

# THE ROCK GARDEN

**THE JOURNAL OF THE SCOTTISH ROCK GARDEN CLUB**

**Volume XXV**

**Part 3**

**Number 100**

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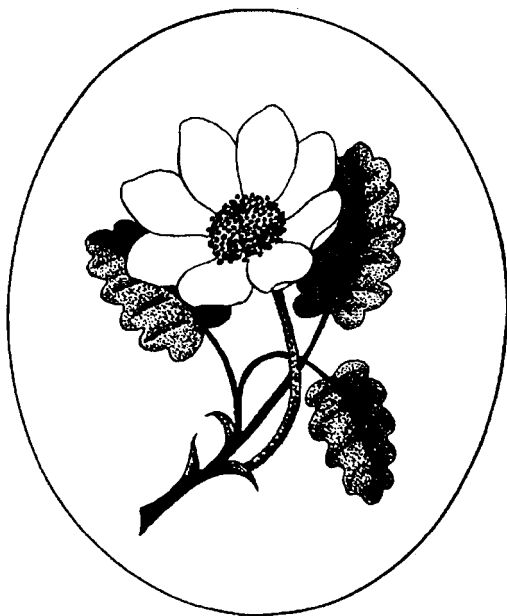
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**THE JOURNAL OF THE  
SCOTTISH ROCK GARDEN CLUB**

**Volume XXV Part 3 Number 100  
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Front Cover : *Rhododendron ferrugineum* in the  
Trummelbach Valley near Wengen.  
Photograph: Brian Wilson

# THE ROCK GARDEN

## *The Rock Garden*

is published twice yearly by the Scottish Rock Garden Club  
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The Editor welcomes articles on any aspects of alpine and rock garden plants and their cultivation. Articles should follow the format of previous issues with colour transparencies and line drawings if appropriate. Articles, if submitted in manuscript, should be in double spacing, but it is hoped that authors will consider submitting material on disk, either on Microsoft Word or on some compatible software.

Please contact the editor before submitting material in order to check suitability for publication and also to see whether a computer disk will be possible.

**The deadlines for contributions are 1 November for the January issue and 1 April for the June issue.** These dates also apply for material for the Yearbook & Show Schedules.

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# 100TH ISSUE

*This is the 100th issue of The Journal of the  
Scottish Rock Garden Club*

The Journal began in 1937 as an annual publication of around 40 pages under the editorship of Kenneth Corsar. It only managed one more edition before the 1939-45 war. It re-appeared in 1946 and has been published twice a year since then. It has had nine editors since then (counting the Bainbridges who edited it jointly as two).

It changed its name in 1983 to 'The Rock Garden' when issue No.72 was published and has kept that name ever since.

A comparison of the current issue with No.1 shows enormous changes (see p.325). Perhaps the most obvious to the editor, but probably not to the general reader, has been the change from lead type to the use of word processors and off-set litho printers. This has led to greater flexibility in the handling of manuscripts and the ability to amend and move text easily. In the last few years the Journal has been produced in-house on computer, with camera-ready copy going direct to the printing company which then sets the pages up for the printing machines. This involves more work for the editor and encourages certain authors who know the flexibility of the new system to try to amend their manuscripts *ad infinitum*.

## ILLUSTRATIONS

Until about 10 years ago most of the illustrations were black and white. Colour was very expensive and so rarely used; indeed that was the reason for setting up an Appeal Fund for colour plates. Nowadays few people take b/w and the cost of colour has come down markedly so that colour is now standard practice. With modern digital scanning it is now possible to 'improve' photographs before printing but, even so, the Illustrations Manager still has to reject at least 60% of transparencies offered because of their unsuitability for printing.

A close look at the Journals over the years shows a gradual improvement in the publication in printing terms. There is much more variation in layout while paper quality has also improved.

## CONTENTS

The contents of the Journal have changed over the years. From a 40 page issue, our standard issue is now 96 pages of text and 16 of colour. There are many more in-depth articles and the range of alpinists described in the Show Reports and in the articles is much greater. The early issues concentrated mainly on telling members how to grow a range of fairly easy plants whereas nowadays there

is more emphasis on travel and on the more difficult plants which the experts grow.

Over the years, the index shows that only a limited number of people actually write for the Journal and editors are always grateful to such folk. Without these regulars, editors would always be in dire straits.

Especial mention should be made of The Stone Column which has been produced by Mike and Polly Stone since 1983, a total of 31 issues. Without fail the editors know they can rely on the Stones' contributions. We owe them a great debt of gratitude.

Apart from the contributors, the editors are grateful to the many people who help to produce the Journal. At present we have Fred Carrie who, as Illustrations Manager, looks at the transparencies submitted, and, along with the Editor, decides which should be used for the next issue. Then we have Mike Reid who, as Advertising Manager, is responsible for arranging adverts for the Journal. Adverts do not make a lot of money for the Club, but they are a most useful service for members. Mike helps the Editor greatly by presenting camera-ready copy of the adverts.

Proofs are read by the Editor, the author and also by a number of proof-readers, the principal two at present being Cyril Lafong and David McKelvie but at the end of the day it is the Editor who is responsible for any mistakes.

The Index is an indispensable facet of the Journal, and we are indebted to Chris Jones who not only does the Volume Indexes but also the cumulative 10 year Index.

The Bainbridges who edited the Journal until recently are still responsible for producing the Yearbook and Show Schedules which they do in camera-ready form which is a great help to the editor.

## COMPUTING THE WAY AHEAD

Two great steps forward in recent years have been the submission of most of the manuscripts on computer disk which obviously saves a vast amount of re-typing. But for those people without a computer the submission of a good clear dark typed manuscript means that this can be scanned direct on to computer disk by a scanner. The Editor is currently indebted to Noel Kent who provides this service.

The Journal has had only four printers in its long life and they have all been most helpful in its preparation. Inevitably, costs have risen over the years and the Club Treasurer is always anxious about this. Currently the Club is indebted to Claymore Graphics, our printers, who manage to keep costs down wonderfully well. In addition a lot of money is saved by the Journal being type-set by

the Editor and also by the team of Aberdeenshire members who, twice a year, spend two days packeting and posting 4000 Journals worldwide. You will see from the annual accounts how Journal costs have been reduced in the last two years.

The Journal has come a long way in these 100 issues. Technology has allowed great progress in quality of content and appearance. It is inevitable that the 200th issue will be quite different from what we have today. As we go forward to issue No.200, to the year 2000 and to the Internet, it would be wonderful to have ideas from members as to how they want to see the Journal develop.

### **A note regarding slides submitted for publication in the Journal**

The Illustrations Manager feels that members submitting slides for publication in the Journal should be aware of the following.

Although members' slides are treated with the great care and respect that they deserve by all the editorial team, on rare occasions slides have suffered slight damage while going through the printing process. Although any damage is deeply regretted, it is impossible for the editorial team to guarantee that it will never occur. During the printing process the slides have to be removed from their mounts and fixed to the drum of the scanning device which digitises the image. The slides must then be remounted before being passed back to the Illustrations Manager or the Editor for return to the author.

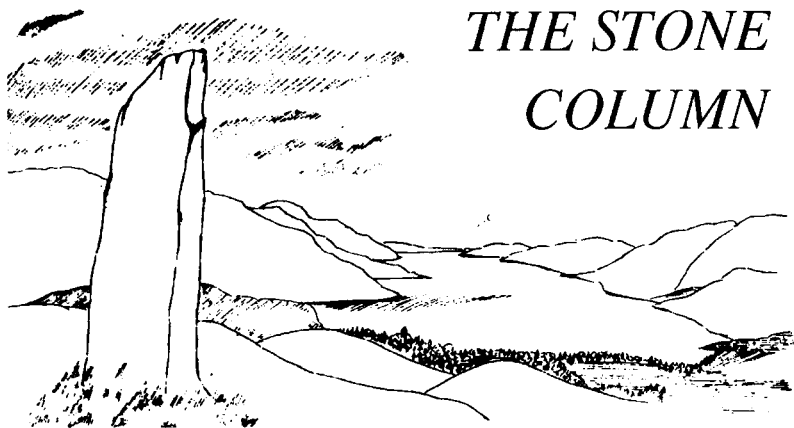
Although the vast majority of slides suffer no damage during this process, it is inevitable that sooner or later a slide will be scratched. We have highlighted this problem to the printers and they have assured us that all slides will be treated with great care; however, no guarantees can be given. It is probably little consolation, but still worth bearing in mind, that many prestigious publications will not even return material that is submitted, far less guarantee its safety. We can only offer this advice; if you have a slide that you would like to have published and it is especially rare or precious, it might be worthwhile having a copy made and sending it instead of the original. Nowadays, copy slides are almost as good as the original and will be quite acceptable for the Journal provided that the original was of good quality.

Finally I would like to take this opportunity to thank all members who send in their precious slides. Please keep them coming in; the risk is very slight and the Journal would be a poorer thing without them.

Fred Carrie, Illustrations Manager



# THE STONE COLUMN



## COMES IN PHASES

Writing an article is rather like swimming in cold water, getting into it is the hard part. However, sitting at the computer in Poll's office, inspiration is but a 90° turn away for outside the window *Stachyurus praecox* is in magnificent full flower, the best we can ever remember. Said to grow to around 2 m in cultivation, our 20 year old specimen is 3m high and wide, the bare reddish stems laden with hanging racemes of soft yellow bells, each corolla about 6 mm in diameter by 8 mm long. From a distance, the general effect is of a very superior alder bush. Further along the bank below the house, outside the kitchen window, the pink heads of an equally large *Viburnum x bodnantense* 'Dawn' are also highlighted by a watery glimpse of the sun in between the inevitable showers, the two complementing each other beautifully. Both have been in flower for many weeks, helped by a winter which has been in three distinct phases, the last current one very unsettled but unusually frostfree. From the Winter Solstice until the middle of January frost held our bare ground in an iron-hard grip, burning the exposed foliage of such dwarf shrubs as *Cotoneaster sandakphuensis*. No snow to protect them this time around, a poor season for evergreens and skiers alike. Some books say not to prune roses at such times but if I didn't thin out and cut back our shrub roses while frozen ground inhibits other activities, except stone collecting, they'd never get done. A burst of heavy rain signalling a subtle change in wind direction, the rest of January was much milder, with only slight frost at night, while remaining largely dry. At last we were

able to sow the bulk of our seed, and rebuild the stock of firewood. One drawback of sowing into fishboxes, for a deeper rootrun, rather than traditional shallow seedtrays, is the quantity of compost which Poll's labourer has to mix. On this scale it is impractical to thaw the ingredients artificially. Not so long ago many households in the village burnt wood, a 'green' fuel which is CO<sub>2</sub> neutral, simply re-releasing the carbon which trees have taken from the atmosphere. Now chainsaws and chopping are much rarer winter sounds, a sign of social change and outside influences perhaps. If winters have become quieter, then summers resound to strimmers and lawnmowers. When we started the garden at Askival 25 years ago, it was one of only a dozen or so in the village; now neglect of gardening, largely a result of financial constraints, has been replaced with success in 'Scotland in Bloom'. Cynics might point the finger at tourists and incomers.

If January was rather dry, surprisingly so for a month which normally sees 150-200 mm of rain, then the final phase more than made up for it. One Monday lunchtime, with pelting February rain drumming on the framelights, I tuned in to the BBC only to be told by the weatherman that a changeable week was in store, "but we need every drop of rain we can get". I was so incensed that I rang Queen Margaret Drive, and asked the Newsdesk what the weather had been like in Glasgow recently. "It's been raining hard", said a Kelvinside accent. "Then who is this 'we' who needs every drop of rain?" was my next question. To be fair to the lady the problem is one of the ingrained London centralism of the BBC. Earlier in the month a 100 mph wind had torn through the Great Glen, snapping off the Hydro Board's poles and leaving most of Glen Moriston without power for several days. Linesmen had to be flown in by helicopter as a landslide had blocked the main Loch Ness-side road. Not a mention of this on the main news, instead their reporter stood on the seafront at Hastings and, with a 60 mph breeze barely ruffling his designer parka, told us how severe the weather was on the South coast.,

Back at home, and off my soapbox, the only damage done by our real storms has been to some of the lights for the old nursery frames in front of the house. These date from 1977, and at exactly 20 years old have greatly exceeded the expected lifespan of their 'Monarflex' covering: a nylon-reinforced UV stabilised polythene sheeting. This is now embrittled and is starting to shred away from the staples; but I have resisted recovering them as I intend to

rebuild and raise these frames, replacing the lights with slightly longer ones. In the original design (see 'The Rock Garden' No. 72, Fig. 54) the drips from the lower edges of the lights fall onto the concrete block substructure, and can splatter onto the pots in the frame. We have never doubted that raising a frame for alpines 0.6 m or so is well worth the extra effort involved; working with the plants, especially small seedlings, is so much easier and more intimate. One can even look into the frames through the ventilation gaps without removing the lights. Back in early February, I peeped into one, containing some of Poll's reserve bulb collection, to see whether any were starting to move, only to find *Eranthis pinnatifida* in full bloom. (Fig.54 p.231). Raised from seed given to us by Eric Watson in 1990, this is a much more delicate and refined species than the usual winter aconites. The white flowers, set off by violet anthers, are carried on short stalks above the ruff of cauline leaves, and not sessile as in the yellow-flowered species. It is a rare native of mountain forests in Japan, and like many of its countrymen, a connoisseur's plant.

#### SPRING IS ON ITS WAY

With the Editor's deadline being 'All Fool's Day', the 1st of April, spring is not yet fully under way here in the Highlands; it will be some time before the grass starts to grow, and the first lamb has only just appeared outside our fence, in the wood. Although it's really too early to be sure, I feel that the omens are good for a vintage spring. Our snowdrops were very late, but vigorous and healthy as always, crocuses were battered as always, and the rest of the bulbs are coming on in a headlong rush, as always. Our narcissi and scillas are barely out when fritillarias and corydalis come crowding behind. Experiments have shown that plants grown under the same lighting conditions are shorter and sturdier if they are exposed to movement stress, e.g. from the wind. This could be why our corydalis, such as *C. paczoskii*, form compact mounds rather than flop as they tend to do under glass. Poll tries to collect the corydalis seed before the pods explode, and also harvests many of the fritillarias, but most of our open ground bulbs are welcome to self-sow and spread at will. A consequence of such a minimum interference approach is that one cannot be too concerned about cultivar names, but then we have never suffered from that exhibitor's disease: clonal fixation. Like snowdrops, dwarf narcissi have their devotees who dwell on minute differences. They would

have problems here, for *N. asturiensis* has crossed with other small early trumpet daffodils to produce a full range of intermediates. A constriction in the corona is said to distinguish the former species, but the offspring sport tubes varying continuously from a quite marked waisting, through parallel-sided, to a noticeable taper before the final flare. No matter, to us they are all beautiful.

Outwith the bulb borders by the house, it looks like being a good year for *Auriculastrum primulas*, if not for roses. Various forms of *P. marginata* are in full bloom, the most vigorous being 'Drake's form', the most distinct 'Holly Leaf', and the most persistent in one place, a dry wall, 'Pritchard's var'. *P. minima* enjoyed a proper winter's rest and is flowering in a trough, as is a lovely form of *P. glaucescens* known, for reasons obvious when one sees it, as 'Frisly'. This last species is a tough and accommodating one here; we still have other clumps raised from the 1972 SRGC seed exchange, which have only been lifted and divided once in all that time, and still flower well every year. European ranunculi also look promising, and 'Kabschia' saxifrages have bloomed well in spite of all the moss in their cushions. In the early days I used to remove the moss from our cushion plants with tweezers, but it was like painting the Forth Bridge, and I have conceded victory to the bryophytes. Most alpinines will happily coexist with mosses, regarding them as an acceptable substitute for a montane herbfield; the only exception being the tall, rampant hairmoss, *Polytrichum commune*, which I do try to pluck from our troughs.

## A FEAST OF TRILLIUMS

In the larger scale open borders, the first trilliums are almost about to flower, starting with the West Coast species like *Tt. albidum*, *chloropetalum*, *parviflorum*, and the diminutive *rivale*. The equally small *T. nivale* is the first Easterner here, with the much larger and beautifully mottled foliage of *T. cuneatum* following on rapidly. Nearby, the bright green foliage of *T. simile* is well advanced, and the huge, broad-petalled, white flowers will not be far behind. A visitor once remarked that he had been told that this was just a white form of *T. vaseyi*, a suggestion that I most strongly refute. *T. simile* (Fig.55 p.232) is very much earlier in flower, in full bloom when *T. vaseyi* is barely showing through the ground. Secondly the flowers are displayed well above the trio of

'leaves', not hanging beneath as in the dark purple *T. vaseyi*. The latter closes the trillium season, only coinciding with the smaller, strongly reflexed, and rather hidden, white flowers of *T. rugellii*. These two hybridise, to produce some very attractive late-flowering pinks and bicolours, all with declining pedicels (Fig.56 p.232). Flowering period does not of, course, show on herbarium specimens; the easiest way to tell *Tt. ovatum* and *grandiflorum* apart in a garden situation is that the former is consistently much earlier, not a help if you only have one. A débutante this year is the distinctive *T. petiolatum*, its darkest red flowers sessile in the centre of a fountain of long-petiolate leaves. No matter how many plants we have grown, we have never lost the thrill, and sense of wonder, at seeing a new species agree to flower here at Askival.

#### GARDEN FAUNA I :- FUR

When one reads of the problems other gardeners have with opossums, racoons, deer, and other garden raiders, we realise how lucky we are that the Scottish mammalian fauna is almost as depauperate as our native flora. Sika and Roe deer used to be seen regularly around the village, but most have ended up in someone's freezer. Rabbits fortunately do not climb, so all that is needed is a good fence. This doesn't stop people writing books on 'Gardening with Rabbits'; personally I'd rather garden with plants, and eat rabbits. Red squirrels do visit occasionally, but appear to do no harm. So far, touch wood, we do not have the American gray, but if it ever does appear I shall reach for my air rifle. It is amazing how ambivalent some can be over small furry animals; gray squirrels are just rats with bushy tails. We haven't seen a real rat for many years, the last one got lead poisoning on the compost heap, but all our drystone walls provide upmarket accommodation for mice and voles. They are particularly partial to newly emerging lily shoots, and also like trillium fruits, two situations where we do set traps; but most of the time we rely on the nightly visits of cats and other predators to control their numbers. Cats are of course almost impossible to exclude short of electrified fences, one must learn to live with them. All our frames have protective nets made from the unobtrusive black plastic mesh sold for fruit cages. We have found that a top-dressing of 5-6 mm gravel will deter their scraping in choicer beds; in the rougher shrub borders they are welcome to stir up the moss and leaves. Most of our neighbours pets know not to visit in the daytime, for like most terriers, Grizzly hates felines; and

he will soon have help. With Tor gone, and Moppy at age 14 only a semi-mobile hearthrug, we were looking out for another dog. Thus when Grizzly's breeders, a keeper and his wife from up near Lochinver, phoned to say they had had a surprise litter we agreed to take one of the bitches, although the timing was far from ideal. The lady had to return her grandson to his parents, both in the RAF stationed at Kinloss, so a meet was arranged in Inverness, appropriately on St. Valentine's day. The pack is now back to three for the time being; Dana is another Red Lakeland terrier, but from working strain and so very different from the pedigree version. She was named for the mountain in California which we climbed to see the Sky Pilot, *Polemonium eximium*, a plant of which from Ron Ratco's seed is about to flower.

Spring is, as I have said, not the best time to start training a new puppy. With so many bulbs just putting their vulnerable heads up in the borders around the house, it has been a nerve-wracking few weeks. When Dana decided that the patch of *Iris winogradowii* (Fig.57 p.233), with over a hundred flowers, needed rewarding with extra fertiliser, we had to grit our teeth and praise her for not performing on the kitchen floor. Incidentally, the iris planting was built up by treating them like snowdrops and dividing immediately after flowering. Garden training follows housetraining, and is currently under way. 'Out' is a command with which she is becoming all too familiar. It must be very confusing for a poor 'doggie-brain', especially as many of the borders have very little growth as yet. It would be so much easier in late summer or autumn when paths are clear between the close boscage on either side. In addition, as one cannot put young puppies into boarding kennels, nor is it fair to confine them to the Land-Rover for 8-10 hours of driving, trips to the Central Belt are out for a while. People who have never kept a dog may be wondering why we go to all this extra trouble for a 'pet'. The answer is simple, if not original: they ask for so little and give so much. I'd rather have a dog for a companion out in the garden, or upon the hill, than some humans I can think of; and it's been shown that, like red wine they are good for your health. Cheers, Dana; welcome to Askival.

