when they are about to go dormant. White-flowered forms are said to exist, but I know of none in commerce.

Iris verna is native to the Appalachian Mountains from Pennsylvania to Georgia. Habitat descriptions such as "on granite ledges under oak trees" suggest that rich woodland soil, partial shade, and adequate summer moisture best meet its requirements. This species has the reputation of being a somewhat difficult garden subject on the west coast, and I have been only moderately successful in getting it to bloom and increase. However, it grew rampantly for years in the University of Washington Arboretum's lath house in the company of woodland bulbs and rhododendrons. Many colour variations have been described in the past—white, orchid pink, and deep violet—but seem not to have persisted in gardens. In the available forms flowers are usually medium violet, shaped much like a dwarf bearded iris, but with a spear-shaped signal of cadmium yellow instead of a beard. Flowers bloom about mid-May with the trilliums and give off an odour of sweet violets. Foliage is evergreen, old leaves lying almost on the ground by spring and new ones, ultimately a foot long, appearing after flowering.

Also from the south-eastern part of the United States is *Iris cristata*, which occurs from Maryland to Georgia and as far west as Oklahoma—a widely grown and rewarding rock garden subject. Leaf-mould enriched soil and partial shade are the usual recommendations. It thrives for me under these conditions, with an occasional top-dressing of compost; it does equally well for a friend who has it planted in full sun. New growth spreads away from old on wiry stolons; a well-grown clump may cover a couple of square yards and will be a sheet of bloom in early May. The flat two- to three-inch-wide flowers—said to have a faint spicy fragrance—bear tiny rooster-comb crests of yellow or orange on a “tea apron” of white, ringed in violet which seems to have leaked out onto the lavender blade of the falls. Perianth tubes support the flowers—usually two to a pair of large green spathe valves—the entire plant being hardly more than four to six inches tall. Forms from the Ouachita Mountains are taller with an inch or more of true stem below the spathes, and have handsome lavender-blue flowers. An especially good medium violet, known as ‘Abbey’s Violet’, is widely grown in the Seattle area and is said to have originated with a Vermont nurseryman of that name. ‘McDonald’s Form’ has milky blue flowers. At least one good vigorous white with a yellow crest is in commerce, while a pure white was recently reported from Kentucky, and other whites, including a very tiny one, have been collected in Georgia. This species moves very well while in bloom, or right after. Slugs are very fond of it, and constant baiting is necessary to defend the flowers.

Iris lacustris from the Great Lakes Region looks much like a tiny *I. cristata*, but is considered distinct from that species by reason of its disjunct range, different chromosome number, and preference for calcareous soils. In northern Michigan it grows on old sandy beaches in pinewoods; elsewhere it is found on cliffs and gravelly lake shores. Because of its liking for lime it is a bit difficult for us in Seattle with our granite based soils. I was unable to establish early spring collected plants from Michigan; however, a fall-planted start from a western nursery has survived. Flowers of *I. lacustris* are smaller than those of *I. cristata*, with strap-shaped petals of lavender marked in violet, and the entire plant is less than 4 inches tall. A white-flowered form has been collected and is somewhat precariously in cultivation in the north-east.

Iris tenuis was originally placed among the Pacific Coast irises but studies subsequently suggested that it has more in common with the

Evansia or crested irises and it is now included with them although it has no crest. Native to damp valley-bottom woodlands on the Clackamas River and adjacent drainages in northern Oregon's Cascade Mountains, this dainty endemic is found in a very limited area and has been placed on the endangered plant list. It grows well in partial shade in my garden and blooms, but would obviously prefer a damper richer soil. Dainty flat flowers about 1½ inches across rise on slender stems over deciduous foliage, reminding one of *I. gracilipes* doubled in size. In Seattle it blooms in May. White is the usual colour, though some have lavender style arms.

The remaining American species which can be classed as dwarfs belong to Series *Californicae* and are found in the Pacific Coast States. Though there are a total of eleven species and five subspecies in the series, few of these can be called "cultivated" plants at this point, and a number of them are too large for the usual rock garden. Only the three northern ones with which I am most familiar will be considered here.

Iris tenax is the most northerly species of the Pacific Coast Irises, ranging from south-western Washington State down into southern Oregon, from the sea coast up to about 4000 feet elevation in the Cascade Mountains. It grows in prairies and open forests and is actually favoured by clear-cut logging. In sunny locations the grassy deciduous foliage forms large clumps topped with dozens of flowers in late spring. The plants vary greatly in size, but the strapping ones can be avoided and the smaller forms—8 to 10 inches—are charming rock garden subjects. The flowers, three inches or more across, are commonly lavender, blue, or violet, rarely white. Pale yellow-flowered populations (f. *gormanii*) are found in some areas of Oregon and, where the two colours merge, variations are endless—tan, pink, salmon, raspberry, red-violet, etc. Signals are usually yellow, sometimes edged with an increase in the ground colour. A few collected clones have been named and distributed: 'Valley Banner', perhaps the most widely grown colour form beyond the type, has rich violet style-arms, white falls elaborately patterned in violet, and white standards with violet mid-ribs. Tiny white-flowered 'Skookumchuck Fairy' was found on a river of that name. 'Monday's Child', also white, has a signal of blue stitching and is somewhat ruffled. Wide-petalled 'Ronald Carroll', blue-tinted white with a yellow signal, is a garden selection.

Iris chrysophylla is quite dwarf, some forms being nearly stemless, while others send up slender stems a few inches tall. Its large spathe

valves are often tinted rose, and the bases of the narrow, evergreen (and not especially yellow) leaves may also be stained red. The spidery flowers up to $3\frac{1}{2}$ or 4 inches across are borne on long perianth tubes. Petals are white or creamy with yellow signals and dark hair-line veining. Pods form almost at ground level, and on splitting become twisted and ruffled—straw-coloured repetitions of the flowers. This species grows in coniferous forests in the mountains of west-central Oregon—both Cascades and Coast Range—and is more shade tolerant than *I. tenax*. There are no named clones at present, but one interesting and attractive variant is known as the Noti Iris (erroniously *notiensis*) from the small town of that name west of Eugene, Oregon. It is thought to represent some long-ago infusion of *I. tenax* traits of which only the orchid colour remains in a now-stable population. This is a delightful rock garden subject with bright rosy spathes and large orchid flowers, blooming in late April or early May. *Iris chrysophylla* and *I. tenax* often hybridise where their ranges intersect, giving rise to daintily marked flowers in many variations of orchid and white, intermediate in size and shape between the two species. This also happens in gardens: new *I. chrysophylla* seedlings, blooming for me for the first time this spring, exhibit the typical flower form and dwarf stature, but some other species have contributed a pleasing rosy blush to the falls!

Surely the most famous and popular Pacific Coast Iris species is *Iris innominata* from the mountains of South-west Oregon. Undiscovered until the 1930s (and hence 'unnamed'), its brilliant golden yellow colour has endeared it to Iris enthusiasts. Besides yellow in many variations, orchid to violet populations occur in the wild, and many fine intergrades have been collected. Where colours mix, both in the wild and in gardens, whites, roses, fawns and apricots appear, as well as white/violet, white/pink, and yellow/red bicolors. Among the smaller garden varieties grown in the United States are 'Santa Ana' and 'Santa Paula', variations on the golden yellow, six inches and under. 'Pixie People' is a collected red-violet self; 'Ami Royale' is purple-edged lavender with a large gold signal, eight inches tall. Gold and red-violet are blended in the bright brick red 'Claremont Indian'. White and gold 'Rogue' is named after one of the rivers where *I. innominata* grows wild.

Many named clones, both in the United States and in Britain, are hybrids of *I. innominata* with *I. douglasiana*. These are usually taller than the forms of *I. innominata* and possibly more permanent as cultivars. *I. innominata* also hybridizes with *I. tenax* in gardens, giving

especially good salmon, rose, or reddish flowers on eight- to ten-inch stems. Where the ranges of *I. innominata* and *I. douglasiana* overlap in the wild occasional hybrid segregates of dwarf stature have been found, with short, wide leaves and large, short-stemmed flowers. 'Bertha Stone' is violet with conspicuous white signal; 'Mini-Ma', only three to four inches tall, is pale lavender-blue. In gardens where a number of species are grown together, Pacific Coast irises are notorious for mixing until all species identity is lost—but this has been the gardeners' gain.

Pacific Coast irises move quite well at flowering time, provided a little care is taken, and this has been a great boon to the collecting of superior wild forms. In gardens, however, late September or early October is preferred, after new white roots are two or three inches long. Deciduous *I. tenax* also moves successfully in early spring just as new growth starts, but I find that the evergreen species divided then do not recover properly before our summer dry season begins. Attempts to transplant these irises in midsummer while their roots are dormant and to ship them bare root like the bearded irises have undoubtedly contributed to their reputation for being "difficult". Plants can be left undisturbed for years and should never be divided down to the last rhizome—large divisions seem to re-establish more readily than small ones. Establishing a small division one season and breaking up the rest of the plant the next will insure against losing a choice clone.

In the matter of garden location, Pacific Coast irises grow well in either sun or partial shade—their chief requirement being good drainage. Prairie or coniferous woodland soils are best, but they do quite well for me in glacial till with added compost. They are said not to thrive on limestone. Since the roots of Pacific Coast irises are much more easily damaged than those of bearded irises, cultivating near the crowns of the plants should be avoided. Bark mulch or pine needles can be used to keep down the weeds. Seedlings set out in permanent locations in mid-spring can be expected to bloom in two or three years. Both species and hybrids self sow liberally and named clones may be superseded by their own progeny unless seedpods are removed. On the other hand, seeds allowed to tumble down banks give rise to masses of colour and interesting unplanned variations.

Interest in species irises is currently at an all time high in the United States after decades of indifference—indeed, there is real danger that the 'bigger is better' approach of tall bearded Iris breeding is being extended to Pacific Coast natives. We hope, however, that there

are enough rock gardeners among us to counteract this trend. We are working quietly to increase the diversity of available dwarf natives, both by searching out additional colour forms in the wild (a task by no means complete) and by breeding and selecting small cultivars in the garden. Airmail shipment makes possible the sharing of new clonal material as never before.

INCREASE IN SUBSCRIPTION

AS FROM 1st October 1977 the *Ordinary* Subscription has been *increased to £2.50. Other Subscriptions remain the same*, i.e.: Family and Junior 50p. The Council regret having to increase the Subscription but it has no option if the Club is to continue publishing Journals of the same high quality. It is hoped that this new Subscription will remain constant for the next year or two. Members can help by enrolling new members to offset the increasing costs. Owing to complications in operating then in present conditions, *Covenants have been postponed* Members are welcome to pay in advance and the new membership cards will show any credit balance to be carried forward to the following year. RECEIPT OF A MEMBERSHIP CARD denotes that the *Subscription has been paid* for that year.

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Small Irises

by JOHN and CHRISTINE GOSDEN

THE GENUS *Iris* is surprisingly neglected by most rock gardeners. We suspect this may be because the easily grown ones have no "snob value" and many of the others have a reputation for undue difficulty. We would like to suggest that both these opinions may be unjustified, that many of the easy irises are well worth growing, and that the more difficult ones have qualities which justify the effort involved.

Perhaps another reason for the neglect of this genus is that there is no good reference book on the subject. The two classics by W. R. Dykes, "The Genus *Iris*" and "Handbook of Garden Irises" were published in 1913 and 1924 respectively and are long out of print and, in the case of the former, beyond the pocket of the ordinary gardener. In addition, plant collecting and botanical expeditions since their publication have added many new species to those described, and altered the taxonomy of others. A reprint of "The Genus *Iris*" has recently been published by Dover Books in a slightly reduced format, but, though it is a beautiful book it has no new material and is again too expensive for any but the most ardent enthusiast.

More recent monographs tend to concentrate almost entirely on the tall bearded iris hybrids; garden-worthy most of these are, but they are outside the scope of this article. Probably the best of these is "The *Iris*" by N. Leslie Cave (Faber & Faber, 1959) which gives a fair amount of space to small species and hybrids, but even this is now out of print. The bulbous species are well described in Brian Mathew's excellent "Dwarf Bulbs", but this is a largely descriptive work with little space given to cultivation and garden use. Patrick Syngé's "Collins Guide to Bulbs" gives more cultivation details but has a less exhaustive list.

It is not our intention to try to remedy any of the deficiencies in existing works, but merely to give an introduction to the genus and mention some of the plants which give us particular pleasure.

Irises are either bulbous or rhizomatous. In both groups there are some of generally easy cultivation and others which need more care. Let us deal with the bulbous irises first.