## GARDEN FAUNA II :- FEATHERS

If the most significant furry fauna at Askival is, like the flora, introduced, the same cannot be said of the feathered vertebrates. Chris and Felicity next door do have an extremely ancient hen they

inherited, known as 'Narkie'. When Grizzly eyes her through the fence, I tell him that she's too old and stringy; but when he's not looking I do toss her the odd caterpillar or cutworm. There is no doubt that as our garden has matured, both the number and diversity of birds have greatly increased. An SRGC couple visiting once on the way back from a bird-watching holiday in the Highlands were greeted on the drive by a shower of debris from the Caledonian pines overhead. A family of our endemic Scottish crossbills, the first ones they had seen, were happily shredding the cones. The crossbills were just passing through, but as the shrub borders have increased in size, and above all in density, so has the number of nesting birds. The other day Poll counted no less than 16 blue tits on and around the bird table, together with several great tits and coal tits. This local population is probably kept artificially high by all the feeding which Poll does right through the winter, but we are amply repaid by all the good work they do in the growing season. To watch a blue tit delicately picking aphids from the stems of a *Soldanella minima* on one of the troughs, without damaging any of the flowers, is to marvel at the precision of movement. Long-tailed tits are fairly regular winter visitors, giving away their presence as they flitter from tree to tree, like flying crotchets, with a soft, high-pitched 'si-si'. The very much rarer, but unmistakable, crested tit we have only seen in the garden once, probably a wanderer from Speyside. Other one-offs have been a golden eagle, a young one sat all too briefly in one of our trees, mobbed all the while by small birds; and a hoopoo, which spent several days probing about in the hairmoss hummocks between the rhododendrons on the plateau.

On average, finches are the most numerous group visiting the birdtable, chaffinches alone easily outnumbering sparrows. Bramblings occasionally join the flock but are usually too shy to make it right onto the table. The strikingly marked siskin is common here, competing with tits for the nuts, usually accompanied by the larger greenfinch. The latter are partial to ranunculus seed, especially *R. seguieri*, and Poll has to protect our plants during ripening with old lampshade frames covered in netting. This is as nothing when compared with the damage done by the beautiful but pestiferous bullfinch. Our amelanchier is always the first to be stripped of its buds; neither does it colour well here in autumn so, were it not providing valuable shade, we should replace it with another sorbus. Many alpine gardeners also

regard sparrows and blackbirds as pests. The former have a reputation for attacking crocuses, but either they haven't learnt this trick here yet, or our crocuses are flattened by gales before they have a chance to go for them. Blackbirds are disliked not for what they eat, but for the damage they do while seeking food. Fortunately our Blackbirds prefer to rip moss from our stones rather than pull apart androsaces. The wind piles fallen leaves against our stone edgings and dwarf retaining walls, the blackbirds scatter them around, and then the wind gathers them again. This game continues until we collect the leaves. In the larger shrub borders we do not gather the leaves, but allow them to accumulate as a natural mulch. All summer blackbirds and song thrushes can be heard rustling about under the shrubs, much preferring their cover to attacking a cushion plant out on an open scree. When a snail has been captured, it is taken to an anvil stone to be battered into submission. Both these species nest regularly in the garden, sometimes right by paths. The much larger missel thrush prefers the privacy of a nest-site high in one of our mature beech trees. Last November a pair took up residency in a large holly bush in the garden across the road. For the whole of the winter it was a case of "beaks off, it's our larder"; consequently the bush remained laden with its red berries until the end of March. Suddenly one morning a loud chattering announced the arrival of a flock of migrating redwings, probably on their way back to Scandinavia. Mob-handed, they were able to oust the guardians and strip the bush, before moving on. Our pleasure at seeing so many redwings was tinged with more than a little regret, for this tree had been a scarlet beacon to cheer us on many a short winter's day, especially when caught by a low-angle shaft of sunlight.

While fruits may well be available to tide some birds over the winter, insects are in short supply. Like many insectivorous species, the spotted flycatcher avoids this problem by migrating. Each summer they return to perch on top of **The Stone Column**, before darting out to catch some passing insect. Unfortunately, they make very little impression on the midge population. Two which do stay all year are the dunnock and treecreeper. While the former forages on the ground, the latter, as the name suggests, specialises in vertical surfaces. Treecreepers are most often seen investigating the fissured bark of our old pines, but also work our stone walls, probing the moss and lichens, and even the sides of older troughs. Wrens have claimed our frames as their happy hunting ground. The



netting 'lights' rest on the wooden crossbars, and so there is a gap of 20-30 mm between their bottom edge and the top of the concrete block work. This operates as an unintentional 'wren-filter', allowing them free access, while keeping out cats and blackbirds. Most robins and some blue tits have also acquired the knack of working the frames for caterpillars etc., but the diminutive goldcrest is too shy. We usually only see them when they come down to drink. At the other end of the scale, we viewed collared doves with great suspicion when they first arrived up here a number of years ago. In spite of close observation with binoculars, we have never seen one attack a growing plant, but they do eat seeds which have been shed onto the ground. So many of our plants self-sow, some with a little too much enthusiasm, that the birds are more than welcome to their share of fallen seed.

#### TO SPAIN, BRIEFLY.

During the darkest days of a Highland midwinter, the kaleidoscope of colour and movement around the bird table outside the dining-room window goes some considerable way towards making up for the lack of flower power in the garden. Dispersing around our patch for the summer, our feathered friends are less obvious to the eye, if not to the ear. Untidy gardeners they may be at times, but on balance we are sure they are of immense benefit to the ecosystem of the garden as a whole. Things are very different in the south of Spain, where we rented a villa in the hills behind the Costa del Sol last November. Not intended as a plant holiday, this was just a late break to stop us working for a fortnight. The only birds we saw, very very briefly, were three sparrows which disappeared into one of the climbers which festooned the house the moment we drew the curtains in the morning. The steep woods up behind were totally devoid of birdsong, but not of hunter's old firerings. Although we were in Spain for sunshine not alpenes, I was allowed one day on a real mountain above Granada, before a snowstorm blanketed the heights. Out of season flowers were to be found on *Viola crassiuscula* and *Leucanthemopsis pectinata*. The latter has had a number of name changes, we grew it on a trough for many years as *Tanacetum radicans*; and other combinations have been proposed. *L. pectinata* is however the name currently used in Professor Gabriel Blanca's 'Joyas Botánicas de Sierra Nevada', a delightful book illustrated with both colour photographs and a series of subtly understated colour drawings of the jewels of

this range. Whatever its name, this endemic is one of the world's finest alpines: a slowly creeping mat of tight silver filigree foliage with which the single lemon-yellow daisies blend beautifully.

## A GROVE OF AROIDS

Growing certain trees and shrubs chiefly for their bark or their coloured stems is a well-established horticultural practice, whereas herbaceous plants are normally grown for flower and/or foliage. There are exceptions to every rule, and one such is to be found on the lower lily bed. Late in 1988 we were given some seeds by John Grimshaw, which he had collected in Nepal, including an arisaema under his number 22. These germinated the following year and were grown on until the raised bed described in the Stone Column for January 1993 under the heading: 'A fullstop for lilies' was ready in autumn 1992. By then they were filling an 18 cm square pot and were so congested that I chickened out of separating them and just planted the whole potfull in a single deep hole. When the resulting thicket flowered, we were able to key them out in U. C. Pradhan's 'Himalayan Cobra-Lilies' as *A. tortuosum*, a result which surprised me as this relatively low altitude (1400-2800 m) species is often said to be tender. Pradhan recommends the 'warmhouse'. Deep planting and good snow cover probably carried our plants through the 1995-6 winter. Like many arisaemas, they are very late risers; but once started the stems race upward to head-height, trailing the foliage like steeply sweptback wings. As these are seedlings, each polished stem has its own unique brown markings. Fortunately, we planted them on the south side of the bed, where sunlight can point up the subtle variations within the grove (Fig.59 p.234). The glaucous green spathes appear before the leaves are fully expanded; the dark brown spadix turning up at the end as a sort of lightning conductor. As the season advances and the fruits ripen through orange to scarlet (Fig.58 p.233), self-sown codonopsis scramble up the thicket, adding their blue saucers to the display. It was recently pointed out by Chris. Grey-Wilson in the New Plantsman (1995,2 p.213) that most of the plants cultivated as *C. convolvulacea* belong in fact to a distinct species to which he has given the epithet *C. nepalensis*. With their squat fruits, deflexed sepals, and hairy centres to the flowers, our plants clearly belong with the majority. True *C. convolvulacea* is apparently confined to southern Yunnan, and could well be less hardy than *C. nepalensis*



Fig. 54 *Eranthis pinnatifida* (p.223) Polly Stone



Fig. 55 *Trillium simile* (p.224) Polly Stone

Fig. 56 *Trillium vaseyi x rugellii* 'Pink Form' (p.225) Polly Stone





Fig. 57 *Iris winogradowii* (p.226) Polly Stone

Fig. 58 *Arisaema* in fruit (p.230) Polly Stone





Fig. 59 Arisaema 'grove' (p.230) Polly Stone

which is found in most of Nepal, at 2400-3600 m. Thus we have unwittingly recreated an autumn scene which could well occur where their altitude ranges overlap in the valleys of the Nepal Himalaya.

#### THE JOURNAL REACHES 100

Unfortunately, publications do not qualify for royal telegrams, and in any case we are talking about issues, not years. The reason that this milestone did not coincide with the Golden Jubilee of the SRGC in 1994 is that in the early days of the Club there was only one Journal per year. Together with the Bulletins of our sister societies, the AGS and NARGS, 'The Rock Garden' is an invaluable resource, containing the accumulated experience of several generations of alpine gardeners and plant-hunters. We have complete sets of both the SRGC and AGS publications, but our run of NARGS Bulletins starts in 1975, the year we joined. While in Oregon in 1996. we obtained all earlier volumes as were then available, from their Bookstore Manager. I also spent a whole afternoon going through those issues of which he held only one library copy looking for useful articles on American alpinists. He very kindly loaned any such to us, so that we were able to take them to a copy shop. Needless to say, this very heavy, but almost irreplaceable, cargo travelled back with us in the hand luggage.

Apart from all the plant lore, 'The Rock Garden' also encapsulates the history of the SRGC, the people and alpine gardens of our collective past. One key to such a treasurehouse is far more convenient than four; so I suggest that this would be an auspicious time to collate a cumulative index for Journals 1-100. In these days of scanners it should not be too onerous a task for someone more computer literate than me, and a fine legacy to pass on to future Scottish Rockers.

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# THE SCOTTISH ROCK GARDEN CLUB

**DISCUSSION WEEKEND 1997**

**Friday 10 - Sunday 12 October  
at the Stakis Tree Tops Hotel,  
Springfield Road, Aberdeen, AB9 2QH**

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## **Friday 10 October**

16.00 Registration

20.00 Evening lecture:

**Jack Elliott "Bulbs for the Rock Garden"**

Followed by the Bulb Exchange and Fringe Slides

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## **Saturday 11 October**

08.00 Registration

09.00 - 12.00 Workshops

12.00 Show opens

14.15 WILLIAM BUCHANAN Memorial Lecture:

**Harry Jans "The Future"**

16.00 Afternoon Lecture:

**Kath Dryden "Growing Woodsy Plants in Adverse Conditions"**

20.00 Buffet Supper

Followed by The Plant Auction

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## **Sunday 12 October**

09.00 Registration

09.30 1<sup>st</sup> Morning Lecture:

**Harold M<sup>c</sup>Bride "The Cultivation and Propagation of Alpine Plants"**

11.15 2<sup>nd</sup> Morning Lecture:

**John Blanchard "Wild Daffodils"**

14.30 HAROLD ESSLEMONT Lecture:

**Jimmy Persson "The Gothenburg Botanic Gardens"**

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**Trade Stands, Book Stall, the Autumn Show,  
swimming pool, sauna, gym, solarium  
and whirlpool spa**

**For costs and booking details see the Booking Form  
with this issue of The Rock Garden**



# CLUSIUS, A RENAISSANCE MAN

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by Sheila Brinkley

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CAROLUS CLUSIUS CLARISS.  
BOTANICUS PROFESS. HONOR.

Over the years my curiosity has been aroused by Carolus Clusius. His name cropped up so often in connection with plants, their introduction and their naming. On learning of his gift with languages, his travelling, writing and other interests, which included history, cartography, zoology and mineralogy, I realised that I had stumbled upon a remarkable man. He lived in the 16th century and may be described as a great Renaissance figure. That Clusius should travel extensively across the difficult roads of Europe of the time, when suffering from “an extraordinary

proneness to fracture and dislocation of the limbs” and yet live to the age of 83, is remarkable. His life was also subject to the turmoil of Reformation and Counter Reformation, which was so devastating throughout Europe, yet his books have helped and influenced subsequent botanical researchers, including Linnaeus, and are still used in research today.

Carolus Clusius was born on 19 February 1526, in the town of Arras (Artois), then a Flemish town but now situated well within France, south west of Lille. This accounts for the fact that his name is very often given as Charles De l’Ecluse, the French form.

## FAMILY LIFE AND EDUCATION

His family was well to do, respected and in a position to have him educated. In fact an uncle on his mother’s side was in charge of a monastery nearby, which young Carolus attended at the age of 14. He was there for two years before he moved to Gand (Ghent), an important centre of learning and culture, in 1543. In the previous century Van Eyck had been producing his religious masterpieces for the Cathedral in that town. Clusius attended an establishment known as the College of Three Tongues. He learnt French, Flemish, which was of course his native tongue, and made a serious study of Latin, which was to stand him in such good stead and form the basis for so much future study and employment.

It seems it was as necessary to move around to obtain an education in the sixteenth century as it is today. The year 1546 saw Clusius continuing studies at Louvain where he gained a Diploma in Law. At the age of 22, in 1548, he travelled to the city of Marburg with one of his friends to attend the first Lutheran University in Germany. When I visited Marburg I found it retains some of its mediaeval atmosphere and life is carried on around the Gothic Church of St Elizabeth, which was built over the saint’s grave in 1235. Today it is a Protestant parish church. Clusius’ year at Marburg proved to be an unsettling period when he was affected by local wars and the religious upheavals of the time. He became disillusioned with his study of law, which was his father’s choice, feeling it was time to rebel against his parent and to think about studying medicine. He had begun to develop an interest in plants whilst walking through the nearby Hessen woods where he found specimens of the beautiful Martagon lily. In those days, botanical study could only be linked to medicine, with plants forming the basis for most treatments. It is possible that Clusius, realising that

he was developing an interest in botany, knew that this could best be pursued via the field of medicine. To this end he set out for the University of Wittenburg, not alone, but in the company of several friends with whom he had studied before. It was in Wittenburg that he was finally advised that France was the best place to receive instruction in medical studies.

## RIFTS WITH FATHER

Clusius' journeys would be taxing enough today with modern transport, and it is hard to appreciate that he would have travelled everywhere on horseback or by horse-drawn coach at best. He made a special journey in 1550 to visit a Spring Book Fair at Frankfurt am Main where he was able to exchange views with the learned men of the age who gathered there, and to buy books. These would be written in classical Latin, the universal language of contemporary scholars. Between early 1550 and October 1551, Clusius visited Strasbourg and Switzerland, where he became strongly attracted to the religious reformer Calvin and his beliefs. It was in the vicinity of Geneva that he had his first introduction to the Alps and their mountain flowers which he found so interesting.

Clusius' father had been angry with his son for some time now. This was partly due to the discontinuation of his law studies, but mainly because he felt that Carolus had been associating with the wrong type of Lutherans at Marburg and Wittenburg. Several times he sent instructions for his son to return home but these were ignored. When Clusius finally made his way to Montpellier in France he had managed to elude men his father had sent after him, and travelled to his destination via Lyon and Avignon.

Entrance to Montpellier University was a serious business; it was necessary for him to pass entrance exams in philosophy and languages. He now embarked upon a very satisfactory period of learning, working under the well known teacher, Rondelet. As this entailed living in his professor's house Rondelet took advantage of his pupil's excellent Latin by using him almost as a secretary. Clusius helped Rondelet to write his special book on fish. The professor was also to construct some of the first aquaria built to house fresh and salt water fish.

## DR CLUSIUS OR NOT ?

During the next four years Clusius started botanising seriously in Southern France. He made a map of the area and several plants

bear his specific epithet of *narbonnensis*. He found the bulb summer snowflake *Leucojum aestivum* L. flowering in local woods. *Narcissus tazetta* L., grew at Villeneuve and *Euphorbia characais* L., near Arles. These plants are described and illustrated in his later books. He enjoyed visiting a doctor in Marseilles who possessed a fine library, and a “dried” fish collection. In this area he located *Astragalus marseillensis*, or tragacanth, a plant which was to interest him for the rest of his life. To the attractive lavender bushes Clusius gave the name of *Stoechas longioribus ligulis*, a Latin name which conjures up the features of this French lavender far more readily for me than its equivalent Linnaean name of *Lavandula stoechas* L.

There is a certain mystery regarding Clusius’ life in the year 1553. Did he actually qualify as a doctor? In 1559, writers Vortius and Paquot state that Clusius received his Diploma in medicine, but he is not mentioned in Montpellier University statements. Although scores of people addressed their letters to him with the title of “medico” or “medecin”, it is possible that Clusius chose not to practise medicine at all. There is some evidence that he preferred to study quietly by himself and to stay out of the limelight, particularly during the years of religious troubles. Even if he were not qualified, the terms of address by others may have been an act of courtesy and respect. There is no doubt that he was a very learned man, and a great deal of study and research revolved around him.

On 27 January 1554 Clusius left Montpellier and made a long detour home via Switzerland and Germany. He did not want to move through France which was ravaged by war. Again he met up with Calvin in Geneva and also went on botanical excursions in the Alps and around Lausanne. He probably stayed en route at small universities and eventually joined his parents towards the end of the year in Antwerp, where they had fled to escape the war in Artois. In the spring of 1555 he went to Louvain and probably met his fellow Flemish botanist, Dodoens, there. Clusius was to work on the French translation of Dodoens “Cruydt Boeck” during the next two years whilst living with his father in Antwerp. The translation was his first botanical endeavour and appeared in 1557.

## CONTACT WITH PLANTIN PUBLISHERS

It was at this stage in his life that Clusius made contact with the famous publishing house of Plantin in Antwerp. Christopher

Plantin, the genial printer, gave enormous services to printing in general and to the publication of botanical works in particular.

The principal artist employed to provide botanical drawings was Pierre van de Borcht (1545 - 1608). He had escaped from his home of Malines when it was under attack in 1572. He had already furnished drawings in the past, working in a freelance capacity, but now began full time employment with the firm. A magnificent collection of his flower natural history paintings resided in the Preussische Staatsbibliothek, Berlin, before the Second World War. They numbered 2,117 in all and no less than 1,856 were of plants. All but a few in the last volume were made for Clusius, and were probably carried out between 1565 and 1573. Wherever possible drawings were made from living specimens and given full colour treatment. Pressed plants were presented only in black and white formal detail to avoid error. Plants from all parts of Europe were illustrated, as well as some arriving from India and America and particular attention was given to medicinal plants. The drawings disappeared during the Second World War and were only finally rediscovered in the Jagiellon Library in Krakow after a lot of detective work (Whitehead 1983). Six hundred of the drawings were used for making the fine wood blocks which illustrated various works printed by the Plantin Press. Some of these still exist, and I was privileged to see them when attending an exhibition called "Botany in the Low Countries in the 16th and 17th Centuries", in the Museum Plantin-Moretus in Antwerp, in March 1993. On the same occasion it was possible to see some early printing presses and to admire the furnishings and paintings in the rooms of Moretus House. Their richness certainly reflected the success of the publishing house. The neat formal garden in the style of the 16th century was open to the public and flowering bulbs of *Leucojum vernum* L., were in evidence. A woodcut of this plant was used in Clusius' book : "Rariorum aliquot stirpium per Pannoniam, Austriam, .." of 1583.

One of the first works Clusius translated for Plantin was the Italian medical book by El Ricettario di Firenze which had first appeared in 1550. Clusius showed signs of modesty by not thinking himself the right person to undertake the task, but eventually did it to please his friends and Plantin, and because he "had nothing else to do at the time".

## PEACE AT LAST

By 1559 the war in France was over. Phillip II left for Spain, and his sister Margaretha of Parma remained to rule the Netherlands. The new peaceful atmosphere allowed Clusius to travel and take up residence in Paris, although he found that the city was split into Protestant and Catholic camps. He was able to enjoy the company of a large circle of friends, in particular Hubertus Languetus (from Wittenburg days) and Lotichius, a poet and professor of medicine who was sadly to die in Heidelberg in 1560, aged thirty two.

The biographer F.T.W. Hunger wonders if Clusius obtained his medical diploma at this stage in Paris, but has been unable to find proof to substantiate this.

Clusius made a short trip to England in March and April 1561 in the company of two young barons. There are no details of this trip but he was to return three more times during his life. At this period he must have been influenced by the travellers of Elizabethan England returning with exciting new discoveries from many parts of the world. He certainly developed a great interest in exotic plants and curiosities.

Returning to Paris in May he became the mentor for two young Germans. One of them was a young law student, Thomas Rehdiger, who remained his pupil for two years. Studies had barely commenced when they were forced to flee Paris to escape an epidemic, probably the plague, and they moved to Orleans, which was a centre for the Calvinist religion. They were back in Paris after six months but the situation between the Catholics and Protestants meant more upheavals to Antwerp and Louvain, where they remained until July 1563.

## TO PORTUGAL AND SPAIN

Clusius planned his first scientific expedition in the following few months and travelled around Spain and Portugal during 1564 and 1565. He had become the mentor for the two sons of the very rich banker, Anton Fugger, a count from Augsburg. They were to go to Italy to see the botanical Gardens there; but Clusius, when bidding farewell to his parents in Ghent, found his father had aged a lot and was in ill health. He had to postpone the trip. They eventually left in late February 1564, but the plan was now to go to Spain and Portugal, much to Clusius' regret.

The party entered Northern Spain by way of the Pyrenees. This part of the journey would have proved fairly arduous, since the crossing was by way of high passes and Clusius mentions three alpine plants in his account. These were the spring gentian, *Gentiana alpina* L., (which he called *Gentianella verna minor*), *Alchemilla alpina* L., and *Scolopendrium officinale* L., (*Phyllitis laciniata*). Clusius' nomenclature tells us that this was an unusual form of the Hart's tongue fern. He was interested in "different" forms of plants and was to seek them out in future and grow them, e.g. the double common fever few, *Chrysanthemum parthenium*.

The expedition travelled to Vitoria, through Burgos and crossed the plain of old Castile collecting plants wherever they could. They reached Salamanca and its old university which dated from 1289, by the end of May 1564. New herbs and woody shrubs, many aromatic, were observed. These included the many varieties of *Cistus*, with their showy flowers, and *Dorycnium hispanicum* (*Dorycnium rectum hirsutus* L.) which Clusius tells us flowers in May and June and occurred frequently around Salamanca. This plant is now more available in Garden Centres and is attractive to grow with its contrasting hairy silver foliage and shiny nut-brown fruits which follow the creamy flowers.

Botanising now continued in the region of the river Torme, before the party proceeded to Madrid. Clusius was disgruntled when he found that the professors in the city did not use the universal form of classical Latin, thus making communication difficult. Leaving Madrid the small party travelled first to Toledo before turning west and making the long trek into Portugal and Lisbon in particular. It was here that they found what they called the Dragon's Blood tree. The original woodcut (made from Borcht's painting) of this tree is still preserved at the Plantin Moretus Museum in Antwerp. The illustration was used in Clusius' Spanish Flora, "Historia Stirpium per Hispanias", which was published in 1576 as his first independent scientific work. The exploration then extended northwards along the coast taking in Cintra and Coimbra, with the party returning to Lisbon by November 1564.

It is possible that Clusius had difficulty in finding his way around the Iberian peninsula, as the little group traversed in many directions, returning to Spain to reach Seville by January 1565. He met several doctors at this centre for overseas commerce and made it his business later to conduct a correspondence with them. Rapid

progress was made during the next three months with the party visiting Cadiz and Gibraltar and finally moving east to Valencia via Malaga and Granada. Clusius admits to feeling tired at times, and records falling from a horse into a ravine on one occasion when he damaged his leg. Near Granada they were forced to leave the main road in order to avoid bands of Moorish robbers. It was in Valencia that Clusius was delighted to find that the medical professors used Latin in the colleges; he thus deemed them more civilised.

## SHRUBS AND BULBS

The expedition travelled back through Madrid and Paris to arrive home at Antwerp in the Netherlands in June 1565. A collection of dried plants embracing 200 species was brought back. Trees and shrubs included the now well known *Viburnum tinus* L., *Arbutus unedo* L., (the Strawberry tree) *Cercis siliquastrum* L., (Judas tree) and the beautiful *Tamarisk gallica* L., which Clusius called *Myrica*. Various ericas had been found including tree heathers, and the pink cross-leaved heath, *Erica tetralix* L., which grows so well in Scotland. He was obviously captivated by this latter plant and gives a long description of it. An illustration of a scabious which Clusius names *Scabiosa hispanica maior*, reveals a seedhead exactly like the one called 'Paper Moon' cultivated in summer gardens today. It appears as an illustration in the book he was to write of the Spanish journey. Bulbs obviously paid an important part in the Expedition's collection, and would have been relatively easy to transport home. An appendix at the end of Clusius' Spanish Flora is devoted to them, and includes tulips, narcissi, scilla, muscari, romulea, anemones, and the beautiful *Pancratium maritimum* L., or sea daffodil. This bulb had been found near the sea at Valencia and Clusius was later to experience great difficulty with its correct naming. Rondelet had called it *Scilla*, the local name was *Hemerocallis*. *Crocus clusii*, now a form of serotinus, with its beautiful lilac perianth and three-branched orange-red style had been found in Portugal; Mediterranean coastal areas yielded a yellow crocus. The little autumn *Colchicum autumnale* L., had been very abundant north of Lisbon around Cintra in the cork oak woods and open grassland. Plants of great medicinal importance included the Mandrake or Mandragora which Clusius recognised when he found it growing in Spain. Known since classical times, it had been used as a painkiller and had been associated with all sorts of strange superstitions. The pretty



larkspur, *Delphinium staphisagria* L., was found in Portugal. Long known as staversacre, or licebane, it has been used externally as an insecticide. Clusius writes that a vinegar extract of the seed could be used to combat head-lice.

The exotic plant *Canna indica* was discovered in Spain where it had arrived from the West Indies. The woodcut of the plant in Clusius' book was probably the first illustration to be seen in Europe. He noted the round bullet-like seeds which gave rise to the name of Indian shot for the plant. The seeds were used locally to make rosaries. Towards the end of 1567 Clusius was overseeing Pierre van de Borcht's plant drawings which were to illustrate his Spanish Flora. Two hundred and thirty three woodcuts after these pictures were made by Gerard Janssen van Campen, and they were the best to be produced to date. Clusius had bought Garcia da Orta's Portuguese work on Indian plants while in Lisbon and settled down to translate it into Latin. This form first appeared in 1567.

Whether Clusius found it difficult to explore the Iberian peninsula or not, he was to produce a map of the area on his return. He worked for the well known cartographer, Abraham Ortelius, and produced a map suitably decorated with renaissance symbols in the borders. A perfect example of this map is held by the University library in Basle, dated 1571, while an earlier copy of 1570 exists in Breslau.

From his letters it appears that Clusius was happy to be back home, although an aura of religious persecution persisted. Political changes had meant that noblemen had more say in the country's affairs. There had been an outcry against existing laws and the Calvinist sect had become more active. His uncle was murdered in the punitive massacre which followed a revolt; his father lost everything and fled to Antwerp. Clusius looked after him until his death in 1573.

#### DIRECTOR IN VIENNA

Clusius' letters which have been preserved from this period were written in French or elegant Latin. There is evidence of a business-like character who kept records of his correspondence and noted the date of his answer to a letter. He had a good memory, remembering details of his journeys and picturing locations where he had found new plants. The year 1573 was the beginning of a period lasting 14 years in which Clusius was based in Vienna. As a

result of his botanical work he had become comparatively well known, and was offered the post of Director of the Imperial Court Gardens in Vienna, working for the Hapsburg Emperor, Maximilian II of Austria. Clusius was 47 years old, impoverished since the death of his father and glad to take up the appointment. F.W.T.Hunger, in his biography, tells us that Clusius was embarrassed by his poverty; he mentions a small inheritance which “barely covered the cost of fashionable dress for the Court” However, he was reassured by the award of “four horse” status from the Emperor, who said that there was no shame attached to poverty. Clusius lived at the house of a well known Doctor who was also the Rector of the University. He made a private garden at Schotenberg, planting seeds and specimens he had brought from his previous one in Mechelen (Malines), which was situated three miles from Antwerp.

It appears that Ghislain de Busbecq, who had been in contact with Clusius, had been instrumental in obtaining his appointment as Court Gardener. Busbecq had been Ambassador from the Austrian Court to Suleiman the Magnificent in Constantinople, and had become well known for the seeds and bulbs of previously unknown narcissi, hyacinths, fritillaries and tulips which he brought back to Vienna.

## INTO THE MOUNTAINS

By the following year, 1574, Clusius had started exploring and botanising further afield. He made the first of many trips to Hungary and visited the River Donau and Pressburg in May. Always interested in antiquities, he tells of finding Roman remains and recording their inscriptions. In the summer he travelled 50 miles to the south west of Vienna to walk and botanise in the mountains, the most important being the Schneeberg. He was to find impressive alpine plants here and gave accurate descriptions in later publications. They included the abundant *Gentiana clusii* L., which has solitary dark blue trumpets and leathery green leaves, the bold white-eyed *Primula clusiana* L. (Fig.62 p252) and *Dianthus alpinus* L., with white spotted purplish-red flowers.

It is extraordinary that he should go to the mountains at all. In the past they had been regarded with fear and were areas to be avoided. It is interesting to realise that of all the flowers depicted on the millefleur tapestries of the 14th and 15 centuries, not one may be regarded as alpine.

## A LOVE OF PRIMULAS

Clusius had a special affection for the genus *Primula*, and he was largely responsible for introducing the fragrant *Primula auricula* L., into cultivation. The court ladies in Austria were keen gardeners and patronised markets where the roots of these honey scented yellow-flowered plants were sold. Clusius gave the name of *Auricula ursi* to the species because the leaves resembled bears' ears. The healing properties of these plants appeared in Herbals in the form of a cure for vertigo: "Clusius saith the mountaineers that hunt after wild beasts do use the roots of Beare's Ears to help either paines in the head, or the giddiness that may happen thereto by the sight of such fearful precipices or steepe places that they must often pass by in following their game". Clusius sent roots of *Primula auricula* and *Primula pubescens* (now *hirsuta*) to his friend Van de Delft in Belgium, and the plants soon spread to England and throughout Europe, becoming very popular in the second half of the seventeenth century. Other flowers that were found in the Austrian province of Styria were the beautiful *Potentilla clusiana* L., named appropriately *Quinquefolium clusiana* by the finder and *Doronicum clusii* L., (*striacum*). The one and a half inch diameter bright yellow flowers are solitary and the original description tells us that the basal leaves are cyclamen-like.

## DANGERS OF THE HIGH PEAKS

Clusius quickly discovered that botanising in high places was not without danger. To obtain plants of *Hutchinsia alpina* L., he tells that it was necessary to proceed with iron hooks on the feet to prevent slipping on the eternal snow still found in August. Could this be the earliest form of crampon? Describing his climb to the top of Hohbergin he says he shivered to mention the deep ravines and overhanging rocks! *Achillea clavennae* L., (*Absinthium alpinum umbelliferum*) was found on the mountain of Etscher. It occurred on limestone here and other similar areas yielded such treasures as the Lady's slipper orchid, *Cypripedium calceolus* L., (*Elleborine recentiorum*) and *Daphne cneorum* L., (*Cneorum matthioli*).

He took living plants back to Vienna. On shady rocks at the upper tree limit of the slopes he records finding *Saxifraga rotundifolia* L., (*Sanicle montana*). He collected that cousin of primulas, *Cortusa matthioli* L., from the woods themselves. This plant has lush, crinkled leaves and a loose shower of magenta

flowers; a charming plant to grow. I have one which is doing well in my new Perthshire garden.

## PROBLEMS OF CULTIVATION

Clusius was soon to discover the difficulties of growing alpiners in the Viennese gardens. He writes of carefully removing a root ball of soil with a plant of *Rhodothamnus chamaecistus* L., but it still died; and all his careful nursing of a small gentian was to no avail. He also concluded that the willow gentian had a will of its own and was choosy about its situation for growth. *Rosa foetida* L., was discovered growing near the capital by Clusius. It was introduced into the Netherlands and England and called the Austrian briar, a name which has lasted. It developed a bicolour sport with petals of two distinct colours: nasturtium red on the upper and shaded yellow on the lower surface. It is still widely grown for its decorative qualities although the flowering season is so short.

Unwittingly, the flower-loving ladies of the Viennese Court promoted the cultivation of beautiful plants, which was surely encouraged by Clusius. Their wealthy patronage procured bulbs and corms via the agencies of Venetian merchants. Many new introductions such as cyclamen, ranunculus, iris, tulip, anemone, fritillaries and grape hyacinths were on sale in the local flower markets. These flowers astonished all by their beauty of colour, form and fragrance; they were fashionable because of their ease of transportation in their bulb resting period. The Venetian connection is apparent in Clusius' text. One of his plant labels reads "Tusai (an old name for *Fritillaria imperialis*) fior Persiano rosso o discolorito con la testa abasso". A rough translation is "the strong persian red with heads hanging down".

## AND SO TO TULIPS

One of Clusius' claims to fame is the fact that he is often accredited with bringing the tulip to Holland. He certainly did take many bulbs with him when he went to Leiden in 1593, but his work and research on tulips began much earlier during his years in Vienna. He separated them into Praecox (early) and Serotinae types with further divisions of colouring. He discovered that plants flowered between five and ten years from seed; and that those from the same pod showed great variety in the flower colour, especially if one parent had been white. Clusius was not to know of the havoc

caused by the virus carried by aphids which now causes the beautiful breaks of colour .

## MAGNATES AND ROYALTY

As Clusius gradually explored further afield he was invited to stay on several large estates and to become acquainted with noble patrons. One in particular, Balthasar de Batthyany, was a Hungarian magnate who became a true friend and was to see Clusius through a difficult time which lay ahead. His early years in Vienna had been happy ones. He found the city a haven for a man who had been worried by living with the tensions in the religious atmosphere of post Reformation Europe. He was thankful to receive a salary, and was engrossed in his work; he also enjoyed the contact of other learned men. There is no doubt that he corresponded with fellow botanists in many parts of Europe: Dodonaeus in Antwerp, and Pinelli in Padua, who wrote to him for 26 years and was a good friend. Clusius noted that a letter took a month to arrive in Vienna from Italy.

His Spanish Flora was published by Plantin in time for the all-important Spring Book Market in Frankfurt in 1576. It was dedicated to Maximillian II and was later translated into French, Greek, Portuguese and Spanish. History has proved that Clusius was a moral man who did not believe in plagiarism, which appears to have been quite a common practice by some botanical writers of the period. He could not have been happy to see the woodcuts which he had so carefully organised to illustrate his own works appearing in other Herbals such as the one of Lytes, in England.

(To be continued).

## TROPAEOLUM SPECIOSUM

The thistle is a handy thing  
If a bare-foot foe comes trampling.  
Else, being a worthless weed, it's not  
A fitting symbol for a Scot.

The flame-coloured nasturtium, *Tropaeolum speciosum*,  
Which does so brilliantly in Scotland and so poorly  
In England, should be adopted now  
As our national emblem surely.

And not for that reason only, but also  
Because it buries itself so deep in the ground  
It is impossible to dig it up. Even so  
The true genius of our country is found.

It has the pleasant habit of rambling about  
Through anything planted near it,  
And coming up in unexpected places  
In all ways our symbol most fit.

Hugh MacDiarmid

( Permission to print this poem has been granted  
by Carcanet Press Ltd., the publishers in 1994 of  
“ The Complete Poems of Hugh MacDiarmid”)

Readers might like to suggest other garden plants which challenge *Tropaeolum speciosum* (see Fig.60 on opposite page) as an alternative national emblem for Scotland. Answers on a postcard please along with a short poem.



Fig. 60 *Tropaeolum speciosum* (p.250) Ian Young



Fig. 61 Typical rocky trackside (p.256) Francis Ferns

Fig. 62 *Primula clusiana* (p.246) Sheila Brinkley







Fig. 63 *Erica bauera* (p.262) Francis Ferns



Fig. 64 *Trollius asiaticus* (p.300) Chris North

# FOLLOWING FOOTSTEPS

South Africa . . . The Cape . . . Table Mountain

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by Francis Ferns

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“ An early start tomorrow, if it’s fine, to catch the first cable car

. . . we should have about half an hour on top and then back down again and on to the rose gardens before lunch.”

This chronicler had other ideas, having quizzed the driver on alternatives . . . “Platteklip is a good way down”, he said . . . “ A bit rough but you should manage . . . then follow the Contour Track back to the car park at the cable station . . . take the little bus to the roundabout and the public transport into Cape Town . . . the walk down should take about two hours”. “ So”, I mused silently . . . “ starting at 9.30 a.m. at the top, we should be back for a late lunch . . . after all it would be downhill all the way.” The silent voice of long experience ballooned over my head . . . “ If you believe that you’ll believe anything ” . . . the caption declared with finality.

The prospect of a fine day, literally footloose and fancy free, was too beguiling for us to care.

## HISTORY, PRE-HISTORY AND STATISTICS

The historical record says that the first known sortie to the top was by the Platteklip Gorge when the Portuguese navigator, Antonio da Saldanha led a party up the mountain in the year 1503, in order to work out the true position of Table Bay, in what was then and still is the confusing topography of the Cape Peninsula.

History, pre-history and statistics can be monotonous, but a little of each is necessary to realise the time scale and speed of development and consequent deterioration to the ecology recently imposed by man.

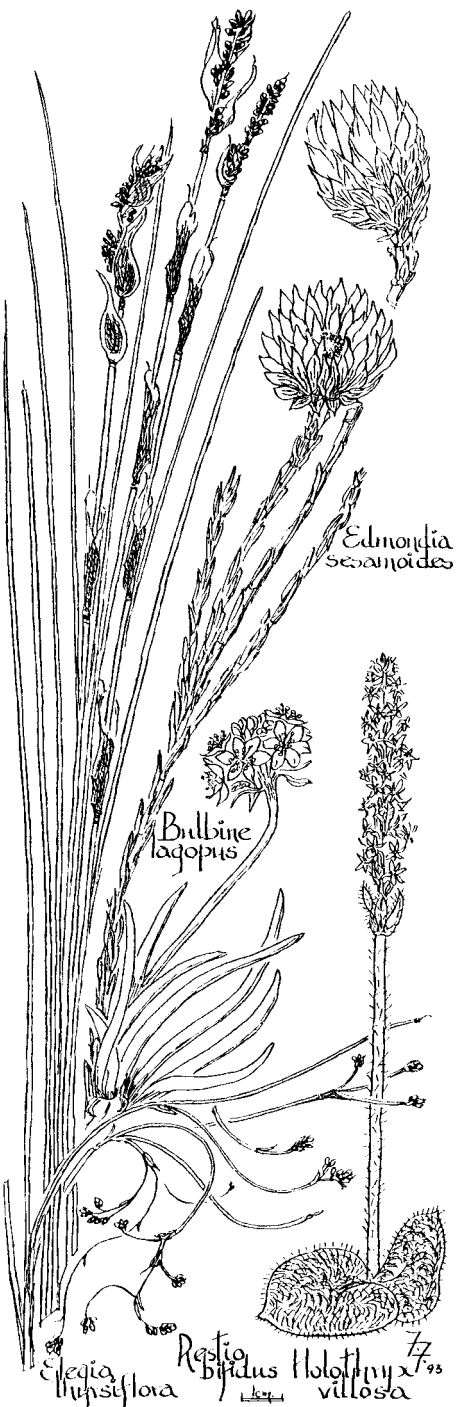
The geology of the south-western Cape is fairly simple. The foundation is Malmesbury shale laid down under water and compacted by the pressure of molten granite welling up and intruding more than 300 million years ago. Then this mass was forced up, eroded to create a flat-topped tableland, only to sink once more beneath the sea, where a resistant sandstone rock formed, before the present visible rocks emerged as dry land. All this took a very long time.



The sandstone, though weather-resistant, has broken down into nutrient-deficient sands; very well drained except where peaty marshes have formed in rock basins. The resultant soil is dry in summer, does not hold water and is short of nitrates, potash and phosphates; nevertheless it supports an outstanding and diverse flora.