BULBOUS IRISES

These fall in turn into two groups which are very different in their cultural requirements. The first, the Reticulatae, is characterised by small bulbs and short stems, each bearing a single flower. The best known of these is *Iris reticulata* which in its various colour forms is widely, though still not commonly, grown. It generally blooms in February-March, and its rich blue-purple flowers with gold markings are equally freely produced in the garden or a pot. All that it, or most of its relatives in this section, asks are a rich free-draining soil, not too acid (they may prefer an alkaline soil, but seem to tolerate mildly acid conditions quite happily) and sun to ripen the bulbs after the foliage dies. A certain amount of care in placing these irises in the garden is needed, because the leaves, shorter than the flower stalk when the flowers open, elongate greatly after flowering and tend to flop about before dying off. An advantage of pot or raised bed culture over general garden culture is that this, like several other species, is deliciously scented, and their dwarf stature (6 ins. or less) makes them difficult of access to many less agile noses! In addition to the colour described above there is also a reddish purple known as 'J. S. Dijt' and a pale greyish-blue named 'Cantab.' There are also hybrids with *I. histrioides* which are deep blue with gold markings ('Harmony' and 'Joyce', only distinguished by their flowering times) and with *I. bakerana* ('Clair-ette', with sky blue standards and dark blue, white-flecked falls).

I. bakerana is a very early flowering member of the group, often by the end of January. Its flowers are a delicate pale mauve with a deep blue-purple blotch at the end of the falls, and are again sweetly scented. Perhaps this one is a little fussier than some as, without a good summer baking, it tends to fade away. However, given the right spot, and the sort of summer we have had recently, it and the preceding species multiply steadily by the bulb dividing into two or three new flowering size bulbs.

Unfortunately this is not the case with *I. danfordiae*. This iris must be a bulb nurseryman's dream, as after flowering the bulbs split up into tiny bulblets which then disappear instead of growing on. Only in a bulb frame can persistent flowering colonies be established. The pale greeny yellow, black speckled flowers are quite attractive, but we begrudge buying fresh bulbs every year. (For a good yellow iris, see *I. winogradowii*).

I. histrio is normally available in the variety *aintabensis*. This again is very early flowering (January-February) and is pale blue with

orange and black markings. The flowers are very long lasting, but it is better in a pot or frame than in the open garden.

I. histrioides, however, is definitely a best buy. The form usually found is var. *major* and this produces on stems only three or four inches high, masses of large, solid, deep royal blue sweet scented flowers. In our garden the first flower often opens on Christmas Day and they go on to flower right through January and into February. There are often flowers in March. Five or six bulbs soon multiply into an impressive patch giving the most marvellous heart-lifting sight in the dead dark days of winter. For sheer garden value this species is only rivalled by the winter flowering hardy cyclamen (*C. coum*).

We pass over *I. vartani*, which is a rather insubstantial plant, to come to *I. winogradowii*, the last to be mentioned in this section, and one of the great financial mysteries of gardening. Here we have a bulb which is as easy and multiplies as readily as its close cousin *I. histrioides*. Yet the price put upon it (£2.50 per bulb is the cheapest we have seen and it can be as high as £6.00) is such as to class it among those near impossibles like *Dionysia* or desperately slow propagators like *Trillium grandiflorum fl. pl.* We would be delighted if anyone could explain why this should be so—or, better still, find a way to change it. However, if you can summon up your courage, rob the housekeeping and pawn the cat, and buy one of these bulbs. Then (and this is a real act of faith) plant it in a sunny part of your rock garden (for it does better in the ground than in a pot) with a generous handful of bonemeal. Surround it with mousetraps, warfarin, slugbait, put a cage of wire netting over it to stop birds or squirrels digging it up, and early in February you will be rewarded with a rich lemon yellow flower with an orange ridge to the falls, of similar size but slightly looser shape than *I. histrioides*. Have faith and each year more and more flowers will be produced until at last you have one of the loveliest sights the open rock garden can show.

The second section of dwarf bulbous irises is the Juno section. These are so different that some botanists (particularly the Russians) favour putting them in a different genus. As far as we are concerned, they are still irises. The Americans call them "corn iris" because the leaves are alternate and deeply channelled, with the bases folded round the stem, like small maize plants. In most species the flowers are produced from the axils of these leaves, but in others the flowers are terminal. The flowers differ from all other irises in having the standards reduced in size and produced below the falls. The bulbs, however, are

the most extraordinary feature of this section for, instead of producing feeder roots from the base of the bulb, large fleshy permanent roots grow down from the bulb and it is from these that the small feeding rootlets are produced. It is most important not to damage these roots when handling the bulbs as their loss can mean considerable delay in establishing the plant. Unfortunately these roots are often missing from newly purchased bulbs, and although they may flower the first year one must be prepared to wait for some time for the next flowering. Very few of the Juno irises are suitable for open ground cultivation, and these are not generally the most exciting. *Iris bucharica* (cream with a yellow blotch) and *I. orchioides* (deep yellow self) do quite well in a well-drained, sunny, limy soil, growing 12-18 ins. (30-45 cm). They are attractive plants but the flowers are not large in proportion to the size of the plant, though they are freely produced in April-May and contrast well with the bright green foliage.

However, it is the other members of this section which need some form of protected cultivation, that justify the effort involved by their beauty. All of them need a very free-draining soil, high in lime and rich in nutrients, with careful watering when in growth (from October to May-June) and no water at all for the rest of the year. They may be grown in a bulb frame, a bed in the alpine house or in pots, but these must be very deep to accommodate the persistent fleshy roots mentioned above. Many of those described in the reference books are only barely in cultivation, having been introduced very recently, but among those in commerce are:

I. aucheri (syn. *I. sindjarensis*). This is very slightly tender, though with us it does well in an unheated alpine house. It is generally a pale lilac-blue in effect, with up to six large flowers on a 6-9 in. (15-20 cm) stem. The flowers are delicately scented (something between vanilla and almonds) produced in February-March and altogether it is an exquisite plant. It must have a fierce summer baking if it is to flower regularly, but it is one parent of two hybrids, both of which are more tolerant than either parent:

I. x sindpers is a cross between *I. aucheri* and *I. persica* (see below) and is tougher than either. It is still not a plant for the garden, but its scented greeny-blue flowers in March are very attractive.

I. x warlsind is a hybrid of *I. warleyensis* and *I. aucheri* flowering in March-April. It grows rather taller and the flowers are yellow and deep blue.

I. caucasica is sometimes available. This is very dwarf with up to

four large pale lime yellow flowers with a bright yellow ridge. Given very free drainage and good summers this might be possible outside, but we prefer not to take the chance.

I. graeberiana can definitely be grown out of doors in England, but our normal summers (unlike the last two) may not be enough to ripen the bulbs in Scotland. It grows from 12-18 ins. (30-45 cm) tall with silvery mauve and cobalt flowers in March-April.

I. persica is one of the heart-breakers of this section. It is very variable but always beautiful. Flowering in January-March on stems up to 8 ins. (20 cm) the flowers may be yellow, silvery-blue, creamy green, reddish purple or violet, or any intermediate. Many of the colours have been given varietal names, but they all share a distressing tendency to flower for one or two years and then bid a swift farewell. Success seems to lie in even stricter control of watering than is necessary for its brethren.

Other species that may from time to time be offered are *I. fosteriana*, *I. cycloglossa*, *I. magnifica* (this is up to 2 ft. (60 cm) tall and does well in the open garden), *I. microglossa*, *I. planifolia*, *I. rosenbachiana* and *I. warleyensis*. All are worth growing if you can find them.

RHIZOMATOUS IRISES

Those of interest to us here fall into four sections:

- (1) Non-bearded irises from western North America, the Californicae
- (2) Dwarf bearded irises of section Pogoniris
- (3) Crested irises of section Evansia
- (4) The irises of the mountains and deserts of the Middle East, Asia Minor, Iran, Afghanistan and southern U.S.S.R. These form the sections Oncocyclus and Regelia, and are collectively known as arillate irises from the presence of a fleshy white aril on their seeds.

(1) First the Californicae. These, in contrast to the delicate darlings described above, are most definitely plants for the open garden. They prefer a lime-free, humus-rich soil in sun or part shade where they will multiply rapidly to large clumps. The leaves are bright or dark green, grass-like, and the flowers are produced on stems 12-18 ins. (30-45 cm) projecting above the leaves. Several flowers are produced in a long-lasting succession on each stem, and they are grand for cutting as well as for garden decoration.

The only species at all commonly grown is *I. innominata* whose flowers may be yellow, purple or orange, in each case with darker pencilled markings. Other species in the group which may be found

are *I. douglasiana* (purple, reddish, violet or white), *I. tenax* (deep purple, yellow or white), *I. tenuissima* (cream, veined purple or red), *I. purdyi* (very similar), *I. bracteata* (pale yellow) and *I. hartwegii* (cream, yellow or lavender). Closely related to these species are two from western China, *I. chrysographes* (reddish violet to black with gold markings) and *I. forrestii* (clear lemon yellow with purple-brown markings) which require similar conditions. But (and here as confirmed species lovers we contradict ourselves) there is a race of hybrids between some or all of these species called Pacific Coast or Californian hybrids. Grow as many as you have room for, and they will all be beautiful. And here is the best bit—buy a packet of seed or beg some from people who grow them. Plant the seed in autumn in lime-free compost in a dwarf pot or pan. Sink the pan in a corner of the garden and forget it till spring. When the seedlings have about four leaves, knock them out of the pot and plant them in their final positions. They will flower, with luck, the following summer, 18 months from sowing, and we guarantee you will be delighted.

(2) The dwarf bearded irises are almost all forms or hybrids of *I. pumila*, *I. chamaeiris* and *I. aphylla*. They all need sunny, well-drained soil, with plenty of lime and fairly frequent division (every three years or so) as they tend to exhaust the soil.

I. pumila produces largish flowers on a stem less than one inch tall. The flowers may be dark red, pale yellow (var. *attica*), pale purple, dark purple or bright yellow, only one to a stem but many of them, in April-May.

I. chamaeiris differs only in being taller (3-9 ins., 7-22 cm) but has a similar colour range and flowers at the same time. There is now an enormous number of named hybrids between these species and *I. aphylla*, all less than 12 ins. (30 cm) in height, flowering in April-May with every imaginable colour and combination of colours, many with several flowers to a stem. They are all perfect for the rock garden or the front of a sunny border.

A last species from this section, and one with rather more "class", is *I. mellita*. This is again very dwarf, with flowers of a dusky smoky purple. The variety *rubro-marginata* differs only in the reddish edge to the leaves.

(3) The Evansia or crested irises contain three or four species of interest to us. They are all rather similar in flower shape and colour, having flattish flowers of lilac or lavender with a central crest which may be white or orange. They like a gravelly humus-rich soil, well-

drained but cool. *I. tectorum* is the tallest at 12 ins. (30 cm) or more, and has broader leaves than the rest. There is an exquisite white form of this species. It needs more sun than the others.

I. gracilipes is 8-10 ins. (20-25 cm) with narrow leaves, a very dainty plant which is not easy to establish and should only be moved in summer while it is in growth.

I. cristata and *I. lacustris* are almost identical, the latter being a miniature of the former, which is itself only an inch or so tall. They produce the odd flower at any time from May till October, but rarely have many flowers open at once. Frequent division and replanting might make them flower more freely, but we have not tried this.

(4) And finally those plants of mystery and magic which inspire passionate devotion in their admirers, and equally passionate antipathy in their detractors—the arillate irises. Farrer himself wrote a magnificent funeral oration for them in “The English Rock Garden”, which inclines us to believe that he had tried to grow *I. susiana* in the open garden and, not surprisingly, had failed. Let us say straight away that we have found several species to be not impossible, provided they are given the care that many of our readers lavish on plants which are, in our opinion, no more deserving than these. Their basic requirements are similar to those of the Juno irises—deep pots or raised frames, sandy soil with vast amounts of crushed limestone, generous feeding with artificial fertiliser during their short growing season, and bone dryness from June to October. A good soaking in October and then no more water till they are well into growth, plenty of water with added nutrients before flowering, and water with a low nitrogen, high phosphate and potassium tomato fertiliser as required after flowering until the leaves start to die or the end of June (whichever comes first). With this regime we have succeeded in growing (and flowering) several of these “impossible” irises and the results more than justify the effort involved.

All the *Oncoclytus* irises share the features of richly coloured flowers, often huge for the size of the plant, produced one to a stem in spring. Many of them have a large furry signal patch on the falls in vivid contrast to the petal colour. The *Regelia* irises are slightly easier of cultivation and have slightly smaller less spectacular flowers, often of subtle blends of colours, produced two or three to a stem. Very few of the species are in commerce in this country. Of those that are, only *I. susiana* is offered at all regularly, and while it is safe to grow this if you grow no others, we do not grow it because every

stock we know is virus infected. Although *I. susiana* itself is virus resistant, most of the other species are not, and we have no wish to see our hard-won stock wiped out! Other *Oncocyclus* species which are fairly easy to come by are:

I. lupina (syn. *I. sari*), 10-14 ins. (25-35 cm), yellow, with signal any colour from green through violet to black.

I. gatesii is one of the most spectacular of all plants, producing flowers up to 8 ins. (20 cm) in diameter on a stem 18-24 ins. (45-60 cm) in height. The ground colour is creamy white, dotted and lined with violet.

I. lortetii also has large flowers, in this species of white and pale yellow, dotted with crimson, giving an overall pink effect, on a 12 in. (30 cm) stem.