Expert opinion varies, but between 8,500 and 14,000 species of plants are believed to grow in the Cape Province; of these about 2,600 species grow on the Cape Peninsula while Table Mountain itself has about 1,470. The Cape Nature Reserve and Table Mountain are telling introductions to these fynbos areas, with their shrubby, largely non-succulent vegetation of the winter rainfall lands. Salt marshes, shifting dunes, often marshy coastal flats, river valleys and rocky mountain slopes . . . all have plants to fit the conditions of so many different, yet closely blending and interlocking habitats. The plant life is incredibly rich in species, colour and form. On a fine day the scenery is magnificent, whether down on the coast or up Table Mountain itself (Fig.61 p.252). The wind can be unrelenting for the photographer and it takes time waiting for the light to strengthen and the wind to drop. It also takes time when every plant is strange and all one wants to do is walk and wander, observe and think.

To lift 27 tightly packed passengers some 700 m, takes about five minutes. Emerging on firm ground at 1067 m above sea level, after taking in the surroundings and the view, we realised that to get to Maclear's Beacon, the highest point at 1087.1 m, another brisk 40



minute walk to the east, was out of the question. There was too much to see and too many new plants at our feet. Anyway, of what avail was another 20 m in height ?

Cape Town and the coast lay far below. The Red Tide coloured the waters of the Atlantic; a band of rich shrimp pink colour drifting close inshore. This flowering of the plankton and the algae had been headline news in the local papers the day before. Somewhere below out of sight to the south-east lay Kirstenbosch Gardens: these eastern slopes are wetter and the shadows creep in much earlier in the day. They used to be well forested but now, except for remnants to the south and on the moister east side up sheltered valleys, the indigenous forest has gone.

The top is seemingly flat. The exposed rock looks like some sort of limestone, especially where the cable station, café and amenity buildings stand. The walkways and some of the rockwork cleverly conceal the fact that much cement rendering has been used to limit erosion of the natural quartz sandstone rock and so make pathways and the areas of frequent use, accident free.

Moving away from the mainstream of human activity, it becomes difficult to tell, on a mountain which has no real winter nor noticeably long nights, which plants are in the spring of their youth and which are resting or going over. The help of a good field guide is the

only answer, especially in the southern hemisphere where the seasons are not always reversed; besides, one's deep rooted northern hemisphere instinct makes it difficult to sense whether the winter is coming or going for any particular plant. The vegetation on the table top can be described as dry fynbos (finebush). The characteristic species are ericas, proteas, Cape reeds, pelargoniums, brunias, many daisies and ground orchids. Lower down the slopes where there is more soil the bulbous genera come into their own, especially in the Hout Bay area and slopes below the Twelve Apostles, a long coastal range of hills where the 150 m contour defines the lower limits of the wildlife reserve, created in 1951.

Species like *Watsonia tabularis* var. *concolor* flower in the spring (Oct: Nov: Dec); it has a more orange or salmon-pink coloured flower than the close massed, 1.5 m or more tall, rose-pink spikes of *Watsonia humilis* and *W. barbonica* (*pyramidata*). Most gladioli do not flower in October, so are not in evidence, but the yellow pincushion protea, *Leucospermum conocarpodendron* forms stands of shrubby cover up to 3 m in some places.

## DISASTROUS FORESTRY

The quartzite rocks and sandy soils are too poor to sustain any profitable agriculture: earlier attempts at forestry proved disastrous to the indigenous flora. They not only failed in their initial purpose of conserving the natural rainfall and reducing water loss through evaporation, they actually increased the surface run off. Most have now been felled and foreign species are being weeded out gradually and systematically. This action is restoring large tracts of the mountain to its more recent original flora and so with it the insect and animal life. The truly indigenous flora began to evolve about 110 million years ago; it is believed to be one of the oldest continuous floras in the world.

Just one more statistic, the cableway company booklet states that we could walk along the table top as far as the upper end of the Plattekip Gorge in about ten minutes.

## IN AND OUT OF THE CLOUD

The table-cloth of cloud which had been drifting over the main table all morning, advanced even closer, then receded, only to advance again to the edge of a vertical cliff running across our line of walk which we judged might be the cleft of the gorge. 'Plattekip' means 'flat rock'; nothing looked particularly flat in that direction. We sat down to review the situation and to eat our meagre rations, filched from the breakfast table five hours ago. Looking round we saw the ground and the track sloping away below us. That area, being more sheltered, was filled with maquis-like scrub comprising mainly leucadendron bushes. This species, *Leucadendron strobilinum*, is endemic to the Cape peninsula. It has the usual tough fleshy green leaves and flowers made up of a mere black

boss in the male, or more greenish in the larger female structure, surrounded by involucre bracts of a yellowish ochre hue to give colour. Not all proteas are as striking as the pictures of the King Protea, *Protea cynaroides*. Many have the useful ability to survive fire damage by re-sprouting from a ligno tuber. Fire has been a major factor in the ecology long before man came this way.

The morning had not been wasted, for everywhere we looked there was something different, something new. Mention must be made of a handful of plants not necessarily beautiful. First the reeds force attention. They form much of the basic ground cover. Then a small yellow asphodel-like flower, *Bulbine lagopus*; the unbranched flowering stems can grow to 60 cm. This plant, identified by its bearded stamens, was only about 15 cm and nowhere as frequent as an attractive helichrysum, *Edmondia sesamoides*, small but shrubby enough to hold its own growing out of the base of the Cape reeds. The silvery white bracts shine against the dark ground cover.

Asteraceae proliferate. I will give space to only one, *Mairea crenata*, a neat little daisy with 4 cm lilac flowers and small green rosettes wedged between cracks in the grey sandstone rocks.

There was a confusion of 'things' beyond my limited knowledge to place in families, let alone genera, many still in bud others going to seed, so wholly out of character to fit text book descriptions. Random flicking through the wild flower guide identifies *Thesium strictum*, a member of the Santalaceae, a few green twigs with leaves no more than bracts clasping the stems. Similar treatment identifies *Holothrix villosa* of which the text says . . . "fairly frequent in shade on mountains and flats, Sept-Nov;". I would never have seen it had not the sun just highlighted and silvered the very hairy (villose) leaves. The flower spike of this orchid has even smaller flowers than the Lesser Twayblade; better things are to be seen among the orchids which flower in the Disa Gorge between December and March, but not on this part of the mountain in October.

At last the cloud vanished. We turned north-east at a way marker and . . . "Golly, what a gulley" . . . To our front the track dropped quite sharply to the Contour Track and then on down to the Tafelberg Road. To our right the steep, seemingly vertical scarp of Table Mountain, familiar the world over in pictures, stretched away to Devil's Peak. All quite majestic and awe inspiring, but we were still on top and had to get down 500 m before reaching the lower level plants. A pebble could do it in ten seconds, but we had only walking shoes and a stick between us and had no wish to break the record or anything else.

Disappointingly, the immediate cliffs of the gorge revealed nothing striking. Grasses took the place of reeds, through which occasional small bulbous species pushed. *Hesperantha falcata*

looked very neat with white flowers like a small ixia with contrasting purple-hued outer reverse tepals.

As we worked our way down, about the 600 m contour the plants began to change. A little campanula caught the eye, *Roella incurva*. One or two smaller, bell-flowered bushy purple heathers, were photographed. Many of these had coloured shining sepals which nearly cover the corolla; such a one, pure pearly white, could well be *Erica coriifolia*. Pelargoniums, not geraniums, began to show as another two or three steep zig-zags were left behind; especially the ubiquitous bright purple *Pelargonium cucullatum* joined by the daisies and watsonia; the red heathers became fewer.

At last our dragging feet met the Contour Track as lunchtime had faded into teatime and finally we enjoyed the reality of dinnertime.  
. .see postscript.

## THE CAPE HEATHERS

It seems better to mention the genus separately here, because many species were seen in the Kirstenbosch National Botanical Garden at the foot of the mountain, besides those seen in the wild on Table Mountain itself. They were mostly isolated plants or in small patches; nowhere did they cover open country as they can on Dorset heaths or Scottish hills; nor at Kirstenbosch, or the Porter garden at Betty's Bay to the south, did they make the carpet of colour to which we are accustomed at Ness or Wisley. Like the European tree heath they really looked in need of a good pruning to make them break into fresh growth lower down.

We are told the genus *Erica* comprises some 657 to 735 species, depending on which authority one is reading. There seems no dispute that at least 90% grow in South Africa of which most can be found in the south-western Cape. They are found in coastal flat country, marshy areas, riverine areas and extend up to mountain tops where the annual rainfall is high and snow is not uncommon; they prefer the moister south-west slopes to the hotter drier north and east faces. To those of us used to the northern hemisphere species, the diversity of colour and form of the individual flowers must come as a shock, especially on seeing pillar box red or yellow pencils of flower nearly 2 cm long.

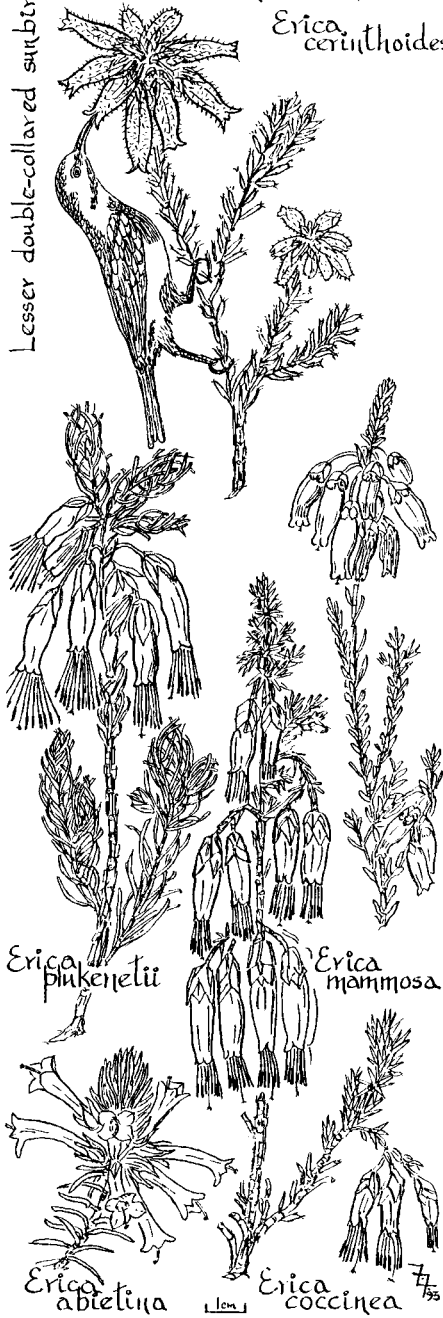
Besides diversity of colour there is much variation of flower shape, but these alone are not the sole factors when identifying species; the structure of the stigma and anthers, the stickiness and hairiness of the flowers and leaves also play an important part. The leaves on the whole are the same narrow folded erica-like leaves one would expect; but what of the pollinators? Some, usually those with long tubes and curved sticky red flowers, are pollinated by the smaller birds in their search for nectar; others, often honey-scented, are visited by insects. Those with extruded long stigmata can be wind pollinated.



Lesser double-collared sunbird

Heathers of Table Mountain

*Erica cerinthoides*



Many are endemic to specific localities. Many are rare, having been picked or burnt almost to extinction and many more are only surviving on steep rocky mountain ranges, out of the reach of the urban sprawl or the farm tractor. They are only marginally hardy in our climate. The classification and division of so many species has given the specialists difficulty. Currently they are divided into sections based on superficial similarities, e.g. 'dasyanthes' from the Greek ...dasys = shaggy, anthos = flowers, or those which have protruding stamens... 'Gigandra'. A filing system more useful perhaps to the amateur than the expert taxonomist.

Only one species is found in all four provinces of South Africa. I think that *Erica cerinthoides* is characteristic of the cape ericas. In the wild it can grow to a leggy 1.5 m. The hanging tubular flowers are hairy, about 2 cm long with a constricted mouth. They are clustered round the top of the growing spike and are usually a typical scarlet red colour, although they can be a delicate pink or white. The short leaves are spread evenly along the stems and are also hairy.

Like *Erica mammosa* with which it can be confused, it survives fire damage by resprouting from the base; that trait might enable it to survive frost damage in Southern England. *E. mammosa* has four small depressions at the base of the corolla tube distinguishing it from *E. cerinthoides*. It is also

in a different section because it has no hairs on the corolla. The colour ranges from dark red, orange, red pink, green cream or white.

*Erica bauera* (Fig. 63 p.254) is also, at a glance, visually similar to the first two, but the grey green leaves are distinctive. The white or pink tubular flowers are held in small spikes just below the growing tips of the branches. I read that Franz A. Bauer (1758-1840) was botanical artist to King George III and resident at Kew for 50 years.

*Erica plukenetii* is another large bush with flower stamens strongly exerted, nearly as long as the red corolla, but it has long leaves, whereas *E. coccinea* which also grows up to 1.2 m on top of the table has leaves only half the length, 4 mm or so, in hard tufts; it also has greenish yellow flowers on some plants, instead of the expected red that its name implies.

Others have long tubular corollas, not markedly inflated and have spreading starlike lobes. The first red erica we saw in the wild was of this form, identified as *E. abietina* which is reported as . . . "frequent on Table Mountain and Devil's Peak" . . . on the other hand it could just as easily have been *E. phyllicifolia*, except that the latter is stated to have a curved corolla tube, a more exerted stigma and reddish purple flowers. Most of the species are variable in colour, although blue is not in their spectrum at all. Some, like *E. macowanii* have orange to yellow coloured lobes shading to red at the calyx. The permutations proliferate and so confuse the inexperienced eye.

I could have wished to see *E. nana*, but our stay near the Franschoek Pass where it is found was washed out due to unseasonal rain. The yellow tubular flower is described as . . . "hard in texture with an almost waxy sheen . . . borne in 4's at the tips of the branchlets in such profusion that the whole plant may become a sheet of yellow . . . found hanging from cliff faces or sprawling over rocks from Kogelsberg to Hottentots Holland mountains". It flowers from September to October. It might do in the alpine house or insulated frame, maybe cheating a little with the help of a soil warming cable. At Kirstenbosch, *E. nana* has been crossed with *E. patersonia*, a small shrubby lowland maize-yellow species, to give a promising gold flowered hybrid.

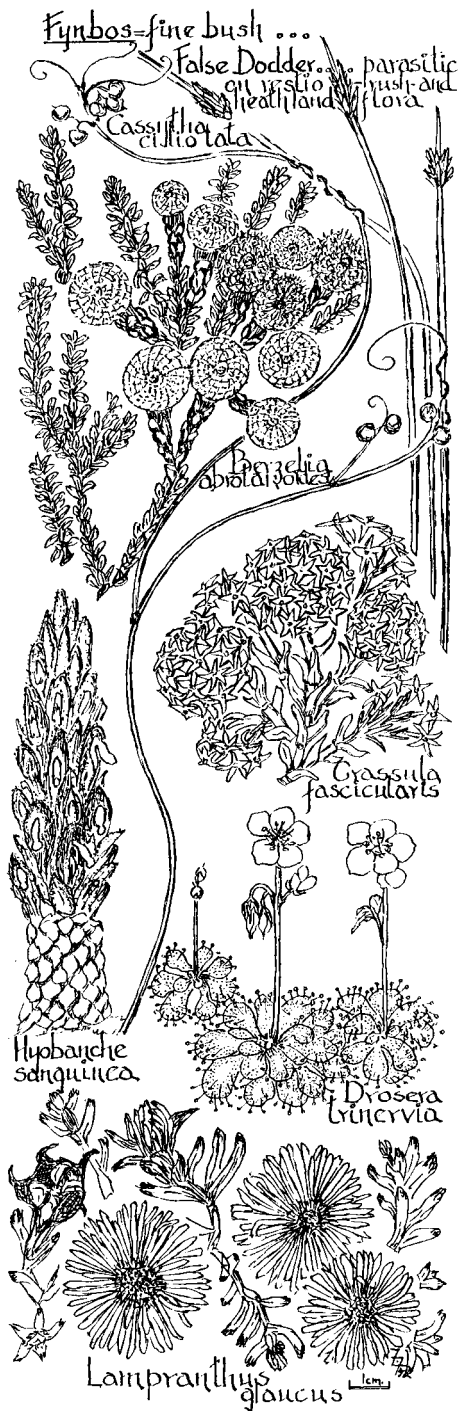
I cannot leave Table Mountain without mentioning the prize of the South African ground orchids, the disas.

## THE DISA ORCHIDS

Until part of the back table on the south side was flooded to create the Woodhead reservoir, we are told that there was "a scarlet blanket" of *Disa uniflora*, the Cape provincial flower. In mountain retreats they still flourish on wet cliffs or along mountain streams. It is said to be pollinated by a butterfly *Meneris tulbaghia*, and that species only. The larvae of this brown and orange butterfly, with a



wingspan similar to the 12 cm of the Red Disa flower, feed on the native grasses and other plants growing on the lower slopes. There are about 70 or more disa species in South Africa again depending on which authority has done the arithmetic, of which 27 are said to occur in the area, including the Blue Disa, *Herschelianthe graminifolia* and there is also *Bartholina burmanniana*, the Spider Orchid, which is rare on the mountain. I can only speak of them from hearsay, not as I would wish from direct observation. They should be easy enough to grow in a neutral to slightly acid soil with plenty of fibrous material; if it is leafmould, peat or sphagnum moss it must not be rotting. The Kirstenbosch Garden has been working on *Disa uniflora*; selected cultivars are on sale in this country. I saw a boxful of plants at the Morecambe Show last year. Ian Christie of Kirriemuir told me that his plants had survived the 1995 winter in a well insulated bench frame, assisted by no more than a warming cable. Condensing his comments, I understood that the plants will tolerate 5°C in winter to 30°C in summer, when 50% humidity should be aimed at, with a buoyant airflow and good light. Watering, pH about 6.0, should be every 2-3 days in summer and 2-3 weeks in winter. Repotting is best done in early spring when roots are just active or in



autumn (Sept.-Oct.) after regeneration of the old plant starts, until shorter days and lower temperatures slow the growth of the new tuber. Feeding should be no more than  $\frac{1}{4}$  of the recommended strength when there are clear signs of root activity. At all times clean water to keep fresh air moving over the roots and a buoyant atmosphere are essential.

### GERMINATION OF FYNBOS PLANTS

The Kirstenbosch gardeners are always actively pursuing new ideas. Two years ago they completed successful research in promoting germination of seeds of fynbos plants by using extracts from plant-derived smoke. They now market a primer pack which has been on sale at the Hampton Court Palace Flower Show. The results of the research were spectacular; not just significant fractions of percentages. In the case of *Syncarpha vestita* (*helichrysum*), germination improved from 100 seedlings per gramme for untreated seed to 2000 s.p.g. for treated seed. The product has a cocktail of other known germination stimulators. It might be worth a try to break dormancy in some other perverse germinators.

### *Postscript*

I read . . . “ The cable car to the summit closed on 12.1.97 for an eight month overhaul . . . the only other way up is a lengthy and strenuous walk (Platteklip). The new cars will revolve and carry 65 passengers. Tony Wheeler of Lonely Planet Publications says . . . “ It’s a good three hours walk down . . . it will take longer to climb up including stops . . . anyone undertaking it should be suitably equipped and carry food, water and warm clothing” . . . Daily Telegraph 18.1.97.

There is a more attractive, but longer route, which approaches the summit over the back table. It begins in the Kirstenbosch Botanic Garden . . . then you have to get down again.

### BACKGROUND READING

**Cape Peninsula**, South African Wildflower Guide, Vol. 3 New Edition 1983. Mary M. Kidd. Botanical Society of South Africa.

The descriptive narrative is sparse and erratic, due to the coloured plates being grouped under flowering seasons. Nevertheless, combined with Vol.5 a very useful aid to identification of plants on Table Mountain and environs.

**Hottentots Holland to Hermanus** S.A. Wildflower Guide, Vol. 5 1985.

A useful aid to visual identification by photographs and descriptive narrative; better fleshed out than some field flora.

**Table Mountain**, Glen Moll. Western Cape Branch of the Wildlife Society of South Africa 1987.

A comprehensive well condensed and informative pamphlet of only 45 pages.

**Ericas of South Africa**, Dolf Schumann and Gerard Kirsten with assistance from E.G.H.Oliver and others. Fernwood Press 1992.

A carefully researched photographic record of more than 450 species, based on the system of Flora Capensis 1905 followed by Baker and Oliver in 1967. Although a thorough taxonomic review is still required, this book is essential reading for anyone interested in heathers. Europe can muster at most 20 species; though the number of cultivars vary between 70 (registered) and 1000. Outside South Africa only 76 Erica species are thought to occur naturally, including Europe and the rest of Africa .

**Smoke that Thunders**, E.H.Wilson 1927. Paperback edition, Waterstone & Co. Ltd. 1985.

A book written in the older narrative style of the pioneer writers. Informative both on South African and other southern hemisphere flora.

**Delineation of Exotic Plants Cultivated in the Royal Gardens at Kew** William Acton 1796 . . . for sight of Franz Bauer’s illustrations

# PRIMULA EDGEWORTHII

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by Alastair Mckelvie

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I have always known this plant as *Primula edgeworthii* (Hook.f.) Pax but in his book 'Primula' (Batsford 1993), John Richards concludes that its correct name should be the earlier one of *P. nana* Wall. His arguments for the change are based on a close similarity between herbarium material of *P. edgeworthii* and what Fletcher and Smith called 'very imperfect material' of *P. nana*.

The name *edgeworthii* has only ever been applied to the one species so that its continued use is not going to lead to any confusion but Richards says that "many early authors considered the epithet *nana* to be confused as Hooker used it indiscriminately for a variety of species". I tend to agree with my old Professor, Sir William Wright Smith who used to tell us as students that if there was more than one published name for a species, it did not matter greatly which name you used as long as you gave the authority along with the name. So for the purposes of this article I am calling the plant *P. edgeworthii* (Hook. F.) Pax. (syn. *P. nana* Wall.). Some of our older readers will recall that it used to be called *P. winteri* Watson but this name is no longer used to my knowledge.

*P. edgeworthii* grows from Himachal Pradesh in India through to Central Nepal. Plants from its western distribution tend to have blue or lilac flowers while in the east in Central Nepal the flowers are pink. The plant illustrated (Fig.70 p.273) was collected by Chris Chadwell and myself as seed in 1990 on the southern slopes of Annapurna at a height of 3000 m and given the number CC&McK 219. As you can see it has the clear pink colour of typical Nepalese plants.

The seed germinated in 1991 and plants flowered in 1992. The plants are given light shade and plenty of water during the growing season but are covered with glass in the winter until early March when they begin to come into flower. I find that plants tend to rot if covers are kept on while the flowers buds are about to open.

Plants are short lived and rarely survive after flowering but they set plenty of seed which germinates quickly if sown as soon as it is ripe in June. If it fails to germinate at once it will do so in April of the next year. Seed has been distributed to several people and it has gone through several generations.

It is not a difficult plant to grow here in the north of Scotland and its beauty in early spring is quite outstanding.

Populations in Nepal vary greatly in plant size, amount of farina, flower size and colour; seedlings of my plants are also variable. Pin and thrum occur and it is advisable to do some hand pollination to get good seed set.

# THE STORY OF MECONOPSIS 'JIMMY BAYNE'

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by Evelyn Stevens

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One of the reasons for feeling special affection for certain plants is their association with the people who gave them to you. One such for me is *Meconopsis* 'Jimmy Bayne'. At about the time I joined the SRGC in 1980 we were having an extension built to our previous house. The builder was fond of plants and one day, looking round the garden, he admired my *Meconopsis betonicifolia* which I had grown from Sutton's seed. "But", he said, "I have a better one", and gave me a piece some time later which subsequently became established.

Over the next few years I learnt about the existence of other perennial Himalayan blue poppies. I was given several different forms (labelled *M. x sheldonii* 'Slieve Donard', *M. grandis* GS600 and *M.* 'Crewdson Hybrids') by fellow members of the SRGC and planted them in a bed with identical growing conditions. I went to the SRGC *Meconopsis* Workshop at the Royal Botanic Garden, Edinburgh and saw *meconopsis* in other gardens. All this convinced me that the *meconopsis* given to me by our builder friend was distinct from the others I had seen and that it was a good one. I showed it to several of the Club's *meconopsis* experts and they agreed with my assessment, but could not proffer a definite identification. I decided to name it, and called it *Meconopsis* 'Jimmy Bayne' after the builder friend. I also began to give it to interested fellow members. To my knowledge it has reached as far as the south of England, Ireland, and different parts of Scotland, and small pieces sent to pen-friends in America and New Zealand have become well established.

Everyone seems to agree that it is an excellent garden plant — see, for example, Lyn Almond's article in 'The Rock Garden', Vol. XXIV, 1996, p.334 in which she singles it out amongst her *meconopsis* for favourable comment. Some people have told me that whereas various *meconopsis* died following the hot dry summer of 1995 and the ensuing exceptionally cold winter, *M.*

'Jimmy Bayne' survived. One friend even regards it as almost a nuisance because it bulks up so well in her garden.

This plant was rescued by Jimmy Bayne in the winter of 1962 while excavating in a garden in Dunblane, Perthshire, in order to build a garage. He came across a plant, which at this time of the year, gave no clue as to its identity. The owners were not interested in it so he took it home to his own garden where it subsequently flowered as a beautiful blue poppy. I don't think Jimmy ever split it up until he gave me a piece nearly 20 years later in 1981.

*Meconopsis* 'Jimmy Bayne' is deciduous, clump-forming and soundly perennial. Its new season of growth starts with the appearance of rosettes of purple-tinged hairy leaves in March and April (Fig.66 p.271). The broad, crenate leaves remain an attractive feature even after they lose the purple tinge as they age and lengthen. From within the clumps of basal leaves, sturdy, leafy flowering stems develop at the top of which arise 3 or 4 vertical pedicels, 18-38 cm long, each surmounted by a single nodding cup-shaped flower (Fig.65 p.271). In our garden, the total height of the plant in flower ranges from 1-1.25 m. The flowers are a good deep blue with a slight purple tinge and are 11.5 cm in diameter. It is completely sterile and can therefore only be propagated vegetatively.

## RELATIONSHIP OF 'JIMMY BAYNE' TO OTHER BLUE PERENNIAL MECONOPSIS

Since I named *Meconopsis* 'Jimmy Bayne' I have continued to try to establish its relationship to other sorts of perennial blue Himalayan poppies in cultivation. It has been a tricky process, but has, I believe, proved possible. Before I go further I think that it would be helpful to briefly state my conclusions. I believe firstly that *M.* 'Jimmy Bayne' is a clone of so-called *M. grandis* GS600, and secondly that plants in cultivation so named are not the true species as that name implies, but are hybrids, probably *M. x sheldonii*. I hope that what follows will clarify these conclusions.

In general, a number of the features described above apply to other meconopsis such as *M. betonicifolia*, and the various forms of *M. grandis* and of *M. x sheldonii* (hybrids between *M. betonicifolia* and *M. grandis*). Identifying features include flower size and colour, the shape of the leaves, the shape and hairiness of the seed pods, the production or non-production of viable seed and the size and shape of the seed if this is produced.

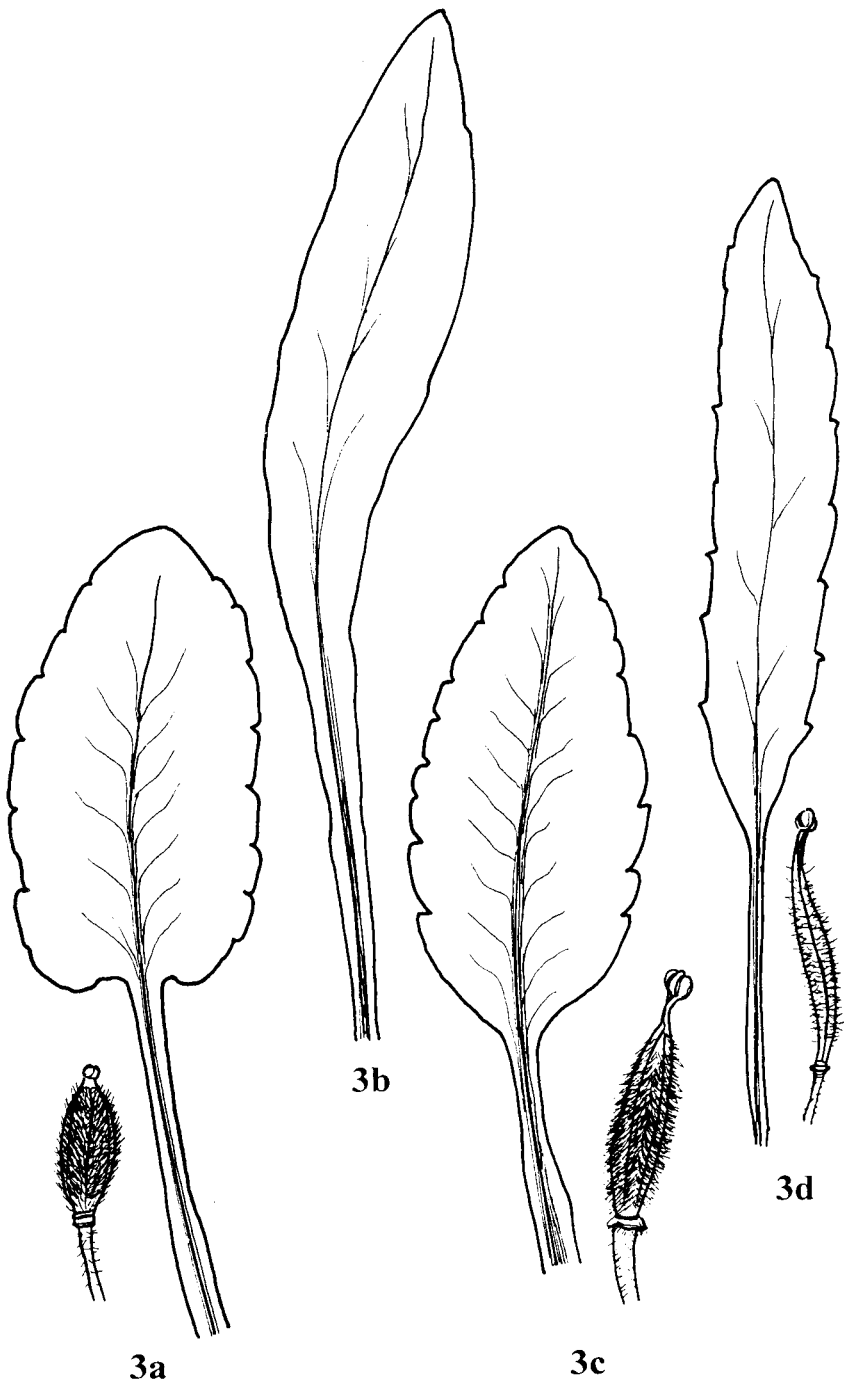


*M. betonicifolia* can be readily distinguished from both *M. grandis* and *M. x sheldonii* on the basis of its flowers which are much smaller (up to 8 cm in diameter) and of a distinctly different shade of blue, and on the shape of the leaves which are cordate, i.e. heart-shaped at the base, and on the shape of the seed pods (Fig.3a p.270). Also the seeds are readily differentiated from those of *M. grandis* and from the seed of a fertile form of *M. x sheldonii* (see a later article) as they are smaller and more smoothly rounded than the latter two.

Leaf-shape varies widely in the different forms of *M. grandis* (e.g.Fig.3b) and of *M. x sheldonii* (e.g.Fig.3d). A feature they have in common and which separates them all from *M. betonicifolia* is that the leaves are cuneate (i.e. wedge-shaped gradually grading from the bases of the leaves into the petioles (Figs.3b, c and d). Aside from this, the leaves range from varying degrees of linearity (long and narrow) which applies to forms of *M. x sheldonii* and to some forms of *M. grandis* (e.g. early Sikkim form - Fig.3b) to oblong (much wider) as for example in *M. 'Jimmy Bayne'* (Fig.3c). The shape of the leaf edges is also a useful distinguishing feature and ranges from nearly smooth to varying degrees and patterns of indentations (for example, shallow rounded teeth in *M. 'Jimmy Bayne'* (Fig.3c).

Seed pod characteristics are also helpful in identification. In both *M. x sheldonii* and *M. grandis* the pods are elongated. In the former and most cases of the latter, they are covered in hairs which are decidedly longer and more bristly in *M. x sheldonii*.

Seed pod characteristics brings me to the difficult question of the status of the various forms in cultivation of *M. grandis* and of *M. x sheldonii*, and this includes *M. 'Jimmy Bayne'*. By definition *M. x sheldonii* is the name given to the hybrid cross between *M. grandis* and *M. betonicifolia* and it is well-known that these plants (for example, *M. x sheldonii* 'Slieve Donard') are normally sterile and produce thin elongated seed-pods containing no properly formed seed. Unless it is virused or mutation has occurred a true species should produce viable seed, yet there are plants in cultivation and listed by many nurseries as *M. grandis* which are sterile, the most noted example of which is so-called *M. grandis* GS600. I have discussed this matter extensively with David Tattersfield, until recently Head Gardener at Branklyn Garden, Perth and have been convinced by his arguments. He believes that it is very unlikely that



3a

3b

3c

3d



Fig. 65 *Meconopsis* 'Jimmy Bayne' flowering (p.268) Evelyn Stevens

Fig. 66 *Meconopsis* 'Jimmy Bayne' rosettes (p.268) Evelyn Stevens





Fig. 67 *Oxalis laciniata* 'Dark Centred Form' (p.318) Harold McBride

Fig. 68 *Oxalis laciniata* 'Gwen McBride' (p.319) Harold McBride





Fig. 69 *Oxalis* x 'Ione Hecker' (p.318) Harold McBride

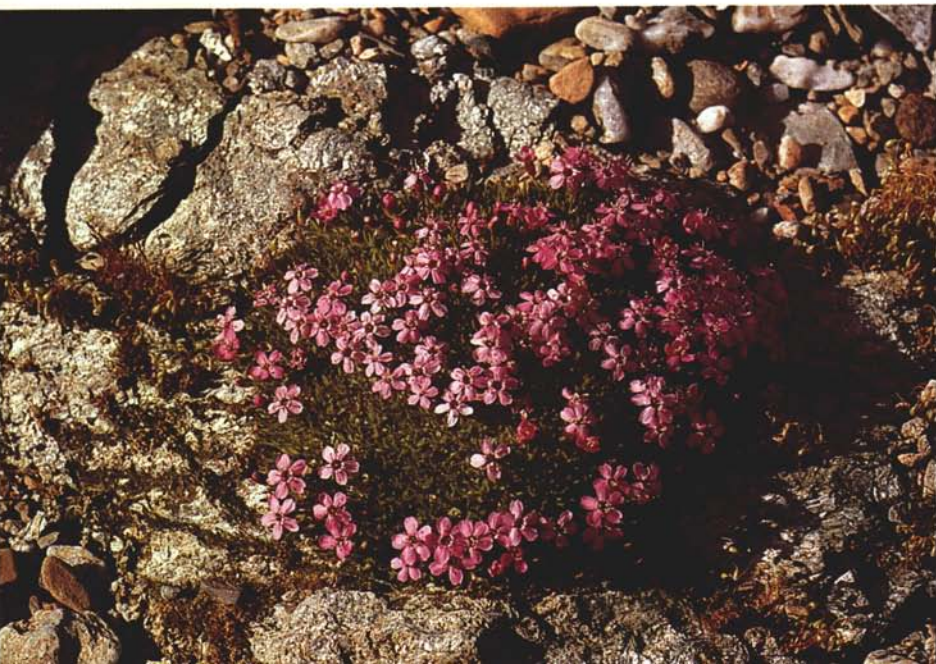
Fig. 70 *Primula edgeworthii* (p.266) Ian Young





Fig. 71 *Eritrichium nanum* (p.285) Nick Boss

Fig. 72 *Silene acaulis* (p.285) Nick Boss



*Meconopsis grandis* GS600 still exists. According to the rules of plant nomenclature this name could only be properly applied to individual plants grown from the original packet of wild-collected seed labelled *Meconopsis grandis* GS600, or to plants produced from these by vegetative propagation. When these plants produced seed the plants raised from them should have been labelled *M. grandis* ex GS600. Later generations could only validly have been labelled *M. grandis*. Then if, later still, plants were raised which were sterile it is almost certain that hybridisation with other garden meconopsis must have occurred. If the second parent was *M. betonicifolia* the progeny would be *M. x sheldonii*. Therefore as I have said above, the conclusion reached is that the sterile plants grown in gardens to-day as *M. grandis* GS600 are not the true species but are hybrids (probably *M. x sheldonii*) which have arisen in cultivation, due to being grown in close proximity to other species.

All of the above is pertinent to this article. I believe that *M. 'Jimmy Bayne'* is a clone of so-called *M. grandis* GS600. Naming it *M. 'Jimmy Bayne'* rather than *M. grandis* GS600 '*Jimmy Bayne*' reflects its undoubted hybridity as it is completely sterile. My conclusions concerning the clonal relationship of *M. 'Jimmy Bayne'* to so-called *M. grandis* GS600 are based on discussions with a number of meconopsis enthusiasts and observations on my own plant collection and other plants I have seen.

#### MECONOPSIS GRANDIS GS600

In the context of the above it is relevant to recount, as far as I have been able to discover, the details of the introduction and history of *M. grandis* GS600. Seeds were collected in Bhutan by George Sherriff in 1934 and given the collection number 600 (see '*A Quest of Flowers*' by H.R. Fletcher pp.75-6). Seeds were then given to Jack Drake of Jack Drake's Nursery, Inshriach, Aviemore, only four years later by Col. and Mrs. Renton at Branklyn, Perth. I do not think it is known whether these were from the original packet of wild seed (and hence true *M. grandis* GS600) or seed from plants raised from the latter (ex *M. grandis* GS600). However, according to John Lawson of Jack Drake's Nursery, a number of generations of the plants grown from this strain initially set fertile seed (see '*The Rock Garden*', Vol XXV, 1996, p.22). John joined Jack Drake in 1949, and he tells me that the few plants which survived the neglect of the war years gradually came to produce

only poor forms from seed and then became completely sterile. Therefore about a dozen of the best plants, which had either survived the war years or had germinated in the years just afterwards, were selected and bulked up by vegetative propagation. The plants sold by Inshriach Nursery as *M. grandis* GS600 are still derived by vegetative propagation from a number of the early selected superior clones and not merely from a single clone. Presumably still more clones were selected by other people who acquired seed in the early years. This could explain why there are in cultivation to-day a number of different clones, obviously very close to one another in appearance and with only subtle differences between them.

However, no matter how fine these plants were and still remain, it seems unlikely that they are either true *M. grandis* GS600 or, in view of their sterility, even *M. grandis*; they must be hybrids.

Leaving the question of hybridity now, I want to address the evidence for there being in existence a number of different clones of so-called *M. grandis* GS600. By collecting a number of different plants labelled *M. grandis* GS600, growing them near to each other and observing them closely for several seasons, I am convinced this is the case. My plants include *M.* 'Jimmy Bayne', *M. grandis* GS600 from Edrom Nursery, Inshriach Nursery and Dalemain Garden, *M. grandis* GS600 'Springhill' from Logan Botanic Garden, near Stranraer, and two alleged to be *Meconopsis* 'Branklyn'.

#### MECONOPSIS GRANDIS GS600 'BRANKLYN'

According to John Lawson, six plants of *M. grandis* GS600 were bought by Sir Eric Savill and grown at Windsor. In 1962 one of them was given an Award of Merit by the RHS and the following year a First Class Certificate. This plant was then given the clonal name \**M. grandis* GS600 'Branklyn' on the advice of Sir Harold Fletcher (see 'The Rock Garden' Vol XXV, 1996, p.22), and is still maintained at Jack Drake's Nursery. There has been much confusion in recent years about the exact identity and provenance of so-called *M. grandis* GS600 'Branklyn', so it is reassuring that John Lawson's recent account has been reiterated and thus confirmed in a recent letter to Bill Chudziak by John Bond, recently retired Keeper of the Gardens at the Savill Garden, Windsor. John has also sent Bill a plant to add to his National Collection. Of my two plants purporting to be *M. grandis* GS600



'Branklyn', (neither acquired by me from Jack Drake), one is very similar to, but distinct from, *M.* 'Jimmy Bayne'; the other has yet to flower. John Lawson has kindly just given me a plant of the FCC *Meconopsis grandis* GS600 'Branklyn' to compare with my other supposed 'Branklyn' plants and with 'Jimmy Bayne'.

In conclusion, on the basis of the present evidence, I support the view that there is in cultivation a number of very similar clones of so-called *M. grandis* GS600, including *M. grandis* GS600 'Branklyn'. I believe that *M.* 'Jimmy Bayne' is one of them.

### MECONOPSIS GRANDIS GS600 'LOOK-ALIKES'

I have emphasised that the characteristic leaf shape (Fig.3c) is one of the important features that help to identify so-called *M. grandis* GS600, as defined by the plants listed above. However, there are other plants that I believe could not be mistaken for so-called *M. grandis* GS600 but which have very similar leaves. One is a very fine clone grown in a magnificent avenue at Branklyn Garden. This striking plant is significantly taller and the flowers much larger (15cm in diameter), and the disposition of the flowers gives the impression of a four sided clock tower arrangement. Like so-called *M. grandis* GS600 it is sterile.