A larger proportion of *Regelia* species are available, among them:

I. hoogiana, one of the loveliest of all irises. The flowers are a bright uniform blue-mauve, with a golden beard, and the petals have a marvellously smooth solid texture. They are carried, two or three together, on an 18 in. (45 cm) stem and are deliciously scented. This species may succeed in the open garden, though the chances are better if it is protected from summer rain after flowering.

I. humilis (syn. *I. arenaria*) is more like *I. pumila* than it is like the rest of this group. The flowers are bright yellow with an orange beard, and grow about 2 ins. (5 cm) tall. It lives happily in the sunny rock garden.

I. korolkowii may be cream, violet or a bicolour, and grows from 12-24 ins. (30-60 cm).

I. stolonifera may again be rather tall, 12-24 ins. (30-60 cm), though a dwarf form is known. It has very variable flowers, brown-purple, tinged and blended with pale blue, cream, green or kingfisher blue.

All the *Regelia* irises are difficult in pots because their rhizomes tend to run about, unlike the *Oncocyclus*, which are very compact.

In addition to these species there is a race of hybrids between the two sections, the *Regelio-cyclus* hybrids, mostly grown by the Van Tubergen nurseries in Holland and given names from classical mythology. Many of these are very beautiful (despite Farrer's disparaging remarks), combining something of the exotic beauty of the *Oncocyclus* with the rather easier cultivation of the *Regelias*. Among the best and most easily found of these are 'Thor', 'Ancilla', 'Chione', 'Clotho', 'Sylphide', 'Teucros' and 'Dardanus'.

However, there are also many other species, some of which may

prove easier than those described above. Among the ones we grow (imported from Israel and U.S.A., where they have an enthusiastic following with its own organisation) are:

I. atropurpurea, 6 ins. (15 cm), purple-brown to black, which sounds very sombre, but the petals have an amazing lustre and are very beautiful. This one seems vigorous and fairly easy.

I. auranitica, 12 ins. (30 cm), tawny golden yellow, with chestnut signal and very fragrant.

I. camillae, 6 ins. (15 cm), blue, spotted violet.

I. haynei, 9-16 ins. (22-40 cm), violet, veined and dotted red.

I. samariae, 15 ins. (37 cm), pink. There is also a rare yellow form. This is another really spectacular flower—6 ins. or more across.

There are still other species we would like to grow, especially *I. mariae*, *I. atrofusca* and *I. urmiensis*. If anybody can tell us where to get them we would be grateful. And in U.S.A. hybridisers are busy trying to combine the quality of the arillate iris flowers with the ease of cultivation of the ordinary bearded iris, which would make these lovely things accessible to everyone.

There are many other species of small iris suitable for the ordinary garden that we have not mentioned here, but descriptive lists like this can become tedious until you have seen some of the plants yourself. We hope, however, that we have given some idea of the scope of the genus *Iris* for the rock gardener, and perhaps fired one or two people with our own enthusiasm.

Plant Notes

NOTOTHLASPI ROSULATUM

Notothlaspi rosulatum is an alpine from the New Zealand screes. It is regarded as monocarpic, and is uncommon in cultivation, possibly because seed is difficult to come by. In these days of ball points, its common name of 'penwiper plant' has an endearing air of the archaic. So I was delighted to receive seeds from a 1974 seed exchange, and even more delighted when two of these seeds germinated in their $\frac{1}{2}$ pint cream carton (inelegant, but a good depth for tap roots). One seedling survived to overwinter, still in its seed compost, on a capillary bench



Fig. 59—*Rhododendron campylogynum in myrtilloides* Photo R. J. Mitchell
See page 266

Fig. 60—*Dionysia freitagii*
See page 268

Photo Dr. D. Stead



in the alpine house. A flower head was produced in 1975, just in time for Glasgow Show, and was fully out for Dunfermline. After this debut, *Notothlaspi* was plunged outside in a frame, to give the local insects an opportunity to disagree with my opinion of its reputed 'fragrance', and to effect fertilisation. Either the insects shared my opinion or they were the wrong insects, for by August *Notothlaspi* had gone to its long rest unpollinated. Without much hope, I left the lot in the frame 'just in case'.

1976 has been a hectic year, but when heat and drought precluded other gardening activities in August, at least the frame could be tidied for the winter, and the sad cream carton was fished out to be emptied on the compost heap. The top dressing of sandstone chips was frugally removed and this revealed a single stem surmounted by three undoubted *Notothlaspi* rosettes. I cannot see that this is a seedling, sporting as it does three rosettes. Salmon states that "small plants with flowers may arise from the stalks of older plants, sheared off by moving stones". Perhaps the loss of the top growth from other causes, together with the failure to set seed, may have stimulated the roots to produce new top growth—but they certainly took their time about it!

There seem to be two morals to this tale: (1) the great exhibitors' sacrifice of the flourish of flowers as soon as the show is over does benefit the plant; (2) procrastination does pay—sometimes!

Thorntonhall

JOAN STEAD

RHODODENDRON CAMPYLOGYNUM

THIS rhododendron has been in our gardens for over 60 years, since the type was introduced in 1912, yet it is not as widely grown as its undoubted merits suggest it deserves. It is the sole member of the *Campylogynum* series, but occurs in a number of forms which vary considerably in habit and flower colour—so much so that at least two of them have from time to time been given specific status. It comes from that area which is the source of so many of our finest plants—the region between Burma, Tibet and China—which seems to have perhaps the richest flora of any temperate part of the world.

R. campylogynum is by no means one of the most spectacular rhododendrons yet it is extremely pretty and has a very subtle appeal, and the longer we grow it the more its quiet charm attracts us. It is a beautiful neat plant in most forms, with dark shining leaves above which the flowers are produced on long stalks, usually two or three to

a cluster. The flowers are slightly nodding, bell-shaped, and very freely produced, usually covering the whole bush, and since most forms flower with us in late May or June, they generally escape the worst of the frosts. The plants themselves are completely hardy and, grown in a moisture-retentive but well-drained soil, flower best and retain the neatest habit in full sun.

We grow the type in three colour forms: a dusky purple which looks a little dull with the light on it, except for its lovely bloom like a plum, but seen against the light becomes a rich wine colour. There is also a form usually described as salmon-pink, but we find it a slightly fleshier tone than this; this form is distinguished by a yellow margin to the leaves and is one of the latest to flower. Finally, we have an apricot flowered form which is an unusual colour for a dwarf rhododendron. Of the three, we have a slight preference for the first, but all of them are lovely with thimble-shaped flowers on neat dome-shaped bushes.

The next form is perhaps our favourite. This is var. *leucanthum*, which may not, in fact, be a true variety but a clone, that is, all the plants may have been vegetatively propagated from a single sport. Whatever the taxonomic status, this is a completely captivating plant with delicate creamy-white flowers making a splendid contrast to the deep green leaves.

Next comes var. *charopoeum*, which has slightly larger leaves and rather wider, flatter flowers than the type. None of the forms so far described grow taller than 18 ins. but var. *cremastum* is much more upright-growing, compensating for its increased size (up to two feet or so) by having flowers of a lovely sealing wax red. This is the clone ‘‘Bodnant Red’’, but there is a purple form which we have not grown.

Finally comes the dwarfest form, var. *myrtilloides* (fig. 59). The leaves and flowers of this form are also smaller than the rest and it forms dense, dark green cushions. We have two colour forms, one dark purple and the other pink. Both are perfectly delightful.

All forms seem reasonably easy from cuttings and flower quite young—at about three years, and all are completely hardy with us, withstanding our cold springs and dry summers with equal ease. Although not large and showy, we find them very rewarding and hope that more gardeners will be encouraged to grow them.

Eskbank

JOHN and CHRISTINE GOSDEN

Book Reviews

Flowers of Greece and the Aegean, by A. Huxley and W. Taylor. Published by Chatto & Windus—Price: £6.50 hardback, £3.95 paperback.

In the formidable task of condensing into 185 pages a simple guide to the flora of Greece and the Greek Islands, including maps of the areas covered, the authors have combined to produce a compact, informative volume which should serve the first time visitor well in search of the indigenous flowers of the area, as well as providing concise descriptions of over 600 species and varieties for the traveller especially concerned with accurate identification.

The earlier chapters introduce the climate and geography as a whole, and its influence upon the numbers and specialisation of the species. Out of an estimated 6000, about one in ten is an endemic. 12 colour illustrations give some impression of the contrasts in the mountains, the plateaux, the gorges and foreshores which are the natural homes of these plants.

The co-authors are botanists of repute, with a series of publications to their names, and most plant descriptions in the book are based upon specimens collected and identified by them during numerous visits at different seasons. The simple references to nomenclature, in the main following *Flora Europaea*, and the explanation of plant classification into families, genera and species, which so frequently confuse the amateur, are sufficient to enlighten the non-botanist. The section of the book comprising—plant descriptions, listing them under their family headings, suitably confirms the order of classification.

The book does not attempt, within its compass, the impossible task of describing the whole flora of the Greek mainland and Islands, but its authority is enhanced by reference to classical works on different aspects of the subject, for the more serious student.

The extracts from Theophrastus and Dioscorides, inserted as postscripts to the descriptions, add a dimension to the book which lifts it above that of a learned but otherwise terse account, of plant identifications.

The line drawings by Victoria Gordon are clear and instructive, and the assemblage of 471 colour pictures of 442 species and varieties, in a block of 64 pages, is convenient for quick reference, suitably keyed to the text, but inevitably the technical difficulties of colour association on this scale results in a mediocre reproduction of original photographs. This section I found the least satisfying in an otherwise excellent compendium.

The paperback at £3.95 appears good value, whereas the hardcover at £6.50 by contrast seems expensive.

J.D.C.

Daphne, by Chris Brickell and Brian Mathew. Published by the A.G.S.

Some years ago Peter Kilpatrick asked me what group of plants I would like to write about. *Daphne* at that time had not been given the attention it so rightly deserved and I thought that this would be a suitable subject. This fact was then related to Roy Elliott, Editor of the *Bulletin of the A.G.S.*, who stated that *Daphne* was being considered by someone in the A.G.S. I am particularly pleased to have been told to leave this one, for Chris Brickell and Brian Mathew have produced a most excellent book for which the A.G.S. should be justly proud.

Its 194 pages are packed with information on the historical features, medicinal properties and cultural details. It also includes a large section on propagation and the troubles which beset *Daphne* in cultivation. There are easily understood descriptions of all the species mentioned and this also includes all those which at some time have been in, cultivation. It is a book which intermixes botanical detail with horticultural expertise and as such is of great value to both disciplines. There are colour plates and monochrome illustrations throughout the book and some excellent drawings by Jarmila Haldova. For the alpine enthusiast it will surely become the book of reference for *Daphne* and for the casual grower this book should inspire them to try a few more species.

The authors and the A.G.S. are to be congratulated on a publication of the highest order.

The book is obtainable from the Alpine Garden Society's Distribution Manager, D. K. Haselgrove, 278-280 Hoe Street, Walthamstow, London E17 9PL, at a cost of £3.55 including postage and packing.

R. J. M.

Show Reports

EDINBURGH AND MIDLOTHIAN

THE SHOW was held in Cowan House, Pollock Halls of Residence, University of Edinburgh, on 26th March 1977. The numbers of entries and exhibitors were nearly double those of the previous year, but most gratifying of all was the outstanding quality of the plants exhibited. Your reporter, in visiting shows of rock garden plants in Scotland and elsewhere, has never seen a better display and it is many years since he has seen one as good. The hall was a riot of colour, a large contributing factor being some 60 pans of Asiatic and European primulas with not a bad entry among them. Rare dionysias, too, were much in evidence, showing how well a number of members have mastered the art of growing this beautiful and difficult genus. Sir George Taylor summed up the Show in one word—"marvellous"—and this view was undoubtedly shared by the many members and other visitors who thronged the hall all afternoon.

The Forrest Medal for the most meritorious plant in the Show was awarded to *Dionysia freitagii* (fig. 60) which has pink flowers with a darker zone round the eye carried just above a tight cushion of foliage. This plant was staged by Mr. Eric Watson, Newcastle, one of half a dozen or so competitors from south of the border whom we were delighted to welcome. Mr. Watson was also awarded the Elsie Harvey Memorial Trophy and the A. O. Curle Memorial Trophy respectively for 3 pans rock plants, new, rare or difficult in cultivation, and 3 pans rock plants grown from seed by the exhibitor. His exhibits here included three dionysias, *lamingtonii*, *bryoides* and *michauxii* and *Primula allionii* raised from collected seed sown in July 1972. The latter had particularly large flowers of a good pink colour. Mr. Watson again demonstrated his skill with dionysias by taking another first with *D. tapetodes* and *aretioides* and for good measure he also took red tickets with *Androsace pyrenaica* and *carnea* which had exceptionally deep

pink flowers. Another of his plants which, although taking only a second prize, must be mentioned was a collected plant of *Primula tyrolensis*, with large flowers of a better substance and colour than any of this species previously seen by this writer. It is to be hoped that Mr. Watson can propagate this plant and eventually distribute it.

The R. E. Cooper Bhutan Drinking Cup for the best *Primula* species was awarded to Dr. Denis Hardy, Aberdeen, for a large very well-grown and flowered *P. edgeworthii alba*. He also took first prize with another two primulas of outstanding quality in a hotly contested class of ten entries—they were the blue *P. whitei* and the Inshriach form of *P. marginata*. That outstanding and enthusiastic exhibitor, Mr. Harold Esslemont, also from Aberdeen, received the Henry Tod Carnethy Quaich for 3 distinct genera rock plants with fine plants of *Trillium nivale*, *Saxifraga* 'Cranbourne' and *Primula allionii* and took first prize for two saxifrages with very good specimens of 'Winifred' and 'Jenkinsae'. Mr. and Mrs. Henry Taylor, Invergowrie, were awarded the Reid Rose Bowl for gaining most points in Section I. Among their exhibits particularly noted were *Primula clusiana*, the very fine large-flowered form kept in cultivation by the late Major-General D. M. Murray-Lyon, and now happily grown in several gardens, *Sisyrinchium douglasii* 'Alba', sometimes listed as *grandiflorum album*, *Pulsatilla vernalis*, much better flowered than one finds it in nature, *Primula clarkei* and *Lewisia brachycalyx*. The K. C. Corsar Challenge Trophy for 3 pans Primulas was won by Mr. David Livingstone, Edinburgh, for *P.* 'Joan Hughes', the rare and splendid dwarf hybrid raised by Mr. Jack Drake which, one was glad to see, was also shown by Mrs. Betty Ivey, Dalry; *P. clarkei* with clear pink flowers set off by a distinct white eye, and *P. gracilipes*, the large-flowered pale pink form. Mr. Livingstone's other plants of note were *Primula x pubescens* 'Faldonside' and *P.* 'Barbara Barker', *Epigaea asiatica*, *Chamaecyparis obtusa* 'Hypnoides', which is now some 28 years old, *Cyclamen pseud-ibericum* and *Narcissus* 'Tête-a-tête', a multi-headed cyclamineus hybrid.

One of the outstanding plants amongst the many very good plants on display was *Soldanella minima* with white deeply fringed flowers marked violet in the inside, shown by Mr. J. Ray Johnstone, Ryton, which had to be seen to be believed. Subsequent to the Show Mr. Johnstone informed me that there were 102 flowering stems on this plant which was only 4 inches in diameter. This was really a remarkable achievement: most of us would be happy to see a tenth of that number of stems on our own plants of that size! Mr. Johnstone also

had fine Primulas in *P. marginata* 'Prichard's Variety' and *P. pubescens* 'Christine', another Jack Drake hybrid with red flowers. Although only second in its class (one of 3 pans) *Primula carniolica*, collected and shown by Mr. R. A. Hodgson, Stokesley, was a particularly good form of this species, having broader leaves and much larger soft pink flowers than the form usually seen. Elsewhere Mr. Hodgson took first prize with two excellent Androsaces, the pink *A. ciliata* and the white *A. pyrenaica*, both good subjects for careful cultivation in the alpine house or frame. Mrs. Sheila Maule, Balerno, as one would expect from a member who grows Fritillarias to perfection, included two in her exhibit of 3 pans of bulbs. They were an unnamed species and *F. pudica* with neat yellow flowers which in shape reminded the writer of a Chinese hat. Her other pan in this class was *Romulea bulbocodium grandiflorum*, not often featured at Club Shows. Another of Mrs. Maule's plants which deserves special mention was *Helleborus lividus* with very delicate green and purple flowers.

Mr. Jack Brownless, Middlesbrough, showed a very fine plant of *Jeffersonia dubia* in an enormous long pot, but so fierce was the competition the judges placed it only third. He had more success with the dainty *Narcissus juncifolius* and *Chamaecyparis obtusa* 'Caespitosa', one of the dwarf conifers which he grows so well. The President of the Club, Mrs. K. Hall, despite the many calls on her time, not only assisted in the administration of the Show but also, along with her husband, put in a few entries and had success with two Narcissus species, *N. minimus* and *N. cyclamineus*, and with *Epigaea asiatica*. Mrs. Betty Ivey, in addition to the primula already mentioned, had two fine specimens of *Primula allionii*, one of which with very dark, near red flowers, took first prize against hot competition from eleven other specimens of European Primulas. She also showed a large well-flowered *Dionysia aretioides* and, nice to note that good grower of difficult plants as she is, she does not scorn the easier more common plants, gaining prizes with *Sempervivum calcareum* 'Nigricans' and *S. arachnoideum*, both of which were grown hard and as natural looking as one can get in a pan. Other competitors might with advantage copy her method of growing these easy and rewarding plants which look at their best when grown really hard.

Mr. Malcolm Adair, Glasgow, continued his many successes of last year with the two lovely Irises 'Clairette' and 'J. S. Dijt' and with well-grown Saxifrages 'Megasaeflora', 'Myra' (Cambria var.), and *burseriana* 'Sulphurea'. On the evening before the Show Mrs. T. M. Hart, Edin-

burgh, staged a very fine pan of a dark-flowered *Pleione formosanum* which everyone present greatly admired but it was beaten into second place by the beautifully spotted *Orchis tridentata lactea* shown by Mrs. Joan Stead, Thorntonhall, who also had outstanding exhibits of *Cyclamen alpinum* P.D.25579 and *Gypsophila aretioides*. Mr. David F. Mowle, Lancaster, continued the success of our southern members with a fine example of *Pygmaea pulvinaris*. Other plants to catch the eye in Section I were the bulbous *Heloniopsis japonica* with clusters of pink flowers (Mr. and Mrs. M. Stone, Fort Augustus), two outstanding shrubs for early in the year, *Arcterica nana* and *Vaccinium nummularia* (Dr. D. C. Graham, Edinburgh) and *Rhododendron pemakoense*, which for once had escaped frost damage (Mr. and Mrs. R. J. Bezzant, Bearsden).

Section II, open to members who had not won a medal or trophy at any previous Club Show, brought forth a number of exhibits which would have distinguished themselves in the "senior" section. Indeed, the Midlothian Vase for the best rhododendron in the Show was won by Dr. P. Semple, Glasgow, competing in Section II with a very good *R. leucaspis*. Dr. Semple was also a winner with *Trillium rivale*, *Primula x forsteri*, a very fine big pan of this natural hybrid, and *Saxifraga retusa*, not often seen in such good condition. The Midlothian Bowl for the best plant in Section II was awarded to Mr. A. J. Holman, Milnthorpe, for hybrid *Primula* 'Beatrice Wooster', covered with pink blossoms, the like of which has never before been seen at Club Shows. Mr. Holman also won with extraordinarily good plants of *Primula whitei* and *Dionysia aretioides* 'Paul Furze'.

The Henry Archibald Rose Bowl for 3 rock plants of easy culture and grown in the open ground was won by Mrs. Mavis Fewkes, Edinburgh, with *Sisyrinchium douglasii*, *Saxifraga apiculata* and *Primula macrophylla*. A nicely grown plant of *Trillium hibbersonii* secured a first prize for Mrs. Joan Dodds, Alnwick.

Mr. and Mrs. Henry Taylor were awarded the Boonslie Cup for a miniature rock garden. The attractive container had been made by the Taylors mainly from small flat stones and had been so planted to give an interest over a long period. The Kilbryde Cup for an arrangement of cut flowers of rock garden plants was won by Mrs. E. Hart against six other good entries.

The Junior Section produced two competitors who are to be praised for their efforts and encouraged for the future. In the two pan class Miss Karen Wyllie, Dunblane, with *Primula vulgaris* and *Tulipa uru-*

miensis beat Master Roderick Milne, Edinburgh, who also showed *P. vulgaris* along with *Saxifraga lingulata*. The positions in the one pan class were reversed, Roderick—winning with *Sempervivum* ‘Mahogany’ and Karen coming second with *Draba aizoon*.

This report has been written at some length but even so names of competitors and of plants of merit have had to be omitted. Really good plants in this Show failed to gain awards simply because of the exceptionally high quality of other entries and all one can say to those who were unsuccessful remember Bruce and the spider.

Our good friends of the Nursery Trade, Alex. B. Duguid, Edrom Nurseries, Coldingham, Berwickshire, and John R. Ponton, now operating from Old Cottage Gardens, Ledgerwood, Earlston, Berwickshire, again supported the Show and in turn visitors supported them! By mid-afternoon both firms had sold all the plants they had brought for sale.

Last but certainly not least, Mr. R. J. Mitchell, Curator, University Botanic Garden, St. Andrews, staged a non-competitive exhibit of *Dionysias* to illustrate evolution and relationships within the genus. Once again Mr. Mitchell showed fine examples of his most remarkable skill with this difficult genus. He deserves warmest thanks for adding another feature of high interest and quality to this most wonderful Show.

DAVID LIVINGSTONE

NEWCASTLE UPON TYNE

THIS SHOW, held on the earlier date of April 2nd during a season which proved a good deal later than those of recent years, was not surprisingly slightly less well represented than previously, especially in Section I (open) in the larger pan size classes. Perhaps the price and rarity of large pans is also becoming a limiting factor! However, in the junior classes, both the number and the quality of the exhibits were outstanding, as was especially noted by the judges, Ken Aslet and David Mowle (AGS) and Bob Mitchell (SRGC). They confessed considerable difficulty in separating three plants for the Farrer Medal, the premier award for the best plant in the Show (it will be noted that this was the alternate ‘English’ rules year in this unique joint Show). Two of these, Assistant Show Secretary Ray Johnstone’s *Soldanella minima*, the same that had been granted a FCC at Edinburgh the week

before, in perfect condition, with no less than 102 stems on a 10 cm diameter clump; and a quite equally superb plant of *Cyclamen libanoticum* shown by Mr. Stubbs, were both in Section B. However, eventually the award went predictably enough to yet another *Dionysia*, Show Secretary Eric Watson's fantastic pan of *D. freitagii*, much feted, having won the Forrest at Edinburgh the week before. This was a magnificent plant at the peak of perfection, and had the merit of being quite attractive, although with flowers of that rather insipid shade of pink found in some forms of raspberry sundaes and *Androsace sarmentosa*. Without in any way detracting from this plant, I wonder (and am not alone in this) just when the sway of the *Dionysia* will end and premier awards in early Shows will go to other equally deserving and unfashionable plants.

We were lucky to see many of these at Newcastle, and notes on a few that caught this visitor's eye follow. We were fortunate to see three of the American douglasias, none perhaps in the peak of condition, but then these plants are notoriously difficult to keep neat, tidy and well-flowered. My favourite was Mr. Hodgson's *D. dentata*, with silvery spiky foliage and narrow rose flowers with darker centres. This was one of 6 very good pans which brought this visitor from Yorkshire the AGS medal in the smaller pan size class. Another very rare plant shown by Mr. Hodgson was the New Zealand Myosotis, *M. pulvinaris*. This is a soft grey woolly mat with sessile large white forget-me-nots, for all the world like a white *Eritrichium* or a Himalayan *Androsace*. These were there too, small, and rather uncertain, and I believe rapidly disappearing from their brief limelight, even with the most expert growers. Two of the latter showed us *A. muscoidea* and *A. zambelensis*. Perhaps these are going through the difficult settling-in period, during which the grower learns about his plant, and the plant adapts to his grower, through natural selection. Thus it is important that both introduction and propagation of these newcomers is by seed, allowing selection of such adaptable clones as we now see in (for instance) *Androsace pyrenaica* or *Dionysia aretioides*.

Mrs. Maule brought *Viola douglasii*, from the American Rockies, and I doubt if any rosulate violet from the southern half of that vast continent will prove any more attractive, with its silvery pinnate leaves, and golden flowers, burnished chocolate on the reverse. This colour pattern was repeated in the three different plants of the fine *Fritillaria michaelovskyi* on show, and if this Show is to be labelled, it must be called the *Fritillaria* Show. At least 19 species were on show, and the

new classes for three pans and one pan *Fritillaria* in Section I (S) were a great success. Mrs. Maule showed us the famous 'Pink Frit.', *F. alburyana*, with *F. pudica* and *F. caucasica*. However, the winner in the three pan class was Mike Northway, with *F. aurea*, *F. assyriaca* and *F. raddeana*. *F. assyriaca* may well have been the most popular plant in the Show: I counted 5 separate pans. Other rarely seen species included Eric Watson's *F. bucharica* and David Mowle's *F. schliemanii*.

Mention of Mike Northway brings me to the success of this far travelling visitor (from Lincs.). He won the AGS medal for the large six pan class (among which *Fritillaria ruthenica* and *Pygmaea pulvinaris* were notable), and also the R. B. Cooke Plate for the highest aggregate of points in Section I. This is the third year that he has won this trophy, although I learn from the Show Secretary that my predecessor's fears that he might win it outright in a third year are not justified. We must congratulate Mr. Northway for his efforts and hope that he will continue to educate and edify us with his fine plants, at the same time stimulating the rest of us to greater efforts, and to show that this trophy is not reserved to him alone (any more than the premier award is reserved for Eric Watson, who has now won it for four out of five years, a truly remarkable effort).