I also have another meconopsis which is very similar in appearance to so-called *M. grandis* GS600. At the end of the Seed Exchange distribution, a spare packet of *M. grandis* seed was given by Joyce Halley to Willie Duncan of Drumeldrie, Fife, in the early 1970s. He raised just a single plant. It is an excellent form, vigorous and with large good blue flowers. Willie gave me a piece of it several years ago, and it regularly sets a little fertile seed.

### BACK TO MECONOPSIS 'JIMMY BAYNE'

However, I will now return to *M.* 'Jimmy Bayne'. It is a fine plant, rather indefinably distinct from other forms of so-called *M. grandis* GS600, but nevertheless it *is* distinct from the others that I have seen. David Tattersfield and Bill Chudziak, with larger collections of clones with which to compare it, agree.

It is easily propagated by division with even tiny side shoots rooting readily. A large clump can be divided into two or more pieces in early spring or late summer and replanted in the garden. But for the small divisions, I plant them up in damp peat-based compost and avoid over-wetting by keeping the pots in a polytunnel

with controlled watering. I find this can be done any time between August and mid-December, and from February till late March.

It is best to make the divisions before the leaves have developed very much, so that a good root system can first develop and excessive transpiration by the emerging leaves thus be avoided.

Here in central Scotland I obtain good results by planting into beds of rich, damp, rather clayey loam, with a tendency to wetness in winter, and to which I therefore add grit, garden compost and manure. The main enemy for these plants here is the cold easterly winds of late spring that can spoil the appearance of the attractive young leaves.

The decision to name *Meconopsis* 'Jimmy Bayne' as such (and thus to beg the question as to its parentage), and **not** *M. grandis* GS600 'Jimmy Bayne' (to indicate its undoubted relationship to the other so-called *M. grandis* GS600 clones in cultivation) or *M. x sheldonii* 'Jimmy Bayne' (to indicate that it is probably a *M. x sheldonii* hybrid) is due in large measure to the persuasive botanical arguments of David Tattersfield, and I am grateful to him for his considerable help with this matter.

I am also grateful to Bill Chudziak, Ian Christie, John Lawson, Mervyn Kessell, James Cobb, Cameron Carmichael, Willie Duncan and many others who have variously given me plants, spent time discussing meconopsis with me or read the manuscript.

I am also very indebted to Anne Chambers for making the attractive line drawings in Fig.3, and to Jimmy Bayne for giving me the plant in the first place.

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### ADDENDUM

\* *M. grandis* 'Branklyn' David Tattersfield tells me that there is in cultivation a second distinct clone which was independently named 'Branklyn' by Col. and Mrs. Renton of Branklyn. Undoubtedly it was an outstanding clone, but the very few known individuals still in cultivation are poor plants of weak constitution, probably as the result of viral infection.

## ADVANCE NOTICE — PERENNIAL BLUE MECONOPSIS WORKSHOP, 5 JUNE 1999

The previous article highlights the confusion that exists concerning the identification and naming of many of the fine clones and forms of large blue Himalayan poppies that are in cultivation. Resulting from reading my manuscripts, Mervyn Kessell suggested organising a Workshop to attempt to resolve some of the problems.

We have contacted many of the acknowledged *Meconopsis* experts and they have enthusiastically agreed to give support.

A one day Workshop has therefore been planned for 5 June 1999 at the Royal Botanic Garden, Edinburgh

It is planned to have a number of short talks from as many people as possible with relevant material to contribute, an exhibition of dried specimens, photographs and live plants brought along in pots, and a conducted walk to see the plants growing in the Garden at the end of the afternoon.

The 1999 date has been agreed in order to give people two full growing seasons for preparation and research and for the collecting of materials such as pressed leaves, seed pods and flowers, photographic slides and prints, and the establishment of plants in pots.

**To get an idea of numbers, we would welcome a response to this notice indicating your interest. We would also welcome suggestions on the form and content of the Workshop.** We will then prepare a sheet for interested members indicating suggested details of topics to be addressed. This will be available from Mervyn Kessell or myself. **Please enclose a s.a.e.**

It is hoped that it will be possible to reach a number of conclusions which can be published.

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# GIBBERELLIN SEED TREATMENT

by H. Taylor

Gibberellic acid-3 as an aid for the germination of some seeds is currently suggested by several alpine enthusiasts including Professor Norman Deno of Pennsylvania who has produced a very interesting book on seed germination.

I was fortunate when, last spring, a friend gave me a small bottle containing 1000 ppm GA-3 thus allowing me to test its effect on a range of 42 different alpine seeds with the results listed below. By the way, GA-3 is a potent chemical that should be handled with care using gloves to avoid skin contact.

With each alpine, the seeds were counted and split into two equal lots. Half were put into a small test tube, covered with a few drops of GA-3 solution and left soaking for 48 hours at 15°C, the other half were similarly treated but with plain water replacing the GA-3 in order to provide a control.

The seeds were sown in January immediately after the soaking treatment. The seed compost contained peat, grit and a small amount of sterilised loam with the seed pots stood on a mist propagation bench with a soil-warming cable that struggled to raise the temperature 8°C above ambient. As the outdoor temperature was low in January and February, the mist bench temperature fluctuated between 1°C and 15°C. Emerging seedlings were counted along with date of emergence.

## **Twelve seed lots had germination improved by around 27% with GA-3**

<i>Androsace bisulca aurata</i>	<i>Cyclamen repandum album</i>
<i>Daphne retusa</i>	<i>Gentiana bavarica</i>
<i>Meconopsis delavayi</i>	<i>Meconopsis punicea</i>
<i>Meconopsis superba</i>	<i>Nototriche mcleanii</i>
<i>Primula calderiana</i> (old seed)	<i>Primula calliantha</i> (old seed)
<i>Shortia soldanelloides</i>	<i>Tropaeolum sessilifolium</i>

## **Nine seed lots had germination speeded by 1-4 weeks by GA-3**

<i>Campanula formanekiana</i>	<i>Incarvillea zhongdianensis</i>
<i>Lilium formosanum pricei</i>	<i>Meconopsis delavayi</i>
<i>Meconopsis lancifolia</i>	<i>Meconopsis punicea</i>
<i>Meconopsis sheldonii</i> (fertile)	<i>Meconopsis superba</i>
<i>Primula sessilis</i> (old seed)	

## Seven seed lots gave similar germination from both treatments

Androsace pubescens	Campanula cenisia
Calceolaria uniflora darwinii	Castilleja pumila
Geranium regelii	Primula faberi(old seed)
Thermopsis barbata	

## Two seed lots had germination inhibited by GA-3

Androsace limprichtii	Cyclamen mirabile
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## Fifteen seed lots had no germination after two months with either treatment

Androcymbium striatum*	Eritrichium kamschaticum
Diapensia bulleyana(old seed)	Eritrichium nanum
Diapensia purpurea rosea(old seed)	
Gentiana verna	Gentianella incurva
Gentianella weberbauerii	Labum bullatum
Lilium polyphyllum	Parnassia petitmeningii
Pleurospermum foetens	Shortia uniflora kantoense
Primula amethystina brevifolia (old seed)	
Trillium ozarkianum	

\* (germinated in July after six months with both treatments)

## OBSERVATIONS

The improvement in percentage germination and more rapid emergence with several meconopsis suggests that GA-3 may lessen the need for a cold moist treatment prior to germination. These meconopsis when sown in autumn in a cold frame give an excellent germination when the temperature rises in spring without any need for GA-3 treatment. But even within a batch of seed of most meconopsis, some germinated just with warmth, without either cold treatment or GA-3; thus within a species the individual seeds appear to vary in their requirement.

GA-3 may boost the germination of primula seed which is old and of low viability.

It is difficult to explain why one androsace and one cyclamen benefited from GA-3 while another species of both genera were harmed, but as only small numbers of seeds were involved these are only tentative results.

My complete failure with 14 seed lots, suggests that these may have needed a different treatment such as chilling prior to being stood on the warmed bench, or the seed may already have been dead prior to treatment.

Initially the seedlings from the GA-3 treatment were noticeably more elongated than those germinating with plain water but after a

few weeks the developing plants were indistinguishable apart from many of the GA-3 plants being bigger as a consequence of their earlier emergence.

## CONCLUSION

Deno suggests that many standard composts used for seed sowing may already contain enough gibberellin from the decomposition of organic matter by fungi to stimulate germination.

My rudimentary experiment with small seed numbers supports the proposition that an application of GA-3 could be a tool for improving the germination of several alpins.

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### SEED EXCHANGE

Once again we have had a successful year—due to the generosity of the donors. We cannot give out what we do not get, so keep sending the rare, the beautiful and the desirable as well as the more common plants. What is common with you may be desirable on the other side of the world.

Please send seed as early as possible but certainly by the end of October. If seed is late ripening, let me have a note before the closing date of what you intend to send.

Jean Wyllie

### Erratum

In the article 'British Plants for the Rock Garden' in the January 97 Journal by Maria Bennett, the photographs were taken by George McKay.

# SCOTLAND'S GARDEN AT PLEAN

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by Jim McColl

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After year's of discussion, plans have finally been drawn up to create a National Garden to celebrate the Millenium in Scotland. The new project to be called Scotland's Garden, which will be sited at Plean, near Stirling, will be a unique facility not just in horticultural terms.

The garden will be designed and run as a centre of excellence to complement an indoor interpretive centre which will explore and explain the past, present and future of man's relationship with plants and the effect on the world's flora and fauna.

Regrettably a bid for Millenium Funding has been rejected but, bearing in mind that when we started serious planning in 1993, the Millenium Commission had not been born, it is no surprise to learn that the Steering Group have voted to carry on. With the progress we have made in 3½ years, we are even more convinced of the merits of our idea.

The initiative in 1993 came from Stan Green, at that time Scottish Branch Chairman of the Horticultural Trades Association. The Steering Group is currently made up as follows:

HTA Stirling Council (owners of the site) Scottish Enterprise Forth Valley Enterprise Scottish Natural Heritage Scottish Tourist Board Royal Botanic Garden Edinburgh Royal Horticultural Society and me!
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Other bodies involved at some stage and kept informed are:

National Trust for Scotland  
National Farmers Union of Scotland.  
British Association of Landscape Industries  
Scottish Landscape Industry Group

The Garden would become part of 'Scotland's Estate' and be administered by a Board of Trustees, nominated by the Founding Partners. Any profits from commercial activity i.e. entry fees, catering, plant sales etc would be re-invested in the Garden

In bringing the plans to an advanced stage many experts have been consulted and numerous establishments/events have been cited to give a three dimensional feel to the project. The Glasgow Garden Festival, the RHS Gardens at Wisley, the Keukenhof in Holland (shop window of the Dutch bulb industry) and Capel Manor College in North London (a wide range of model gardens designed as teaching aids for amateur and professional courses) were frequently referred to.

The Plean Estate, currently run by Stirling Council as a Country Park, is in an ideal situation, close to the Central Scotland motorway network. As such, it can probably be visited by 80% of the Scottish population on a Day Trip. The area runs to about 77 hectares and has a mature landscape which has been disrupted in recent times by mining activity. Apart from a ruined house and coach house block and walled garden (wall intact) there are two pit bings and a polluted burn. There are marvellous stories to tell about regeneration, recycling and biological control processes.

Apart from gardens of excellence, you will expect to find an Arboretum, Trial Grounds, a permanent tribute to our great Plant Hunters etc. There will be a very strong environmental education theme running through the entire site. Hopefully, in time, formal links may be forged with schools throughout Scotland.

The indoor visitor attraction set in a garden of diversity and excellence will soon become a regular place to visit and with such a unique mix, it will also become a very marketable facility for tour operators. All of this adds up to about 200 new jobs and the regeneration of a community which has suffered since the decline of coal mining.

Significantly, I feel sure that there will be a niche for every specialist society in Scotland who may need a venue or national focus whether it be for trials, meetings, conferences, shows or display areas.

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# “DIFFICULT” ALPINES

Success in cultivating a particular plant  
justifies the method of growing it

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by Nick Boss

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Alpine plants that are grown away from their natural habitat and environment are sometimes described as *being difficult to grow*. Why is this? Perhaps it is because they are not amenable to new conditions and changes in their environment. In order to answer the question and explore the possible reasons, the alpine plant will be considered in relation to its natural habitat and then in the garden.

## HABITAT AND SURROUNDING ENVIRONMENT

Alpine plants have evolved over a long period of time into many and varied distinct forms and as a result have successfully adapted to new habitats and climates. The type of alpine that is going to be considered is the cushion and low growing forms, since it is with this specialised group that the term ‘difficult’ has been most associated ( the true high alpine).

Examples of low growing forms are *Eritrichium nanum* (Fig.71 p.274), *Silene acaulis* (Fig.72 p.274), *Loiseleuria procumbens* and *Dianthus* spp. These particular species, as with most high altitude ones, are generally associated with rock ridges, cols, screes and high level tundra/steppe. These habitats experience extreme exposure, not only to intense ultra violet light, but also to the desiccating effect of wind. Compact growth and small leaf area are therefore essential to survival in these places. The European androsaces tend to favour less exposed, but more specific, habitats, such as semi-shaded crevices where soil moisture is very free draining and where there will also be protection from excess overhead moisture. *Dionysias* are crevice specialists too, but have an additional requirement of a dry atmosphere; indeed they have a tolerance towards heat and exposure that reflects the climatic conditions and surrounding environment where they grow naturally in the Middle East.

## SURVIVAL IN THE WILD COMPARED WITH SURVIVAL IN CULTIVATION

To survive in the wild most alpiners have to mature, flower and set seed in order to regenerate themselves successfully so that they can provide genes for future generations of plants. So why do some alpiners grow successfully in the wild, from our perspective a

hostile environment, but then appear difficult when brought into cultivation?

There are, of course, many possible reasons why alpiners, especially those from specialised habitats, appear difficult in cultivation. Perhaps the most important reason is that, as a result of adapting to suit quite specialised habitats, some alpiners have only a limited tolerance towards changes in their surrounding environment and habitat and therefore can only thrive in a narrow range of acceptable conditions. Examples in cultivation may be too little shade, or not enough, or moisture reserves may be limited. The prevailing climate for the region as well as local weather may favour the cultivation of some species, but not others. Unseasonal warmth, especially during winter dormancy, together with humidity can encourage premature growth and therefore interrupt the vital rest period. As a result some alpiners may be more vulnerable to disease and insect pests in lowland situations.

## STRESS

Could stress be a likely reason for alpiners appearing to be difficult? In the wild, survival for an alpine on a rock face will present difficulties, but not impossible ones. From the reader's perspective though, these difficulties will lead to a stressful situation. For the alpine in the wild, on the other hand, though possibly under stress, survival is more successful because of physical adaptations, including the ability to regenerate itself. In cultivation there will again be stress for the alpine, but the environmental factors will be quite different.

Perhaps there is no real difference then between stress in the wild and that experienced in cultivation, only the symptoms are different. They are an inability on the part of alpiners or people to adapt to changes in their preferred environment, in a physiological sense.

There may, then, be some justification for improving, to the best of the grower's ability, the conditions necessary for the alpine to survive in cultivation. However, if either the minimum or the maximum cultural requirements are exceeded these may result in stress. Important requirements to consider are:

### 1. The quality of light

If there is insufficient ultra violet light, particularly for those light sensitive and slow growing species, there will be less 'food' made (especially fats and oils), and less available for plant growth. In addition, plant hormones responsible for promoting flower bud formation and shoot development will not be stimulated sufficiently and will give rise to both poor flowering and lax growth. A decline in health might then be expected. Examples of species that are light sensitive are *Androsace alpina*, *Silene acaulis* and *Loisleuria procumbens*.

## 2. Moisture and heat

Two important points to consider in relation to moisture are, firstly the availability of continuous supplies of moisture during the peak growing season and, secondly, whether reductions in moisture during the inactive rest period are sufficiently reduced to permit resting.

Excessive heat is another related factor. This can, when combined with the normal effects of transpiration, make worse the effects of insufficient moisture and will encourage a plant to wilt. Basal rot is another consequence of too much heat. Two species that are particularly sensitive to availability of moisture, but also excessive heat, are *Primula macrophylla* var. *moorcroftiana* and *P. sonchifolia*.

## 3. Insect pests, diseases and ventilation

If alpiners are in an unfamiliar environment, i.e. either it is too humid, too hot or there is not enough moisture or too little ventilation, then they are more likely to be vulnerable to the adverse effects of insects or diseases. Lack of ventilation, however, for example, is not a problem in itself but it can lead to an alpine being infected by *Botrytis*.

## ALPINES PLANTS IN GARDEN CULTIVATION

How can we as growers achieve that same measure of success when growing alpiners as occurs in the wild? In some low altitude gardens the optimum levels of ultra violet light, shade, temperature, moisture and, indeed, dormancy, are not readily achieved, but can be partly reached by observation coupled with experimentation. For example, we can move plants to what we think is a more favourable position and see if there is any improvement in their overall health. Any garden, whatever its size, has areas of different exposure to light and moisture. Having moved our alpiners to a new position the question we have to ask ourselves is 'Have the alpiners been able to flower, set viable seed and live for the optimum time?' Also, have they the form, growth and character that indicate, for example, that the plants have been exposed to sufficient light. The importance of increasing exposure for light sensitive alpiners is ensuring that photosynthesis can function efficiently.

The importance of light can, of course, be legitimately considered just as much an important factor as the often discussed composition of composts. Exposure to maximum ultra violet, continuity of moisture with drainage and shade with coolness, have been the prime factors in being able to grow successfully many species from specialised habitats.

## MOISTURE AND DRAINAGE

A continuous supply of moisture is very important. This is not always easy to provide when also providing efficient drainage. For some alpine plants that need a lot of moisture and good drainage a close approximation of their moisture requirements can be achieved by using sphagnum with leaf mould and, to a lesser extent, through the use of soft rocks like chlorite schists, sandstone or tufa.

Examples of moisture loving species are *Saxifraga stolonifera*, *S. andersonii*, *S. poluniniana* and *S. lilacina*. One could also add species from moraines and 'snow lie' habitats, such as *S. androsacea*, *Ranunculus glacialis* and *Gnaphalium supinum*. Wide fluctuations particularly in moisture levels either in a pot or outside in a rock garden cannot, surely, provide the conditions necessary for healthy growth to take place.

## MY SOLUTION TO GROWING DIFFICULT ALPINES

### *Slower rate of growth*

The idea is to subject the alpine plant to environmental pressures to which it has become adapted, therefore encouraging better flowering along with a form of growth that is more in character. Examples of environmental pressures are general exposure together with partial root restriction. Tests with *Campanula cenisia*, for example, have shown that if growth is not slowed down the plant will grow vigorously, become exhausted and then will die — within a year. If grown slowly in a suitable rock such as chlorite mica schist, its growth is moderate, it flowers well and can last for four years — and without repotting.

Species that have responded favourably to this treatment are: *Silene acaulis*, *Androsace alpina*, *A. delavayi*, *Dionysia tapetodes* and *Ourisia microphylla*.

### *Moisture and drainage*

For some alpine plants that have a modest requirement, but need at the same time very good surface drainage, the use of suitable types of rocks have minimised fungal infestations. Also, rocks encourage a cooling effect and as a result of this process a modest supply of moisture is formed by condensation in the 'root run'.

### *Aesthetic reasons*

Since rocks have an important role in the cultivation of some alpine plants, it seems complimentary to them to wish to present them in such a way as to enhance the character of the particular plant — with the best possible effect, particularly if showing.

### *Method and ease of establishment*

The seedling is inserted into a small crack (sometimes artificially made) that penetrates at least  $\frac{3}{4}$  into the rock so as to allow for

further root exploration into the compost surrounding the rock. Seedling plus rock are then immersed in a container of water and left until established. The rock can then either be positioned in a scree or put in a pan.

In conclusion, then, the differences between the physiological requirements of any alpine plant in the wild and the actual environment produced by cultivation, must not be too great. The plant's behaviour may change in response to cultivation. Determining the requirements of alpine plants can be likened to detective work. Some requirements are clearer and more easily understood than others and therefore point in the direction of success. Others need more time for study. What may be very much more important is the greater emphasis we put on some of these requirements and, of course, these will vary in importance from species to species. Preconceived opinions on how to grow alpiners can inhibit ways of thinking and learning. Conversely it can also generate new ways of thinking that will enable us as growers to understand and study the new and interesting alpiners now coming into cultivation.

When cultivating the less well known and understood alpiners, you must decide what your objective is. If, for example, it is to achieve a better understanding of their physiological requirements (not necessarily the same requirements needed for show perfection), then, to compensate for the absence of ideal growing conditions, non-conventional methods of cultivation may have to be considered.