The Gordon Harrison Cup, for the highest aggregate of points in Section B, went to another visitor, A. J. Holman, whose excellent plants included *Saxifraga reuteri*, *Androsace vandellii* and *A. pyrenaica*, as well as a truly remarkable pan of *Primula* 'Beatrice Wooster', a popular plant, but rarely seen so well grown and flowered.

In Section C, there were many excellent and rare plants, including *Androsace brevis*, from wild collected seed; *Shortia galacifolia* in well-flowered condition, a rare sight; *Primula megasaefolia* (grown in the open ground for over a year); and the petiolarids 'Stonor No. 1' (*P. gracilipes* x *irregularis*), and Dr. Davison's *P. petiolaris* and *P. petiolaris* x *gracilipes*. The Cyril Barnes Trophy for the highest aggregate of points went to another incomer, B. P. Riley from Cumbria.

One could continue at further length about the excellent plants seen: many beautiful *Pulsatilla vernalis* and *Lewisia tweedyi*, the latter surpassed by a plant in bud, most generously given to the plant sale, and bought for £1 by the 9-year-old son of an exhibitor with his life savings. Surely a lad to watch! Tulips were outstanding, with wild collected *T. saxatilis* and a very beautiful form of *T. violacea pallida* outstanding. *Ranunculus acetosellifolius*, *R. calandrinoides*, *Ptilotrichum reverchonii* and *Helichrysum plumeum* were among notable plants in

ace condition, but many eyes were caught by David Mowle's excellent pan of *Pygmaea* in very good flower, that surely must also have been a close contender for the Farrer Medal.

Away from the competitive benches, a display was once again erected by the Hartside Nursery, now becoming well-known as the source of many good plants. We have to thank Mr. Woodward for his splendid contribution to the publicity stall, which was busy all day, and Mrs. Gloria Johnstone, who with her willing band of local group helpers toiled unceasingly all day providing refreshment in this excellent hall, which offers such unparalleled recreational facilities. It was good to see that sex discrimination did not prevent several males from wielding tea-towels with great effect.

The plant sale was a great success, selling over 800 separate items, and the team from Newcastle University was kept busy throughout. This helped to make the Show a great financial success despite the lowered door receipts, for which the cold weather was doubtless mostly responsible.

The Newcastle Show now seems to be thoroughly established as one of the major Shows in the country, and the credit for this is largely due to Eric Watson and his wife Nan, to whom no thanks could be too much.

Dr. A. J. RICHARDS

PERTH—23rd April 1977

AFTER the most severe winter for many years, which had followed a cool wet autumn and was itself followed by a late Spring bringing bitter searing winds, some of our gardens were in a sorry state when the Perth Show date drew near, and prospects for the Show were bleak indeed, but in the event only slightly fewer plants than usual were on the benches and for this satisfactory state of affairs we have to thank mainly the exhibitors with alpine houses and cold frames. A year like this does demonstrate very forcibly how dependent our early Shows are on the members who give their plants glass protection. Incidentally, one of the benefits of the competition being mainly between alpine house owners is that conditions are more even and living in a cold or exposed place is not a serious handicap.

The class for six pans of rock plants, distinct, not more than two of any one genus, was won by an entry consisting of *Cassiope lycopodioides*, *Daphne petraea* 'Grandiflora', *Kalmiopsis leachiana*, *Lewisia*

tweedyi 'Rosea', *Pleione pricei* and *Saxifraga grisebachii* (BM form). This entry gained for Mr. John B. Duff the Alexander Caird Trophy. The Daphne was awarded the Forrest Medal for the most meritorious plant in the Show and also a new trophy, the Major-General D. M. Murray-Lyon Trophy for the best plant in the Show exhibited by a member resident in the Tayside Region (more about this later). Also seen among the plants entered in this class were *Grevillea alpina*, which had been flowering all winter in an alpine house and was still in good form, the small but well-flowered *Ranunculus acetosellifolius*, *Orchis sambucina*, *Ranunculus parnassifolius*, *Cyclamen libanoticum*, *Trillium hibbersonii* and *Pleione forrestii*.

The Dundas Quaich for three pans of rock plants of different genera went to Mr. J. D. Crosland for *Orchis militaris*, *Trillium rivale* and the rarely seen and difficult to flower creeping *Primula reptans*, which received a Certificate of Merit. Other outstanding plants in this class were *Aciphylla munroi*, *Ranunculus bilobus* and the attractive little *Viola dubyana*.

The L. C. Middleton Trophy for the highest number of points from first prizes in Section I was won convincingly by Mr. and Mrs. Henry Taylor, who brought along a wonderfully varied collection of interesting and well grown plants, many of them raised from seed collected on their annual trips abroad.

The rare and difficult class was won by Mr. H. Esslemont with *Dionysia microphylla*, second was *Aciphylla polita*, while *Ranunculus buchananii* was third.

In the class for plants raised from seed by the exhibitor I was attracted by the size of the third prize-winner, a plant of *Draba polytricha* 9 ins. in diameter entered by our Seed Exchange Hon. Manager, Miss Joyce Halley; this not an easy plant to keep for long.

First place in the class for Scottish native plants went appropriately enough to a lovely specimen of *Primula scotica* and the winner for silvery foliage was *Senecio leucophyllus*.

Raoulia eximia gained first place and a Certificate of Merit for Mr. J. D. Crosland, as a cushion plant.

Mr. H. Esslemont was once more unbeatable for androsaces with a large plant of *A. imbricata*. Second in this class was a pink androsace with an unusual leaf, *A. mairei*, not before seen at Perth Show.

In the class for two pans Ericaceae or Vacciniaceae, Mr. M. Adair staged a magnificent entry consisting of *Kalmiopsis leachiana* and *Cassiope* 'Muirhead', both plants beautifully flowered and each filling

completely a 15 in. diameter container. The *Kalmiopsis* was awarded a well-deserved Certificate of Merit.

Other cassiopes appearing in the Show were *C. selaginoides*, *C. wardii*, *C. 'Randle Cooke'*, *C. 'Kathleen Dryden'* and *C. lycopodioides*.

Mrs. E. Ivey's *Oxalis obtusa* attracted much attention, as did Miss G. Blackwood's large *Ramonda myconi 'Rosea'*.

Mrs. J. Wyllie won first prize for a container of living rock plants arranged for effect.

There was keen competition in Section II for the Bronze Medal awarded for most points. Junior Member Alasdair Sutherland and Mr. R. Barr gained an equal number of points and each received a medal. Mrs. Linklater Shirras was a close runner-up.

Judges were the Club President, Mrs. K. Hall, Mr. R. S. Masterton and Mr. J. R. Aitken.

Medals were awarded to Mr. Lawrence Greenwood for gracing once again the Show with his much admired flower paintings, to the Orchardbank Nursery for decorating the platform with a trade stand, and to the children of Primary VII class of Caledonian Road School, for their splendid poster display and miniature gardens.

Thanks are due to our Show Secretary, Miss Rhoda Fothergill, for running the Show with her usual efficiency and for including a continuous and automatic display of slides of garden interest projected on a daylight screen in a quiet corner of the hall where visitors could rest awhile.

Teas, prepared and served by the ladies of the Group Committee, were as usual much appreciated and enjoyed, and helped considerably with the finances.

The Perthshire Group is much indebted to Mrs. Murray-Lyon for donating a unique and most attractive trophy to the Perth Show in memory of her late husband. The trophy, to be known as 'The Major-General D. M. Murray-Lyon Trophy', is in the form of a silver Alpine Ibex, standing on a piece of natural rock. It is for annual competition, to be awarded to the best plant in the Show exhibited by a member resident in the Tayside Region. Members were delighted that Mrs. Murray-Lyon was able to attend the Show and present the new trophy to the first winner. Junior Member of the Perthshire Group, Miss Karen Wyllie, presented Mrs. Murray-Lyon with a bouquet.

Sadly, this was our last Show in Kinnoull School, as increased rentals—up sevenfold compared to last year—have forced us, reluctantly, to seek other premises. Fortunately it has been possible to

arrange alternative accommodation in Kinnoull Church Hall, which is immediately opposite the School, for both the 1978 Show and the 1977-1978 Meetings.

J. B. DUFF

DUNFERMLINE

THE SHOW was held in the Nethertown Institute on Saturday 30th April. Despite a long spell of cold stormy weather preceding the Show, a colourful display of plants filled the benches. The Judges were the Club President—Mrs. I. Simson Hall, Mr. A. Evans and Mr. R. J. Mitchell.

In Class 1 Mrs. E. Ivey of Dalry won the Mrs. W. B. Robertson Cup for 3 pans, with *Kalmiopsis leachiana*, *Primula x goeblii* and *Androsace imbricata*. Mrs. Ivey also won the class for new, rare or difficult plants with *Aciphylla polita*, a dainty Speargrass. Class 5—one pan *Primula*, was keenly contested, Mrs. J. Stead taking first with *Primula forrestii*, which was also awarded a Certificate of Merit. Mrs. Stead was also successful in the *Lewisia* class, gaining a first with *Lewisia leeana*.

Outstanding in the *Rhododendron* class was a really splendid *Rhododendron* 'Blue Tit' exhibited by Dr. and Mrs. D. E. Truman. In striking contrast was the blood-red *Rhododendron* 'Humming Bird' (*haematodes x williamsianum*) exhibited by Mr. Malcolm Adair. A plant which attracted a good deal of interest was *Campanula alpina*, in flower, shown by Mr. Malcolm Adair. There was a wide variety of plants in the open section, *Kalmiopsis leachiana* being awarded the George Forrest Medal. This fine well-flowered plant was owned by Mr. Malcolm Adair, who was also awarded the Carnegie Dunfermline Trust Trophy for most points in the Section.

In Section II there was keen competition for the Bronze Medal between Mrs. M. Reid of Carnock and Dr. and Mrs. D. E. Truman of Edinburgh. The standard of the entries was high and Mrs. M. Reid gained a narrow victory.

In Section IV, restricted to Fife Members, Class 45 for 3 pans grown in open ground was won by Mr. and Mrs. D. G. Williamson of Burntisland, whose entry included a well-flowered pan of the lovely *Douglasia vitaliana praetutiana*. Class 46 for 1 pan Cushion Plant was won by Mr. and Mrs. J. E. Campion with *Pygmaea pulvinaris*.

Sempervivums were well represented, Mrs. Muir taking first for the 3 pans. The Cacti and Succulent class is always a feature of this

section. Mrs. M. Reid was awarded first prize for a most attractive group. Mrs. J. L. King was second. Mr. and Mrs. D. G. Williamson were awarded the Institute of Quarrying Quaich for most points in the section.

It was encouraging to see entries in the Junior Section. Karen Wylie of Dunblane entered *Anemone blanda*, *Vinca minor* (double form) and *Sempervivum* 'Malby's hybrid' in Class 68.

The new Show Secretaries, Mrs. J. L. King and Mrs. M. Muir, have every reason to be congratulated on the success of their first Show.

J. E. CAMPION

GLASGOW SHOW

THIS YEAR the Glasgow Show, which was held on 7th May, regretfully broke the long-standing association with the McLellan Galleries and, because of sharply increased costs, migrated to the Knightswood Community Centre. In spite of being away from the city centre, this proved to be a happy choice of venue, thanks in no small measure to the helpfulness of the wardens and staff who took in their stride a Show so much bigger than they expected. An added attraction, for exhibitors and visitors alike, was the car park associated with the Centre.

The exhibitors gave us a heart warming example of the pleasure to be found in the garden and alpine house, even in this laggard spring, with its persistent rain and cold. We were happy to welcome friends from as far afield as Aberdeen, Invergowrie, Midlothian and the Isle of Arran.

The Forrest Medal was won by Mr. J. D. Crosland's *Primula reptans*. Few of us can have seen this plant in such beautiful Show condition before. It quite overshadowed even the pan of the lovely *Pleione forrestii*, which was also included in the entry for '3 pans new rare and difficult plants' which won for Mr. Crosland the Wm. C. Buchanan Challenge Cup.

The Dr. Wm. Buchanan Memorial Rose Bowl was won by Mr. and Mrs. Henry Taylor, whose 6 pan entry included the lovely pale pink form of *Ranunculus asiaticus*, *Sarcocapnos crassifolia*, massed with flowers, and the white form of *Primula viscosa*, which I do not recall seeing on the show bench before.

Mrs. B. Ivey won the Archibald Challenge Rose Bowl with a 3 pan entry consisting of *Lewisia tweedyi*, *Kalmiopsis leachiana*, and another

rarely seen primula, *P. x goeblii*. Mrs. Ivey's overall entry in Section I also won for her the Crawford Silver Challenge Cup for the winner of most first prizes.

The dwarf Rhododendron classes were well filled and made a scintillating display. The 3 pan class and the Edward Darling Memorial Salver were won by Mr. Malcolm Adair with *R. calostrotum* 'Gigha' (a real beauty, smothered in flowers) and the hybrids 'Curlew' and *sargentianum x kotschyi*. Mr. Adair won the 2 pan Ericaceae with superbly flowered pans of *Phyllodoce nipponica* and *P. aleutica*.

Three welcome newcomers to Section I were Dr. Peter Semple who won his Bronze Medal at Edinburgh, Mr. Richard Barr who won his at Perth, and Mr. Stephen Benham, whose journey from Arran almost made him too late to show.

Next year we shall be joined in Section I by Dr. Lois Kissen, who in a close contest with Mrs. Freda Cochrane won the Wilson Trophy and Bronze Medal.

It was unusual, at the Glasgow Show, to have so few Rhodohypoxis—no one could rise to a 2 pan entry—reflection on this spring's weather no doubt. There were several interesting ranunculi—*bilobus*, and the pink form of *parnassifolius* (Mr. and Mrs. Taylor), *lyallii* (Dr. Semple) and a beautiful *seguieri* (Mrs. Ivey).

The bulb classes included a pan of the unusual *Tulbaghia alliaceae* (Mr. Benham), *Leucojum nicaeense* and *Fritillaria graeca* and *F. crassa* (Mrs. Maule).

The new class for Viola species attracted four entries and was won by Mrs. Maule with a pan of that rare and attractive Western American *V. flettii* and the fern class found a worthy winner in Mr. and Mrs. Taylor's charming *Cheilanthes gracillima*. Another unusual and attractive plant was Dr. Stead's *Hesperochiron californicum*. Evidence that quality and condition count for more with the judges than do rarity and difficulty, lay in the award of 1st prize in a large class to Mrs. Carol Scott's *Polygala chamaebuxus*, in perfect show condition.

There was a paucity of entries in Section IV, except in the classes for cut daffodils, and future Shows could well show some pruning here. An item of interest was Mr. Buchanan's illustration and account of his discovery of the orchid *Spiranthes romanzoffiana* (Drooping Lady's Tresses) on the Island of Colonsay.

The Rhododendron Section is even more at the mercy of the weather than is the Alpine Section; and so, alas, are the Rhododendron exhibitors, as Mr. Cumming proved when the ferry carrying him and the

second instalment of his entry was unable to make port and eventually returned to Dunoon. However, there was compensation for him when the judges awarded the Sir John Stirling Maxwell Trophy to his truss of *Rhododendron rex*, (benched the night before) as the best individual truss or spray in the Show.

There were some absentees from the ranks of exhibitors, but a welcome newcomer in Mr. E. A. T. Wright from Arduaine; and altogether there was a brave show in the Rhododendron room. Those stalwart supporters of the Show, Mr. and Mrs. Neil Rutherford, were awarded both the Urie Trophy and the Rhododendron Challenge Cup.

There was a most interesting stand by the Royal Botanic Garden, elucidating the meaning of 'lepidote' as applied to Rhododendrons, with magnified illustrations of the scales, which give rise to the term; sprays of flowers and slides of the growing and flowering plants.

The National Trust for Scotland showed some quite outstanding trusses of Rhododendrons from the Brodick Castle collection, and Mr. Jim May, who has charge of the Trust's new venture, the Gardening Advice Centre, at Greenbank House, Clarkston, was in attendance to answer queries.

We welcomed three trade stands—our old friend Mr. John Ponton of Legerwood, Berwickshire, Mr. and Mrs. Huntley of Hartside Nursery Gardens, Alston, Cumbria, and Mr. and Mrs. Tait of Marchburn Nursery, Leewood, by Lanark.

There would be no Show without exhibitors and the Show Committee is grateful to all those who take the trouble to turn plants into exhibits, to pack them and travel to Shows, and I thank all the exhibitors who supported the Show so well. Thanks are due also to the judges, who give so freely of their time—Glasgow on a very wet Cup Final Saturday is not everyone's mecca!

I would also like to express appreciation of the great exhibitors—the Forrest Medal winners over the years who have shown us wonderful plants in immaculate condition, at this Show and so many others. The old timers are emphatic that the calibre of our Shows has risen over the years, and this is due in no small measure to the standards set by these exhibitors for the rest of us to try to equal. We have seen what can be achieved, and with their help and example we have tried to emulate. The Club, and its members, are indebted to them.

Finally, I would like to thank all those members of the West of Scotland Group who worked so hard and willingly to set up and dismantle the Show, who helped with the planning, and were always

ready to assist whenever called on. It was a team effort right from the start and I hope they all enjoyed being members of that team as much as I did.

JOAN STEAD

ABERDEEN—14th May 1977

IN SPITE of a quite hostile spring season and almost nightly frosts during the week preceding the Show, it is to the considerable credit of all exhibitors that the Show opened at 10.30 a.m., admitting members and the public to a fine display of plants. Not surprisingly in the circumstances there was a slight fall, actually fifteen plants fewer, this year compared to the previous year's record total of entries, but it is gratifying to record that Section II in fact registered a new record number for the Section. Not only the number, but also the general standard of plants in this Section was noteworthy, bearing witness to the developing skills of newer exhibitors, infusing fresh life into the display and the promise of future Shows to come.

In the Open Section I, Mr. A. D. McKelvie's handsome selection of plants repeated last year's performance, gaining the award of the Walker of Portlethen Trophy for the highest number of points, in which he, by a long way, out-matched his nearest competitor. Among his entries were fine specimens of *Viola riviniana*, native to Scotland; *Senecio leucophyllus*, silver-grey foliage; *Anchusa caespitosa*, the rare Cretan endemic; *Campanula aucheri*; a very well flowered specimen of *Prunus prostrata*, collected by J. C. Archibald in Morocco; and well grown examples of *Cortusa matthioli*, *Primula forrestii* and *Petrophytum hendersonii*.

The premier award for the most meritorious plant in the Show, the George Forrest Memorial Medal, was duly presented to Mr. Stanley Birse representing Aberdeen District Council, Department of Leisure and Recreation. Mr. Birse, gardener in charge of the Alpine Section of the Victoria Park, one of several parks in Aberdeen under the direction of the Department, was also responsible for the excellent display of rock garden plants at the Show from which *Cassiope selaginoides* L. & S. Form (fig. 58) was adjudged the outstanding plant.

Cassiope wardii; *Hormatophyllum reverchonii*, the rare shrubby crucifer from Sierra Cazorla, Spain; *Pleione limprichtii*; Iris (Juno) M. & T. No. 4245; *Cyclamen creticum* and *Fritillaria michaelovskyi* shown

by Mr. Crosland were the only entry in the Six Pans Class. In the Three Pans Class, *Pleione pogonioides*, *Paraquilegia anemonoides* (white form) and *Fritillaria erhartii* took first place, shown by Mr. Crosland, seconded by Mrs. Sylvia Simpson's *Erythronium tuolumnense*, *Pleione limprichtii* and *Cassiope* 'Bearsden'.

Loiseleuria procumbens and *Pernettya macrostigma* raised from seed gained a well merited first place, shown by Mr. and Mrs. Stone from Fort Augustus, as did their entries of *Primula calderiana* and the Japanese *Primula modesta*—two Asiatic Primulas, and in the Class for Gentians their display of *Gentiana acaulis* (Trotters Form). Another visitor from afar, whose entries made a welcome and noteworthy contribution to the Show, was Mrs. Sheila Maule of Balerno, by Edinburgh, demonstrating with effect the rock gardener's art in her display of award winning specimens of *Jankaea heldreichii*, the legendary species from Mount Olympus, Greece; *Petrocallis pyrenaica*; a well flowered *Daphne petraea*, on its own roots, dispelling the illusion that only grafted specimens are floriferous; *Leucojum nicaeense*, and a diminutive *Hyacinthus fastigiatus* collected by her on the Island of Sardinia.

In the Single Pan Ericaceae, *Cassiope* 'Bearsden', shown by Mrs. Simpson and also by Mr. A. D. McKelvie, followed by *Kalmiopsis* 'M. le Piniec' by Dr. D. G. Hardy, took respectively first, second and third places. From her collection of dwarf conifers, Mrs. Helen Blair showed mature specimens of *Abies balsamea* f. *hudsonia* and *Picea abies* 'Pygmaea'. Dwarf *Rhododendron ludlowii* x *hanceanum* and *Androsace hirtella* were contributed by Mr. H. Esslemont and a Certificate of Merit was awarded to a pan of *Orchis papilionacea*, the Butterfly Orchid, shown by Mr. Crosland, collected by him in Sardinia in 1973. *Lewisia cotyledon* hybrids and *Lewisia tweedyi*, including White Forms, provided one of the brightest sections of the Show, attracting more exhibitors than any other, supported further by another member of the Portulacaceae shown by Dr. Hardy, *Claytonia nivalis*—a plant not so often seen as the Lewisias.

This year the Aberdeen Quaich—for the best plant in Section II—was presented for the first time, the recipient being Mrs. R. Williamson, a very new member, with a magnificent plant of *Pulsatilla vulgaris* full of flowers. She also won lustre with a beautifully staged plant of *Primula vulgaris*, double form, grown from seed by the exhibitor, and a good bright colour form of *Cyclamen repandum*, just at its peak in the Cyclamen Class.

The Special Prize, another new award for Two Pans of Different Genera, was taken by Mr. W. D. Holmes with a neat plant of *Arabis blepharophylla* and a good specimen of *Primula longiflora*. Second in this Class was Dr. F. W. Smith, one of his plants being the delicate stemmed *Cassiope* 'Randle Cooke'.

For the Silver-grey foliage plant, Mrs. H. Salzen staged a Jubilee Year winner with *Tanacetum haradjanii*. All Mrs. Craig's plants did well for her, including a lovely *Saxifraga burseriana* 'Sulphurea', a pan of *Narcissus triandrus* 'Angel's Tears' and *Hylomecon japonicum* with its fragile yellow flowers.

In the Dwarf Shrub Class, Mrs. H. Parrish with a first ever exhibit, a very well grown and presented *Polygala chamaebuxus* 'Purpurea', well worthy of a place in Section I, gained a Certificate of Merit. Dr. F. W. Smith showed a well grown *Erica* 'Silberschmelze' and Mrs. R. Williamson took third place with a nicely shaped little *Hebe pingui-folia* 'Pagei'.

A majestic *Trillium grandiflorum* was shown by Mrs. M. Aikman and one of our young members, Miss Julie Sinclair, produced a first in her Class with *Heuchera merriannii* amongst several of her other well grown entries. Miss Pittendreigh brought along some of her cherished plants, including a beautifully fresh *Sempervivum arachnoideum*.

In the Primula Classes, Mr. W. D. Holmes had some very good plants on the benches, notably *Primula melanops*, just at its prime, and a beautifully flowered *Primula farinosa*. He also gained a first place with *Rhododendron impeditum*, covered in its violet-blue flowers. These exhibits amongst others brought him enough points to be the overall winner in Section II and so he received the coveted Bronze Medal.

There was more colour in Section II than ever before, and we are very grateful to see so many new members beginning to show.

Over many years the Aberdeen Group have been fortunate in the enthusiastic support given by Mr. F. G. Sutherland, Superintendent of the Cruickshank Botanic Garden, and by the courtesy of Aberdeen University. In his final display prior to retiral, Mr. Sutherland clearly took great pains in staging his artistic impression of a rock garden and its plants, complete with pool and miniature waterfall, which was a delight for all to enjoy. It is with gratitude that we record our thanks to him for his fine displays in the past, and his willingness at all times to contribute to the better knowledge and appreciation of many plants

and their cultivation. We have pleasure in expressing our good wishes to him for a happy and active retirement.

Many other members whose names do not appear on the prize list gave willing support to the Show in a variety of different ways, putting on special displays, serving refreshments, supporting seed sales and publicity, or acting as stewards. There is the important and not easy task of judging the entries. Without the able and cheerful support of these members, in addition to that of the exhibitors, the Show would not be possible. The Committee express their warm appreciation of all services given by all who assisted.

SYLVIA M. SIMPSON
JACK D. CROSLAND

Endangered Species Act, 1976

by JAMES T. AITKEN

ON 3 FEBRUARY 1977 there came into operation the Endangered Species (Import and Export) Act 1976 which implements, so far as this country is concerned, the 1973 Washington Convention on International Trade in Endangered Species of Wild Flora and Fauna.

There has been increasing concern for some years now, not only in Britain, or indeed what may be termed the developed nations, about stocks of wild creatures and wild plants, but also in the countries (some, so-called 'underdeveloped') where these species of animals, birds or plants have their native habitat. One of the resolutions of the 1972 Conference on the Environment held at Stockholm led to the Washington Convention. The intention of the Convention was to set up a complementary import/export licensing system to regulate the trade in animals, birds or plants whose existence was in jeopardy.

The Act lists various animals (including fish and birds) and plants which, and derivatives from which, are protected. In order to import any of these into the United Kingdom a Licence must be procured from the Secretary of State for the Environment. Generally this import licence in turn requires from the exporting country an export licence to complete its validity. The object is to impose a check at

the exporting country and also at the importing country. Normally an export licence will be issued only when the exporter has received an import licence from the importing country.