Your objective which is success in cultivating a particular plant, will of course, justify the method of growing it.

Looking at the situation as a whole, perhaps the statement "difficult to grow" might be used more appropriately in the context of an alpine's requirements being difficult to understand.

#### *Editorial Comment*

In case any readers feel that this article is slightly too theoretical for a Gardening Journal, let me reprint a paragraph from the Report of the Discussion Weekend Show in 1996:

"Nick Boss gained the Diamond Jubilee Award and a Certificate of Merit for his six pan exhibit of alpiners set naturally among, over and between rock fragments and slivers of stone . . . the effect singularly resembled a miniature trough, its essence distilled into art."

*I think we can assume that Nick applied the ideas expressed in his article to achieve these splendid results.*

## PLANTS FROM THE SHOWS

Alan Porrett ARPS is, as you might expect, a man who takes superb photographs. Over the years he has photographed many plants at our Shows with wonderful results. Few have been shown until now in the Journal because they were rarely appropriate to the published articles. So we have decided to print here a selection of photographs he took at Northumberland Shows in 1995 and 1996.

Alan takes his photographs on Fujichrome 100 film using a twin flash dedicated system with one main and one small subsidiary flash, using a Camron Macro lens

***Hepatica nobilis*** (Fig.73 p.291): A widespread European species with many named cultivars. Easily grown in moist humus-rich soil in semi-shade. Flowers in early spring. Propagation by seed or division.

***Viola brevistipulata hidakana*** (Fig.74 p.291): A Japanese species which grows from woodlands up into mountain crevices. The deep yellow flowers are offset by the bright red stems. Flowering in April, it is a plant for the alpine house or careful cultivation outdoors in semi-shade.

***Bergenia ciliata*** (Fig.75 p.292): A plant of forests and rock ledges from Afghanistan to Tibet. With its white/pink flowers on stout leafless stems it is an easy plant for the garden. It can be propagated by seed or division.

***Fritillaria pineticola*** (Fig.76 p.292): This plant is synonymous with *F. bithynica* and comes from western Turkey where it grows in pine/oak scrub. It has greenish flowers with yellow insides. Best grown in the alpine house and propagated by seed.

***Pulsatilla vernalis*** (Fig.77 p.293): This European species grows widely from Scandinavia to southern Spain. Flowering in early spring, it is not the easiest of the pulsatillas to grow. It does fine in an alpine house but tends to rot in British gardens when grown outside. It seems to need a cold hard winter as it grows fine outside (and seeds itself) in cold countries such as Canada.

***Trillium rivale*** (Fig. 78 p.293): This is a native of western North America where it grows at rocky stream sides. In cultivation the white or pink flowers appear in early spring. It can be grown quite readily in leafy soils in half shade.

***Pleione 'Etna'*** (Fig.79 p.294): This is a hybrid between *Pleione speciosa* and *P. limprichtii*. It is of easy cultivation in an alpine house as are most pleiones. The bright red-purple flowers are borne two to a stem.

***Primula vulgaris v. sibthorpii*** (Fig.80 p.294): This a species of the eastern Balkans where it grows in light woodland or scrub. It is of generally easy cultivation and produces its delightful salmon, red or purple flowers in early spring.



Fig. 73 *Hepatica nobilis* (p.290) Alan Porrett

Fig. 74 *Viola brevistipulata hidakana* (p.290) Alan Porrett





Fig. 75. *Bergenia ciliata* (p.290) Alan Porrett

Fig. 76 *Fritillaria pineticola* (p.290) Alan Porrett







Fig. 77 *Pulsatilla vernalis* (p.290) Alan Porrett

Fig. 78 *Trillium rivale* (p.290) Alan Porrett





Fig. 79 *Pleione* 'Etna' (p.290) Alan Porrett

Fig. 80 *Primula vulgaris* v. *sibthorpii* (p.290) Alan Porrett



# SOME PLANTS OF NORTHERN SIBERIA

**Don't ignore the special offers through your letter box**

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by Chris and Marie North

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When our post arrives at about 8.30 am we sort out the 'special offers' and destroy them. Fortunately, one of these was overlooked and turned out to be of great interest. It was for a few berths left on a cruise up the Yenisey — a huge river that flows northwards through central Siberia to the Arctic ocean. This seemed too good to be true. We booked next day and were off within three weeks.

Of course we were hoping to see something of the flora in the region but it was difficult to know where to look for information. A visit to the Edinburgh Botanic Garden Library was helpful. Practically all the books on the topic were in incomprehensible Russian but amongst them a thin, large-format, volume stood out from the rest — 'Plantae Vasculaires Jeniseenses' by N.J. Scheutz (1888). Although it had a Latin title it was a report from the Swedish Royal Academy of Science and written in Swedish. Fortunately having worked there a long time ago I could read it. It proved to be an account of a botanising expedition which covered almost exactly the route we were to take — even stopping at the same places. Could it be that we were to be the first persons from Britain since 1888 looking at the flowers to be seen there ?

## THE JOYS OF RUSSIAN TRAVEL

Leaving Heathrow we spent a day being shown round St. Petersburg and at 6 pm joined a river trip. There was an interesting Russian floor show and each table for four was given a bottle of vodka, lemonade and sparkling wine. We finished all this and left, in a slightly inebriated state, to join the cruise ship Anton Lhekov at Krasnoyarsk. The Tupulof jet aircraft looked smart from the outside, but inside it was distinctly well worn. The seat springs were clearly felt through the cover, there was little leg room and my safety belt did not work. However, we arrived safely at our

destination early next day having travelled from Heathrow about the same distance as to Calcutta or the Cape of Good Hope.

## DECIDUOUS WOODLAND FLORA

After a short sleep we were taken on a visit to the hydro-electric station outside the fairly large town of Krasnoyarsk. The basin of the river Yenisey is twice that of the Volga and large enough to produce an astounding 500 billion kw/hr of electricity — more than that of France and Italy together. The exhaust water from the dam was an enormous jet capable of blowing away the Pitlochry dam and probably Pitlochry itself. On the way to the hydro-electric station our coach stopped for a short time and we were able to get out and look at the flora. It was pleasantly wooded countryside with deciduous trees and one of the notable plants on 8 July was the pale-yellow flowered monkshood, *Aconitum lycoctonum*. Other species that were fairly common here included an inula, probably *Inula salicina* and *Centaurea scabiosa*, both native to Britain. Unfortunately we did not have time to wander in the woods where *Cypripedium guttatum* and *C. macranthum* are said to occur, often in large quantities.

That evening we set off northwards and stopped at Yeniseysk — a small town on the east bank of the river at about the same latitude as Aberdeen. Here the deciduous woods were largely replaced by *Pinus siberica*, which resembles the Scots pine but has peeling orange-yellow, rather than reddish brown bark. There were also groups of birch trees.

## VOROGOVNO AND LEBED

Our next stop, and with a chance to disembark, was Vorogovno, also on the east bank. The town can best be described as 'friendly'. The roads were unsurfaced, cows wandered about unmolested and motorbikes with sidecars were a favorite form of transport. In spite of the latitude (about the same as that of the Faroes) there were small, sheltered vegetable gardens with tomatoes and marrows thriving well and potatoes, spring onions and fennel. Wild plants included nettles (both perennial and annual species), *Centaurea scabiosa*, *Geranium pratense*, *Chelidonium majus* and *Heracleum barbatum*. The last of these resembles our giant hogweed. The chelidonium (greater celandine) had larger flowers than we usually see in Scotland and is described by Scheutz as the variety *grandiflorum*. It is a plant with an extraordinary wide range, often

grown near buildings for the yellow latex was thought to be a cure for warts. I have seen it growing also at Carcassonne in the south of France and near home in Scotland.

We now set off for Lebed. Our Swiss-run cruise ship was well appointed, the food was excellent and the staff friendly and helpful. The captain and most of the crew were Russian, the cook German and the Chief Steward Austrian — no Swiss. There were about 300 passengers, mostly German speaking but about 10 French and 10 English speaking (including a Swedish lady who spoke both French and German but chose to join us). Each language group had a Russian guide and ours, Ludmilla Bogdanova, was especially informative and helpful. Lebed is a small colony on the east bank mainly involved in hunting. We arrived to a welcome of fish soup and vodka served on trestle tables by the sea shore. In the sand here grew *Dianthus sequieri*, *Linum perenne*, a red clover, *Tanacetum vulgare* var *boreale* and the rather-impressive, pale yellow flowered *Oxytropis campestris* found also in one part of Glen Clova in Scotland.

#### ARCTIC WOODLAND

Our guides, carrying rifles for protection against bears, took us through enormous stands of *Heracleum barbatum* to the Taiga (pronounced with the accent on 'a') which is essentially arctic woodland here comprising *Picea obovata*, *Pinus siberica* and *Larix siberica*. In a clearing grew:

<i>Antennaria dioica</i>	<i>Melampyrum</i> sp.
<i>Campanula glomerata</i>	<i>Polemonium caeruleum</i>
<i>Geranium pratense</i>	<i>Thalictrum</i> sp.
<i>Leonurus sibiricus</i>	<i>Veratrum album</i>

The leonurus was 1.5 m high and had tight whorls of small, mauve, dead-nettle like flowers. The exact species is not easy to determine but they are all attractive plants which deserve more attention by gardeners.

We entered the woods and amongst the mossy carpet grew a number of species with which we are fully familiar:

<i>Dactylorhiza maculata</i>	<i>Paris quadrifolia</i>
<i>Lilium martagon</i>	<i>Pyrola</i> sp.
<i>Linnaea borealis</i>	<i>Vaccinium myrtillus</i>
<i>Maianthemum bifolium</i>	

Apart from the lily, these are all plants that grow wild in Britain and are common in Scandinavian woodland. We did see bear scrapings but no bear appeared.

Back on the ship we sailed past seemingly endless forest of conifers. What looked like log rafts could be seen near the shores but we were told that they were not cut timber, simply trees that had fallen into the water due to the erosion of the banks by ice flows. Our next stop was Turuchansk where on 21 July the temperature was 12°C though they only have about two months without snow. This is a part of the region where ‘undesirables’ were banished and we were taken to a typical ‘goulag’ which had been a prison for a left-winger who had been sent there by the Czar. Plants growing around the houses included yarrow, *Achillea millefolium*, white dead-nettle, *Lamium album*, a vetch like our *Vicia cracca* and a strange *Stellaria* species. The last of these somewhat resembled greater stitchwort but with leaves up to 12 cm long and flowers about 12 mm in diameter with white petals that were deeply fimbriated — a complete enigma. The dead-nettles differed from our usual form by having longer and narrower leaves.

#### INTO THE ARCTIC

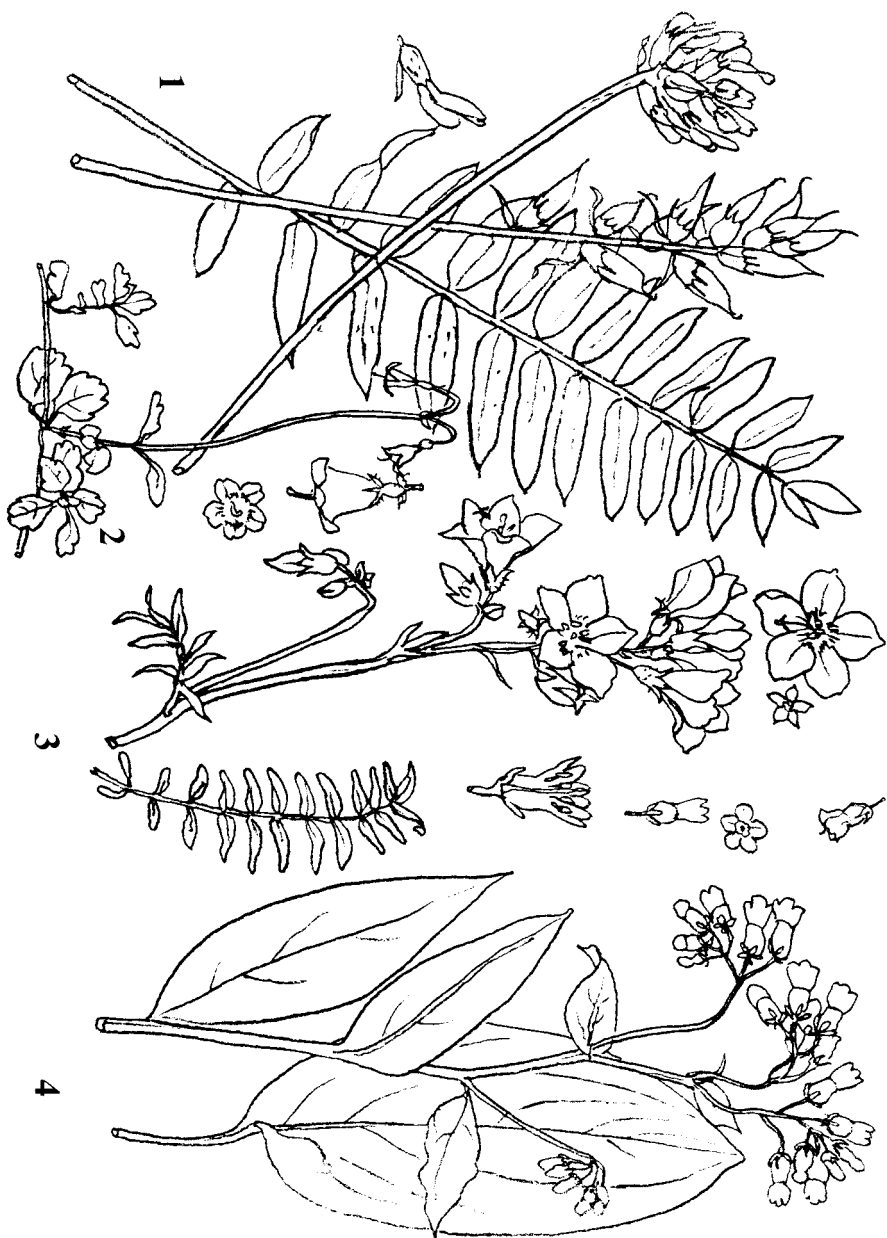
Cruising next day we crossed the arctic circle and watched the midnight sun dropping to the horizon and rising again. We also had an informal party put on by the passengers and crew and some of the performances were very skilled. Here we were in the land of permafrost and there were few trees — mostly stunted willows. We landed at Igarka and were taken round a museum with boring stuffed animals, mammoth tusks and artifacts from the local native population. There were a few pressed plants and those we had not seen growing included:

<i>Atragene siberica</i>	<i>Rosa majalis</i>
<i>Allium schoenoprasum</i>	<i>Thymus serpyllum</i>
<i>Pulsatilla patens</i>	<i>Vaccinium vitis-idea</i>
<i>Rubus idaeus</i>	

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Plants on the Arctic Circle: See line drawings opposite

1. *Oxytropis campestris*
2. *Linnaea borealis*
3. *Polemonium caeruleum*
4. *Mertensia sibirica*



I took the opportunity to slip out of the museum and to search around the buildings for native plants. As I said to our guide Ludmilla, we had come to see living Siberia not dead Siberia and I think the remark appealed to her Russian soul. In a willow scrub there was *Lilium martagon* flowering above the arctic circle, *Veronica longifolia*, the delphinium-like *Aconitum septentrionale*, a *Stellaria* sp., like chick-weed, and the magnificent *Mertensia sibirica*. The last of these grows to about 30 cm, resembles a cerinthe and has flowers of a beautiful sky blue. It is a very desirable garden plant. Farrer describes it as being the same as *M. ciliata* and “as easy to grow as a dandelion”, but not everybody agrees with this statement. Two nurseries are quoted in ‘The Plantfinder’ as stocking it.

Back on the ship we continued northwards through calm water with the sun barely rising above the horizon, treeless shores, some quite large patches of snow and small ice flows. The atmosphere reminded me of ‘The Ancient Mariner’ though there was no albatross, only arctic gulls. At latitude 72.5° we turned back; this is further north than the northern most shores of Alaska, Spitsbergen and half way up Greenland. The temperature was an exceptional 7°C.

## INTO USTPORT AND DUDINKA

Our next stop was Ustport. This was a smelly, untidy and broken down settlement of wooden houses where the population make a living by arctic fox breeding, reindeer herding and fishing. The beautiful small foxes were kept in pairs in cages with wire-netting floors and the stench was unbelievable. The pelts are not used primarily for export but as the cheapest material local people can buy to keep out the cold.

There were plenty of flowers at Ustport growing by the roads which simply consisted of a few planks in places where it was exceptionally muddy. They included an artimesia, dandelion, buttercup, ox-eye daisy and *Saxifraga cernua* which grows on the summit of Ben Lawers in Scotland. The most impressive were the marsh-marigold *Caltha palustris* and *Polemonium caeruleum* that made a truly magnificent display. A form of coltsfoot named, like our own from a pressed specimen in one of the museums, *Tussilago farfara* differed by having the edges of the leaves deeply indented. There was also an interesting *Tanacetum* sp. that had foliage and



the smell of tansy but with single 2.5 cm capitulae that had short ray florets — I cannot find a name for it.

Further down stream, but still above the arctic circle, we berthed at Dudinka. By contrast to Ustport, this is a moderate-sized, custom built industrial town and port with many cranes by the shore and factories. It serves for despatch of oil from the wells inland, timber (cut but not replanted) and minerals. It was designed by committees in west Russia without much reference to the local inhabitants and they seem to have overlooked the fact that, when central heating is built in, it melts the permafrost foundations and buildings begin to fall over. The workers' tenements, now largely deserted, were very shoddily built with no outside pointing of the brickwork. However, the land round about was so covered with a cotton grass that it looked like patches of snow. Apparently, Stalin liked it and wanted it preserved but its wind-borne pollen caused much suffering to those prone to asthma. To mollify our feeling about Dudinka we were taken to an excellent folk concert given by the local indigenous population called Taymirs (after the region). The dancers were colourfully dressed in native costume and one scene which mimed a crow or raven that found something edible but then dropped it whilst flying away was especially charming. Afterwards we met the players and they were very friendly and lively.

#### AND NOW THE TUNDRA

Leaving Dudinka southwards for the airport we stopped shortly in the tundra — which for Marie and me was the highlight of the whole journey. The landscape looked very like parts of the Scottish highlands with heather-size bushes and a few groups of low-growing trees. There were plenty of flowers. *Vacciniums*, arctic birch (*Betula nana*) and *Ledum palustre* seemed to be the main shrubs. The ledum is common in Scandinavia and looks like a dwarf rhododendron with heads of small white flowers. It has been used medicinally and is said to have been added to a kind of beer that drove the vikings 'berserk' (a Scandinavian word) before they went into battle. Amongst the scrub grew *Cortusa matthioli* (or perhaps *C. siberica*), *Geranium albiflorum*, *Pedicularis oederi*, (with pale yellow flowers though there are several species recorded and our identification may not be correct), *Rubus arcticus* and *Viola biflora*. There was also a senecio with very hairy leaves and a cardamine like *C. heptaphylla* (*C. macrophylla* according to Scheutz). The most beautiful of all the plants here was *Trollius*

*asiaticus* (Fig.65 p.254) like a form of our *T. europaeus* but with deeper gashed leaves and larger, bright orange-coloured flowers. The Swedish name is Smöbollar which means butter balls and aptly describes it. This idyllic spot was marred by the mosquitoes. One needed to cover one's face, hands and ankles with a repellent and, although this stopped one from being bitten, it was necessary to keep one's mouth shut to prevent breathing them in. The situation was nearly as bad at Ustport and Turuchansk where the dogs were equally bothered but cats seemed to remain free.

## FINAL IMPRESSIONS

Soon we arrived at the airport and flew back to Moscow. Red Square was impressive and we liked St. Basil's Cathedral — designed, it is said there, by Peter the Great's court jester, which explains a lot. Thinking back over the journey we were impressed how like us the Russians were, more so than some of the peoples we had met nearer home around the Mediterranean. One feels that one could fit in quite well at Vorogovno. Many Russians, tired of the underhand dealings in some of the larger cities are moving to the Gulag area of Siberia where they can live unmolested and at peace.

The flora was also often familiar and close to what I have seen in Scandinavia. One is impressed by the enormous range of some species which cover an area of northern Russia as far east as Japan, and also in North America. This is in contrast to the Mediterranean where there are pockets of indigenous species limited to small areas. Schultz says that the flora is analogous to Lapland and Finland with about one third different species.

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Plants north of the Arctic Circle, Tundra Siberia.