Although the Act does not subdivide controlled species, the Department of the Environment has indicated that within the controlled species they will grant licences more readily in respect of some than others. The so-called 'Endangered Kinds' will be subjected to special scrutiny in licensing, including examination of the proposed recipient's ability to care for the subject. Such licences will not usually be issued for purely commercial purposes. Licences for so-called 'Vulnerable Kinds' will be issued more readily and to the trade, on a block basis and for up to 9 months. 'Vulnerable Kinds' are still within the Act.

The Appendix shows the plants at present scheduled by the Act and the present division into List A (Endangered) and List B (Vulnerable). Plants may be added to the schedule (as well as removed from it) and moved from one List to the other by the Department. If a plant is not listed it is unaffected at present by the Act.

As well as striking at trade in the species of flora and fauna themselves, the Act prohibits (without licence) trade in derivatives such as birds' eggs, whale meat and snake skins. In this connection the stems of Tree Ferns may be imported only if covered by a licence under the Act.

Applications for licenses and enquiries about the operation of the Act should be addressed to Wildlife Conservation Licensing Section, Department of the Environment, 17/19 Rochester Row, London, SW1P 1LN, except where applicants are resident in Northern Ireland, in which case the authority applicable is the Department of Agriculture for Northern Ireland, Animal Health Division, Dundonald House, Upper Newtonwards Road, Belfast BT4 3SB.

A general dispensation allowing the import and export without licence covers certain items including herbarium specimens of plants. This dispensation covers also personal effects of travellers so that, for example, the Editor's ivory backed hairbrushes and his wife's leopard skin coat (otherwise struck at as derivatives) will be permitted to them.

The Act does not affect the import or export of seed of plants.

Members who seek to obtain licences under the Act are advised to allow time for the necessary procedure. As private individuals or tradepeople, they may find licences for 'Endangered Kinds' difficult to procure, whereas 'Vulnerable Kinds' should prove much more

readily obtainable. It should be kept in mind that the object of the International Convention which this Act gives effect to, is to restrain trade in such species. There will be little point in complaining that, for example, the Act may make more difficult the import of rare plants because the object of the Act is to try to ensure that the plants in question are not denuded from their habitat. A kind of bureaucratic pallisade has been erected.

The licensing system under the 1976 Act does not affect legislation regarding plant health which works separately and sometimes in parallel so that where a health certificate was previously required, it still is. In this connection members will recall that where plants are being imported personally, for their own use and in small quantities only, H.M. Customs may, where the plants are declared, dispense with the health certificate if the importer can give an assurance that the plants will be available for inspection within a reasonable period. H.M. Customs have a form for completion by the importer in such circumstances.

Again, where it is proposed to import for your own use, and in small quantities, plants collected in the wild, a licence granting authority may be obtained from the Department of Agriculture and Fisheries for Scotland, Chesser House, Edinburgh EH11 3AW, or from the Ministry of Agriculture, Fisheries and Food, Plant Health Branch, Great Westminster House, Horseferry Road, London SW1P 2AE. This licence is to be surrendered to H.M. Customs with a list of the plants at the place of re-entry to the U.K.

Members will appreciate that, for health reasons, the import of certain plants is prohibited as well as for the purposes of the 1976 Act. Thus, to permit import, any plant must be clear healthwise and also under the 1976 Act.

Finally, members will recall the coming into force about a year ago of the Conservation of Wild Creatures and Wild Plants Act 1975. What is the connection?

Really, none. The 1975 Act referred to plants and animals in Britain. Generally it sought to conserve our native flora and fauna. The 1976 Act functions as part of an international arrangement to which our country is a party, still to protect rare flora and fauna, but this time from deprivation by international trade. However, both measures are part of an international consciousness of the need to protect the wild resources of our planet.

APPENDIX

All plants not in either of the two lists below are excepted kinds for which licences are not required

PLANTS

<i>Family</i>	<i>List A (Endangered kinds)</i>	<i>List B (Vulnerable kinds)</i>
Araceae	Alocasia sanderiana Alocasia zebrina	Pachypodium
Apocynaceae		
Araliaceae		Panax quinquefolium
Araucariaceae		Araucaria araucana
Cactaceae		Cactaceae
Caryocaraceae	Caryocar costaricense	
Caryophyllaceae	Gymnocarpus przewalskii Melandrium mongolicum Silene mongolica Stellaria pulvinata	
Compositae		Saussurea lappa
Cupressaceae	Fitzroya cupressoides Pilgerodendron uviferum	
Cyatheaceae		Cyatheaceae
Cycadaceae	Microcycas calocoma	Cycadaceae*
Dicksoniaceae		Dicksoniaceae
Didiereaceae		Didiereaceae
Dioscoreaceae		Dioscorea deltoidea
Euphorbiaceae		Any species of the genus Euphorbia which is a succulent
Fagaceae		Quercus copeyensis
Gentianaceae	Prepusa hookeriana	
Gnetaceae		Gnetum montanum
Humiriaceae	Vantanea barbourii	
Juglandaceae	Engelhardtia pterocarpa	
Leguminosae	Ammopiptanthus mongolicus Cynometra hemitomophylla Platymiscium pleiostachyum Tachigalia versicolor	Thermopsis mongolica
Liliaceae	Aloe albida Aloe pillansii Aloe polyphylla Aloe thorncroftii Aloe vossii	Aloe*
Magnoliaceae		Talauma hodgsonii
Melastomataceae	Lavoisiera itambana	

Meliaceae	Guarea longipetala	Swietenia humilis
Moraceae	Batocarpus costaricensis	
Orchidaceae	Cattleya skinneri Cattleya trianaei Didiciea cunninghamii Laelia jongheana Laelia lobata Lycaste virginalis var. alba Peristeria elata	Orchidaceae*
Palmae		Areca ipot Chrysalidocarpus decipiens Chrysalidocarpus lutescens Neodypsis decaryi Phoenix hanceana var. philippinensis Zalacca clemensiana Meconopsis regia
Papaveraceae		
Pinaceae	Abies guatemalensis Abies nebrodensis	
Podocarpaceae	Podocarpus costalis Podocarpus parlatorei	Podocarpus neriifolius
Portulacaceae		Anacampseros
Primulaceae		Cyclamen
Proteaceae	Orothamnus zeyheri Protea odorata	
Rubiaceae	Balmea stormae	
Saxifragaceae (Grossulariaceae)	Ribes sardoum	
Solanaceae		Solanum sylvestre
Stangeriaceae	Stangeria eriopus	Stangeriaceae*
Sterculiaceae		Basiloxylon excelsum
Tetracentraceae		Tetracentron
Ulmaceae	Celtis aetnensis	
Verbenaceae		Caryopteris mongolica
Welwitschiaceae	Welwitschia bainesii	Welwitschiaceae*
Zamiaceae	Encephalartos	Zamiaceae*
Zingiberaceae	Hedychium philippinense	
Zygophyllaceae		Guaiacum sanctum

Notes: 1. Any scientific name given under the lists of kinds shall be taken to cover also all sub-divisions (e.g. genus, species, etc.) within it.

2. A name bearing an asterisk excludes the sub-division immediately opposite in the other column.

The Drought in my Garden

by IRENE LIMONT

I THOUGHT a few notes on the drought would be of interest to members in the north whose gardens did not suffer so much. It must be emphasized that although the drought lasted just three months, its roots went back to a winter and spring of only moderate rainfall. The temperature was over 90°F. on nineteen days, the highest being 102°F. in the shade. The plants therefore had a good deal to contend with when living outside their normal habitats.

My garden in Surrey lies in an area that suffered most, for the soil is a quickly draining, thin, greensand, and neutral in reaction.

I was away from the garden for ten days during the time of highest temperature and the plants had to make do with unskilled watering. During this time no shade was given to the plants when, with the temperatures over 95°F., they needed it most. This, I think, was the critical factor as it caused the plants to dehydrate.

When I got back I took one horrified look round and found quite a number of plants looking very dry. Some had suffered in the heat, namely—*Primula denticulata* which never recovered; *Polygonum tenuicaule* which came away later on; and *Cortusa matthioli* which also revived and produced flowers rather late.

Nierembergia rivularis and *Linaria pilosa* were flagging, but several days watering brought them up again and both had a few flowers in due course.

Burnt up completely were *Saxifrages jenkinsii* and *apiculata*, a seedling of *Geum montanum*, *Rhododendron impeditum*, *Saxifraga primuloides* 'Elliott's var.' and the mossy *Saxifraga* 'Marshal Joffre'. An encrusted saxifrage was badly burnt except for a patch of the shade by a nearby *Campanula*. *Campanula* 'Norman Groves' had its flowering stems dessicated. A seedling of *Campanula rotundifolia* just vanished. What a result for ten days away!

I started watering that night and gave all the plants a good soaking, and particularly the new bed that had been made early in May. Next day covers were put over the plants worst affected to shade them from the greatest heat. Gradually the plants recovered and the beds looked better.

Rhodohypoxis baurii and *Veronica* 'Heidekind' needed a daily watering. The veronica was only planted in the spring and produced only a little growth and poor flowers.

Then came a break with two thunderstorms and some light rain, which eased the situation slightly. However, a second dry spell set in, water restrictions were issued, so it had to be saved household water for watering. The temperature never rose above 98°F., but as the days went by more plants required watering, namely *Veronica buchananii* 'Minor'. The soil was beginning to look very dusty and *Rhododendron radicans* was producing its autumn colours much too early.

Nevertheless two Azaleas survived without watering and one now looks quite fresh and green with only a few dead twigs to show for their hard summer.

With *Geum montanum* only the central rosettes remained green. I gave the plants a dry mulch of gritty loam, which seemed to help, especially after rain, and the plants started to grow again. *Gentiana lagodechiana* and *G. septemfida* required watering as they were starting to wilt, but they went on to flower very well—real tough plants. Towards the end of the drought the big patches of *Dianthus neglectus* and *D. nitidus* began to show the effects of too much dryness by the old plants dying off. It would be interesting to know if they do this in their native habitat.

There just was not enough water to give everything a good soaking.

In full shade *Salix retusa*, primulas and *Mertensia pterocarpa* did without water and looked none the worse for it. In half sun, *Campanula* 'Covadonga' and *Viola* 'Correvoniana' flowered profusely. *Viola labradorica* did so well it threatened to engulf *Rhododendron* 'Pink Drift', and *Tiarella wherryi*—planted in the spring—grew and flowered all summer. A second plant of *Rhododendron impeditum* coped successfully and at the time of writing has one or two flowers.

The plants that really enjoyed themselves were some two-year-old plants of *Iris pumila* grown from Club seed. One flowered for the first time. I moved two plants towards the end of May and, apart from being a little limp at first, they never looked back.

Albuca humilis did well and set more seed than ever before. A prostrate form of *Cotoneaster congesta* 'Nana' sprawled happily over its stones threatening to engulf nearby plants. A *Dianthus* flowered for the first time after several years' growth. It has purple-pink flowers and a sweet scent.

Fritillaria meleagris grew and flowered better than ever before.

The sedums, *Hebe* 'Carl Teschner', although only newly planted, had already layered itself, and *Hypericum coris*, all grew very happily.

Having survived the driest summer on record we have had to contend with the exact opposite—the wettest autumn on record. It is asking much to expect plants from such differing climates to cope with these extremes and this indeed will be a real challenge to our skill, and their adaptability to survive.

Obituaries

EUAN HILLHOUSE METHVEN COX—1893-1977

EUAN COX was one of the most knowledgeable and experienced horticulturalists of the day who by his writings and example did much to promote the love of gardens and their content. He was born on 19th June 1893 at Westward in the Carse of Gowrie about three miles from Glendoick, which became his home and where he laid out and planted a notable garden in which he particularly indulged his deep interest in the genus *Rhododendron*. His early education was at Cargilfield and Rugby before going to Cambridge University where he graduated B.A. He joined the Services during the First World War but was invalided out of the army and became for a time secretary to John Buchan—later Lord Tweedsmuir—who then held an appointment at the Foreign Office.

Cox's deep interest in plants really developed from his friendship with Reginald Farrer. They met at a tea party in a nursing home where Farrer was convalescing after an operation and then quickly decided to join forces and undertake a collecting expedition to Upper Burma. They used as their base Hpimaw and from March to mid-November 1919 they scoured the countryside for plants of garden merit. Cox had to return home in 1920 but the year spent with Farrer certainly fired the enthusiastic love of plants in Cox which led him to embark on a period of horticultural journalism, a phase which was to contribute significantly to the literature and in which his discerning judgement of plants and ready descriptive pen were given full scope.

For some years he was Gardening Editor of *Country Life*, but perhaps his most important contribution to horticultural literature was the founding and editing of *The New Flora and Silva*. In the first editorial in October 1928 he stated the object of the journal as one that would cater solely for the keen gardener who is ambitious, interested in particular groups of plants and wishing to enlarge his collection and above all for the gardener desiring to learn about the best plants and the best methods of cultivation. This journal appeared under his editorship for ten years and it attracted contributions from authorities on all groups of plants and indeed was used sometimes as a medium for describing new species. Other calls forced him to give up the editorship in 1938 when he handed over to Lady Beatrix Stanley, but it became a war casualty in August 1946. Its demise left a gap in the range of horticultural periodicals which has never been adequately filled.

In 1926 Cox published 'Farrer's last Journal'—a factual account of their expedition in 1919 and in which Cox gives vivid descriptions of the country and the plants they encountered and in which he quotes liberally from Farrer's letters. In 1930 he published 'The Plant Introductions of Reginald Farrer', which is a beautifully produced book and illustrated with water colour drawings which Farrer had made in the field.

The Cox family had long been established in the jute spinning business in Dundee and in 1932 Euan returned north to take charge of the business while at the same time he continued with his journalistic efforts in London. The business was sold after the 1939/45 War and then Cox was able to devote himself entirely to his garden at Glendoick. The collection of *Rhododendrons* there was started soon after he returned from Burma and indeed one or two plants from the Farrer expedition still survive. Cox frequently went for weekends to Exbury, Tower Court, Leonardlee and Caerhays, all notable *Rhododendron* Gardens, and, as was the custom, plants were generously exchanged with these Gardens and so Glendoick was greatly enriched from these sources as well as from the Royal Botanic Garden, Edinburgh.

Cox's interest in plant exploration in south-eastern Asia culminated in 1945 in the publication of his book 'Plant Hunting in China', which is a comprehensive history of botanical exploration in China and the Tibetan marches. For some years he contributed a regular weekly gardening column to *The Scotsman*. In 1970 Euan Cox was awarded a Veitch Gold Medal by the R.H.S. for his work as a plant collector, author and authority on *Rhododendrons* and other trees and shrubs.

Two plants bear his name which he had collected on his expedition with Farrer—*Berberis coxii* and *Juniperus coxii*, the coffin Juniper.

In 1954, in partnership with his son, Peter, a nursery was started at Glendoick and Euan Cox carried on with much of the office work until the age of 80. In collaboration with his son three books were published—‘Modern Rhododendrons’, ‘Modern Shrubs’ and ‘Modern Trees’.

Euan Cox was of a modest, retiring disposition and only seemed completely at ease in his garden or when conversing about plants.

GEORGE TAYLOR

LEN BEER

IT WAS as an enthusiastic and knowledgeable plantsman that we remember Len Beer. He was curator of the Botanic Garden at the University of Durham, and previous to that had been Curator of the University College of Bangor Botanic Garden. However, members of the Club will remember Len Beer more for his plant hunting expeditions to Nepal, resulting in an abundance of seed for distribution. Plants arising from his collections are now flowering in the garden.

Len's expedition record is impressive. He collected in Malaysia and was a member of the Trans African Hovercraft Expedition in 1969. In 1971 he was leader of the University College of Bangor Nepal Expedition in a joint horticultural/agricultural venture to East Nepal.

In 1975 Len and his wife Sheila returned to the Iswa Khola, bringing back a good harvest, and finding at the same time several new plant records for Nepal, including *Lilium sherriffae* and *Smilacina purpurea* var. *oligophylla*.

Len was travelling lecturer for the Club in 1976 and was one of the principal speakers at the 1975 Discussion Weekend in Edinburgh. His cheerful disposition, his sense of humour, and patience in dealing with people, brought him many friends. During his talks he made light of the difficulties he experienced in the wild.

Such was the man. He died at the age of 35 and will be sadly missed.

R. J. M.

Seed Exchange (Angus Group)

LAST SEASON was a good one for seed and I think most members received a large proportion of their first choice. Will collectors please remember that even a few seeds of the rarer species are particularly welcome, and there is always a demand for seed of *Androsaces*, *Cyclamen*, *Gentians*, *Lewisias*, small bulbs and *Primulas*.

Seeds or lists of seeds to follow must reach me by the end of October. We were held up last year by a few days, which resulted in the list being three weeks later than usual due to the intervening Christmas holidays.

All overseas members and home donors receive a seed list. Home members, not donors, who wish a list must send a stamped addressed envelope, $8\frac{1}{2} \times 5\frac{1}{2}$, or an addressed sticky label to:—

Miss J. HALLEY
16 Abercrombie Street
Barnhill
Dundee DD5 2NX

Applications for seed must be on the form provided, and all orders are date stamped and are dealt with in the following order: overseas donors, home donors, other overseas members and home members.

We have had enquiries about seed envelopes and have purchased some for your convenience on a trial basis. The sizes are 4 in. \times $2\frac{1}{4}$ in., $4\frac{3}{4}$ in. \times $2\frac{3}{4}$ in, and 5 in. \times $3\frac{1}{2}$ in. 44, 50 and 55p per 100 respectively. Should you wish to purchase, please send a S.A.E. to:—

Dr. ISOBEL SMITH
36 Seafield Road
Broughty Ferry
Dundee

You would need a 12p stamp for the first two sizes and 15p for the largest one if you wish 100 envelopes. 20 of each size cost 30p and a 12p stamp.

We have a leaflet on methods of cleaning seed which can be obtained from Dr. Smith or myself.

It looks as if it should be a good season for seed, so hope you have a good harvest.

There has been some peculiar seed sent in as *Boykinia jamesii*, so reports tell me. This plant is 6 inches high and the flowers are bright pink.

JOYCE HALLEY

Celmisia longifolia

by BRIAN HALLIWELL

OF SOME 60 odd species of *Celmisia* most come from New Zealand and it is this country's species that are best known to rock gardeners. A genus for the specialist, for patience and skill are needed to bring most to flowering. Most are intolerant of soils which dry out and grow poorly where summer humidity is low.

The Australian species are mostly unknown and few if any are seen on rock gardens even in Scotland where the genus does grow well. *Celmisia longifolia*, which comes from Tasmania, Victoria and New South Wales, is probably the most widespread species, being not uncommon on higher mountains above the tree line in open grassland or on heaths. From a stout rootstock thick almost fleshy roots develop. Tufts of leaves are produced in loose rosettes which have shaggy bases. The leaves, which are mostly upright, are recurved, showing blue-green through a mat of silvery hairs whilst old leaves can be almost glabrous. Flowering does not seem to have a definite season but continues spasmodically from mid-summer until mid-autumn. The stiff upright flower stems are white and shaggy, and daisy-like flowers 1-1½ ins. in diameter, have white petals surrounding a dull gold centre which can be purplish before becoming fully developed.

Grow in a peaty moist soil in light shade, but take care not to let aphids become established on plants. Aphids can be a problem for they hide in the crown amongst the leaf bases where they are hard to reach with insecticides, and resulting growth is malformed, vigour declines and death can result. It seems to be quite as hardy as the New Zealand species but resents soil which is frozen for any length of time. It is often grown as pot or pan plant where its long flowering season can make it useful for the alpine house during summer.

Propagation is by seed sown as fresh as possible and whilst cold is not essential for germination, it certainly acts as a stimulus. As with all *Celmisias*, the percentage of good seed in any sample is small and viability is short, which is further reduced by adverse storage conditions of high temperatures and low humidity. Established plants can be divided in early spring just as growth is beginning.

Not as spectacular as the choicest New Zealand species, it is still well worth growing and is more tolerant to dryness in the atmosphere and the soil during the summer.

Seed is, and has been, offered by Canterbury Alpine Garden Society.

Crocus and *Passer domesticus*

by F. C. BARNES

MUCH speculation has been rife and published on the notorious antipathy of the latter for the former species, especially in its yellow forms. There are two observations, one made over 48 years ago and the other only as I pen these words, which I should like to add to the argument in the hope that it may lead a little further towards the solution of this tiresome problem.

My first observation takes me back to the Spring of 1929 when I saw a fairly large planting of Dutch crocus in Jesmond Dene, a public park which abuts our garden. There were three colours—purple, white with purple stripes, and yellow, planted on a steep, clayey bank, with a cover of tall trees, mainly Gean (*Prunus avium*) now 40 feet high or more. During these years the crocus have spread so that they are pretty well solid for an acre or so, but it is a long time since I saw a yellow one. Is this perhaps the effect of *Passer domesticus*?

And now as the lawyers say *per contra*. Last year we took a foot or so off the lawn and planted bulbs, including a yellow form of *Crocus chrysanthus*. They did quite well in spite of our resident population of *Passer*; 23 at the last count. This year we extended the bed and planted some more of the same yellow form about two feet away from the originals. The new ones flowered about a week earlier than the originals and are untouched, but the ones planted last year were demolished as soon as they began to show any colour.

I have only the vaguest hypothesis to suggest for this apparent aberration. Could it be that corms bought from a nurseryman, whether raised in Holland or Lincolnshire, are forced and do not have the capacity in their first year of producing whatever attracts the sparrows (nectar, perhaps?).

Perhaps Members may have similar or equally pertinent observations which they would send to the Hon. Editor and if sufficient emerges I am quite prepared to collate the information and draw appropriate conclusions.

Why Shade Alpines?

by HENRY TAYLOR

ALPINE PLANTS in general come from high mountains where sunlight, especially ultra violet, is much more intense than in Britain. Yet, curiously, books on alpine house culture usually recommend shading in summer to avoid 'Scorch'. These books often omit to mention that 'Scorch' is not caused by high light intensity but is due to high temperature. The problem is the build up of heat due to the 'Glasshouse Effect'. This term is used for the phenomenon whereby sunlight, mainly short wave radiation, passes through glass heating up objects inside, but the long wavelength heat rays given off by these bodies cannot pass back out through the glass. Thus heat builds up within the glasshouse, especially if air circulation is inadequate. This was a problem with wood and putty type glasshouses. Fortunately aluminium glasshouses with easily removeable clip-in panes of glass allow adequate cooling without the need for shading.

For the last three summers I have kept my greenhouse temperature low by leaving the door open and unclipping and removing glass from the far end wall, in addition to leaving the vents fully open. By the way, the doorway and ends of the glasshouse are best covered by nets to keep out birds.

Possibly I also get away without shading because of capillary benches in my glasshouse. Evaporating water must lower the temperature in addition to keeping pot plants wet. There are no crocks in the pots of course. This capillary water is turned off from October to March, to avoid plants being kept too wet in winter.

Also with the thin framed aluminium glasshouse, plants can stand anywhere without etiolation. No need for the old, 'Place pots of bulbs close to the glass or they get drawn'. This derived from the days of thick wooden astragals causing heavy shade. Plants used to be placed between the beams close under a pane of glass. Due to sparse aluminium framing, light does not diminish with distance from the glass, as the distance of the plants from the sun—our source of light—remains virtually constant.

Concerning these remarks on eliminating shading, my glasshouse is in the sunniest part of our garden in one of the sunniest regions of Scotland! Even *Ramonda pyrenaica*, which usually grows in part shade in the wild, has flourished in full sun in the alpine house, no doubt benefiting from the copious water supply.

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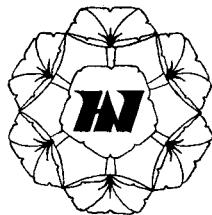
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SPRING TOURS in Europe include Greece, Turkey and Sicily and are mainly for people who enjoy a combination of sites and flowers. They will take place between the end of March and the beginning of May and will be particularly suitable for people who do not wish to be too energetic, but who, at the same time, enjoy a certain amount of walking.

SPRING TOURS in India and Nepal highlight the Langtang Valley where, in May, the rhododendrons are remarkable for their profusion and variety in addition to the alpine flora to be found there. This is quite a tough trek and from London back to London with a day or two's rest at either end in Kathmandu is likely to take over three weeks. It will be accompanied by Oleg Polunin. Our Darjeeling trek—which is quite easy walking—will also be repeated in April. On both tours the views are magnificent. Finally, our **SITES & FLOWERS IN NEPAL AND KASHMIR**, a hardy annual, will also take place in May and will, as usual, be led by Miss Theresa Atkins.

SUMMER TOURS for alpinists are being replanned in 1978, in order to try, where possible, to make economies. For example, we are hoping to find people who are willing to share rooms with a friend, thus making it possible to use smaller (but equally friendly and comfortable) hotels. Dinner, bed and breakfast only will be provided in the price, so that picnics can be bought locally with the help of the tour leader (which usually results in a more interesting and certainly less expensive meal); and we are searching out new centres. **(Suggestions from SRGC members will be welcomed in this respect)**

OUR AUTUMN HOLIDAY to see the Flowers of the Cape Province will be repeated in September 1978 and certain treks will be repeated also.

FINALLY, our General Tours brochure will contain new areas, including Morocco, in February and September; the Desert Cities of Rajasthan, highlighting this fascinating part of India which not only contains the best known places such as Jaipur and Agra, but also Jodhpur, Bikaner and Jaisalmer—mediaeval cities built of yellow sandstone in the heart of the Thar Desert; and a tour of Southern India, including the Nilgiri hills.

Details of these and other holidays will be available in the autumn, together with descriptions of Christmas/New Year breaks of a week or so in Greece and Spain, from

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