See line drawings opposite

5. *Cardamine heptaphylla*

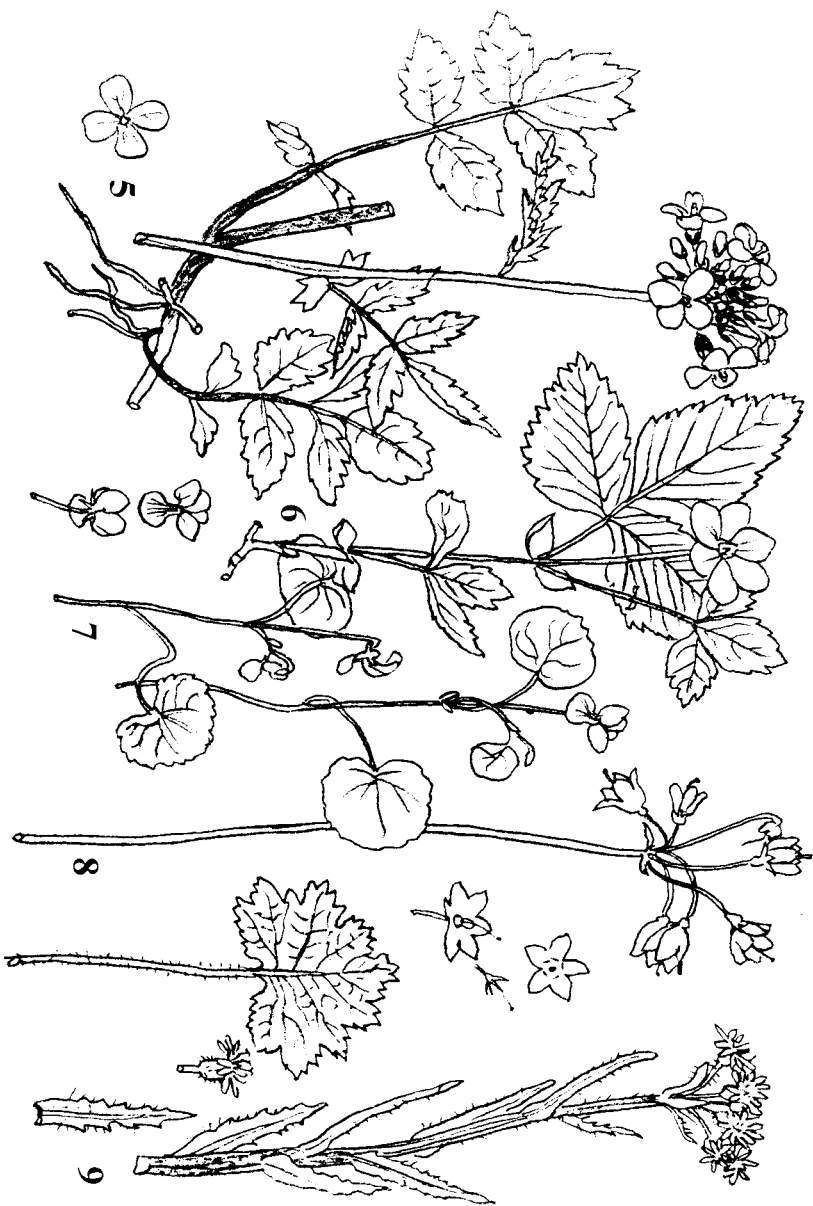
6. *Rubus arcticus*

7. *Viola biflora*

8. *Cortusa matthioli*

9. *Senecio* sp.

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# WHAT'S NEW ?

## 1. Vine Weevil Control

All rock gardeners must be aware of vine weevils and the damage they can do to plants. The adult weevils, about 10 mm long, black and pear-shaped, hide in decaying vegetation during the day and emerge at night to nibble on a variety of herbaceous plant and shrubs, producing notches in the leaf margins of plants such as rhododendrons, primulas, strawberries and cyclamen.

**The adults**, all of which are female, lay hundreds of eggs during the summer. The larvae, which are about 10 mm long and are white with brown heads, emerge in early autumn. They chew away at plant roots, especially in pots and can cause much damage and death.

**Insecticides** have been used in the past but the banning of DDT some years ago caused an upsurge in vine weevils and led to a weevil epidemic in strawberries which was responsible for a lot of damage. The insecticides which are currently permissible for gardeners to use for control, such as pirimiphos-methyl or lindane, are not particularly effective but there is hope for nurserymen in a new approved chemical, Imidaclopid, which can be incorporated in composts and will control grubs for up to a year. Approval for gardeners is currently being sought from MAFF.

**Beetles** such as naturally occurring predatory carabid and staphyloid beetles are being studied at the Horticultural Research Institute, East Malling, to assess their potential for controlling weevils; these beetles are found in long grass.

**Parasitic nematodes** (available as Bio Safe, Miracle Natures Friends for Vine Weevil, Nemasys) have been used for some years to control weevils but they are only effective with warmer soil temperatures than we get in most of Scotland. Indeed, low temperatures are responsible for the ineffectiveness of the new environmentally insecticides being developed for vine weevils.

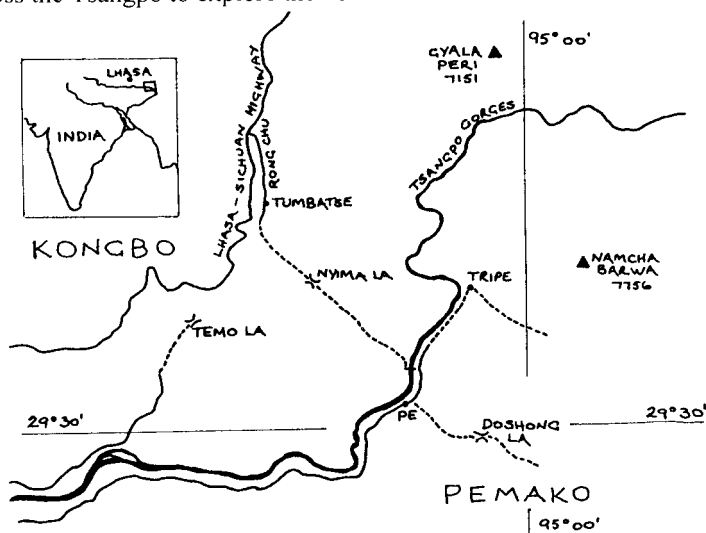
**Genetic engineering** is, not surprisingly, coming to the aid of growers troubled by weevils. Research at the Scottish Crop Research Institute, Dundee is looking at the cowpea trypsin inhibitor gene which gives resistance to some caterpillars and weevils. Glasshouse trials have shown that when this gene is introduced into strawberries it reduces the ability of the weevil to digest its food and so it dies. If these trials are successful there will need, of course, to be a full investigation of any inherent risks to humans or the environment.

Unfortunately this technique is obviously not going to be introduced into the range of alpines we grow; at least not for the foreseeable future.

# RETURN TO THE TSANGPO: THE 1995 EXPEDITION TO SOUTH-EAST TIBET PART 2 NORTH OF THE RIVER

by Anne Chambers, Fred Hunt and  
Richard Lilley

The first article (Volume XXV, pp.182-193, January 1997) described our journey eastwards along the Tsangpo, the exploration of the Doshong La and the area farther down river around Tripe. In this second account we cross the Tsangpo to explore the north side of the river.



As we left the idyllic campsite under Namcha Barwa (Fig.81 p.312) the weather broke and we walked through a rainstorm back along the Tsangpo to keep a 10 a.m. appointment with the ferryman. We were to cross the river then go over the Nyima La on foot while the support vehicles made the long journey round by road to rendezvous with us in the Rong Chu valley. Early travellers described crossing the Tsangpo in coracles, tiny wooden-framed craft covered in yak-hides, which bobbed and tossed in the currents before making landfall, often inconveniently, several miles downstream. Our crossing was more direct and mundane on a raft-like structure powered by a diesel engine. Several trips were needed to get all our gear, camp staff and guides across, then we were delayed further when we tried to hire pack ponies in the

village of Timpe at the foot of the Nyima La track. The Lhasa-Sichuan highway circumvented this trade route some years ago and the villagers were understandably reluctant to subject their animals to the hazards of the disused trail. Eventually they were persuaded and we progressed a few kilometres to an unremarkable camp site at 3170 m.

### WET VIRGIN FOREST

Next morning, we continued ascending through the wet virgin forest. It seemed much as Ludlow and Taylor described it in 1938; huge specimens of *Larix* and *Picea* towered over 30 m; underneath them occasional plants of rhododendrons such as *R. oreotrephes* and *R. principis*. We saw the pink woodland *Primula latisecta* growing on the mossy forest floor and the curious *P. advena* v. *euprepes* by the track. The maroon flowers have lobes completely reflexed along the tubes. There were a few poor specimens of *Meconopsis betonicifolia* but that plant would surprise us later. In places the track was badly eroded and at one point two of the heavily-laden ponies fell a few metres to the stream bed when they lost their footing in the wet greasy peat. Fortunately they were unharmed.

We were still in the forest when we camped for a second night but this site, at just below 4000 m, was as memorable as the previous one was not. *Meconopsis simplicifolia* grew near it; the blue four-petalled flowers were held on long stems giving the plant a stately appearance. Around the camp among fallen logs were magnificent specimens of *Meconopsis pseudointegrifolia* (Fig.80 p.311) with huge bowl-shaped blooms of luminous yellow on 1.5 m stems. To complete the visual feast, the skies cleared briefly and gave us a view south to the spire of Namcha Barwa and the Doshong La.

### DWARF RHODODENDRON ZONE

Next morning we were soon above the tree line on the long slow pull up to the summit of the pass; at 4600 m the Nyima La is considerably higher than the Doshong La but, unlike the latter, is clear of snow for most of the year since it receives much less precipitation. Beyond the forest is the dwarf rhododendron zone with its many associated plants. The dominant rhododendron species were the pink *primuliflorum*, the deep rose-coloured *phaeochrysum* and another that sent the rhodo enthusiasts into what

can only be described as paroxysms of excitement — they had found the true *R. laudandum* v. *temoense*. It had tiny dark leaves which contrasted well with the clusters of white flowers; the diagnostic feature was the near-black scales on the leaf reverse. The plant in cultivation under that name seems to be a hybrid. Free-standing among the rhododendron and *Potentilla fruticosa* scrub were stems of *Fritillaria cirrhosa*, some single-, some double-headed; the flower colour and checkering on each plant was entirely individualistic though all grew within an area of only a few square metres. This sturdy Nyima La form did not have the supporting tendrils from which the plant's name is derived. We were delighted to find some *Cypripedium tibeticum* (Fig.84 p.313) on a bank by the track; this form was bright wine-red and grew as single specimens in an open situation, in all aspects unlike the one in the woods above Pe. With it were clumps of the cassiopes that had so confused us on the Doshong La — *wardii*, certainly, with its thick hairy stems, *fastigiata*, and probably hybrids of the two; here, too, a lilac-blue primula in the Muscarioides section, *P. bellidifolia*, with many small tubular flowers forming a conical head, and a very dwarf intensely blue *Corydalis*. Farther up the track near herdsman's summer shielings, where soil fertility was probably high, the ground was covered with thousands of purple *Primula calderiana*, a species we had seen only sporadically lower down.

## GIANT RHUBARB

We were enticed from the track on to the hillsides above; in the dangerous chaos of jumbled rocks there was much of interest. Where turf stabilised the surface, it was studded with *Lilium nanum* (Fig.83 p.313), not the small dull form commonly in cultivation but plants with large purple-pink bells and orange anthers. *Meconopsis pseudointegrifolia*, *horridula* and *speciosa* grew in the crevices; on some *speciosa* plants the flowers were four-petalled, on others multi-petalled but all had impressive spines that graded from black at the base to red then white. But the most spectacular and incongruous plant on these hillsides was *Rheum nobile*. We had marvelled at those pale spires of giant rhubarb which were visible from great distances. When we reached them, some stood over 2 m tall. The huge overlapping bracts were cream at the apex of the plant, shading to green at its base; they totally enclosed the spikes of small flowers in what must have been a congenial microclimate

in that exposed situation. A few had been cut down and eaten — the Tibetans apparently relish the thick central stem.

## THE TOP AND DOWN INTO THE RONG CHU

Near the top of the pass was a wet flush with a substantial colony of a primula in the very variable *macrophylla* group, identified later by John Richards as *P. macrophylla* v. *ninguida*. Each clump was slightly different in colour but all in magenta-purple tones; the leaves were so mealy they had a ghostly appearance as the mists swirled around them. A much smaller member of the same subsection, *P. chionantha* ssp. *brevicula*, grew on the summit rocks. This very attractive primula was only 10 cm in height, the flowers clear pink with a white eye and the leaf midrib was suffused with pink.

The view from the top of the pass was clear. Across the wide valley of the Rong Chu we could see the scar of the highway as it climbed away in a north-westerly direction into ever more open countryside. The descent was through dwarf rhododendron and cassiope scrub with bright pink patches of an androsace, later identified as *A. adenocephala*. Then we were into the forest again and here, for the first time, we found the Ludlow and Sherriff form of *Rhododendron wardii* which has crimson blotches at the base of the corollas. Some logging had taken place and the low-growing brown and white striped spathes of *Arisaema elephas* (aff. v. *handelii*) went almost unnoticed in the tangle of withered branches by the track. Our camp that night was by a thicket of *Berberis temolaica*, an unusual species with comparatively large yellow flowers and strikingly blue leaves on mahogany stems. This plant takes its specific name from the Temo La, the next pass we were to explore, though we failed to find it there.

First, we spent a couple of wet days in the Rong Chu. The vegetation indicated that the valley was never short of water. The wetter areas of the lush meadows were bright with swathes of pink *Primula tibetica*. All the larger moisture-loving primulas, *chungensis*, *alpicola*, *sikkimensis* and *florindae*, and an iris species grew in abundance. Most impressive was Bailey's 'Blue Poppy', *Meconopsis betonicifolia*, with heads up to 10 cm across and of characteristic turquoise blue, obviously enjoying the light shade of the trees along the river banks. It was here in the Rong Chu in 1913 on his exploration of the area that Bailey first found the plant;



Kingdon Ward, who had read his account, collected seed in 1924 and introduced it into cultivation.

The track to the Temo La was nearby but in the face of continuing rain we abandoned our plan to explore it from this side and joined the highway to drive to the provincial town of Bayi for a night under concrete rather than canvas. This diversion was not without its compensation since we had to cross the 4500 m Serkyem La, another area of dwarf rhododendron moorland. The flora was similar to that of other high areas with *RR. nivale* and *laudandum* v. *temoense* prominent among clumps of cassiope, giving shelter to the little yellow pendent bells of *Lloydia flavonutans* and the best specimens of *Primula atrodentata* we had yet found.

## TOWARDS THE TEMO LA

Next day we drove back along the Tsangpo towards the south-western approach to the Temo La, not without incident. First we passed streams of Bön pilgrims in holiday finery, as they traversed their religious shrines in a counter-clockwise direction, opposite to that of Buddhists; the Bön religion is derived from the original animistic beliefs of Tibet before the advent of Buddha. Then at a point very near the river we met a coracle walking along the road. The skin boat effectively hid its bearer, his companion following with an oar in each hand. Both men looked totally bemused by the interest they had engendered but said "Thank you, sir" to AC in response to her thanks for this unexpected photo opportunity; "Sir" is an honorific title applied to either sex in China. By the time we reached the foot of the Temo La the weather had deteriorated again and we were forced to camp in the courtyard of a farm whose barn gave us some respite from the leaky mess-tents. By mid-June the monsoon is fast approaching the area and rain becomes heavier and more frequent.

## THE WET LOWER VALLEY

It had not abated by morning but a group set off to attempt the pass. The tree peony, *Paeonia lutea*, grew near the farm but only a few yellow flowers remained then in mid-June. The very wet lower valley was home to all the same moisture-loving primulas that we had seen in the Rong Chu but with a single white-flowered plant of *P. tibetica* in the sheets of pink (Fig.82 p.312). Higher up we found rarer species. On steep banks beside the track were rosettes of

*Primula cawdoriana* (Fig.85 p.314), named by Kingdon Ward after the young Lord Cawdor, who accompanied him. The central stems of *P. cawdoriana* bore clusters of fringed lilac flowers; in this form the tubular corolla was much longer than broad, narrowing and shading to white at its base. But the gem of the Temo La grew under shadier overhangs — the beautiful *P. baileyana*. KW described it as... “a rock plant with a thick coating of snow-white meal so generously applied that it creates a small dust storm when you pluck it.” The heavy rain had washed some meal from the upper leaf surfaces but much remained; the flowers, atop wiry white stems, were a cool lilac-blue. A little farther, orchids in profusion; we had seen *Cypripedium tibeticum* several times before but never in the quantity that we found here. The banks were covered with the glowing wine-red flowers, some larger than others with broader deeply-veined leathery pouches. Dr Phillip Cribb (Orchid Curator, Kew) identified these as *v. corrugatum* which he believes forms a continuum within the species. Growing in the masses of *tibeticum* was a small colony of a second *Cypripedium* species, *himalaicum*. This is a more delicate plant, smaller in its parts, with a smooth egg-shaped pouch which projects forward and is a mottled greenish-yellow with red veining; the column is bright yellow, not red as in *tibeticum*.

#### TREASURES ON THE SUMMIT

The keenest of the party continued in poor weather towards the summit through a forest of *R. wardii* coming into colour and were rewarded on the top by the best display of *R. fragariflorum* yet seen among carpets of *Cassiope selaginoides* with *Lloydia flavonutans* dotted here and there. In 1924 Kingdon Ward had recorded three meconopsis on the Temo La — the blue *simplicifolia*, yellow *pseudointegrifolia* and a rare ‘Ivory Poppy’ (*M. x harleyana*), the latter confirmed by George Taylor as a hybrid of the two species. After some searching, a single cream-coloured flower of the hybrid was spotted growing not far from its parents.

#### SERENDIPITY INDEED

The following morning in brilliant sunshine we bumped down the track to the highway for the long drive back to Lhasa. The view of Namcha Barwa reflected in the tranquil Tsangpo was stunning, a sight never to be forgotten. The farther north and west we drove, the drier the countryside became with only the occasional black



Fig. 81 *Meconopsis pseudointegrifolia* (p.306) Fred Hunt



Fig. 82 Namche Barwa from Tsangpo (p.305) Fred Hunt

Fig. 83 *Primula tibetica* and *P. tibetica alba* (p.309) Fred Hunt





Fig. 84 *Lilium nanum* (p.307) Fred Hunt

Fig. 85 *Cypripedium tibeticum* (p.307) Fred Hunt





Fig. 86 *Primula cawdoriana* (p.310) Fred Hunt

tents of herders' encampment. *Stellera chamaejasme* was blooming on the steppe, not the yellow-flowered form but one with bright red buds that opened to pure white flowers. As the convoy climbed slowly towards the highest pass (5030 m) on the road, our vehicle developed a problem too obvious to ignore and pulled up with a very flat tyre. We climbed down and sat a few metres away, watching the others disappear in trails of dust. But the enforced stop was serendipity indeed — we had two close encounters of an exciting kind. The first was so close that we had yet to focus on it. We were sitting amongst small clumps of an unfamiliar *Androsace* which later George Smith was very pleased to identify as *graminifolia*, not in cultivation. The terminal clusters of pink flowers were typical of the genus but the leaves were stiffly narrow and grass-like, hence its specific name. The short hairs on the grey-green leaves gave the plant a dusty appearance that accurately matched the scant herbage around it.

As we set about photographing this find, a figure separated from the yaks that were grazing in the distance and started towards us — it was a Khampa, a name that once struck terror in the hearts of travellers. Anyone crossing this province of Kham considered himself fortunate to escape the territory of these nomadic herdsmen without being attacked then robbed and left for dead. His slow approach suggested curiosity rather than menace and we tried not to stare at the silver-mounted dagger in his belt. Then he smiled and we were back in the present day. Khampas are handsome people; their long hair is entwined with skeins of red or black silk before being wound round their heads and fastened with silver and turquoise ornaments. We were to see more of them later in the markets of Lhasa but this 'on site' encounter in that vast landscape was the most memorable.

## AND SO TO LHASA

One last plant to see before we dropped down to the plateau surrounding Lhasa — it was *Meconopsis integrifolia*, a high-altitude species quite unlike the *Meconopsis pseudointegrifolia* with which it was once grouped. Dwarf, often below 30 cm, the whole plant was covered in long silky, cream hairs shading to a tawny gold on the outside leaves and black on the calyces. The globe-shaped flowers, three or four to each plant, were an intense acid yellow with a boss of golden stamens. A very beautiful poppy and a fitting finale to the meconopsis list.

The slopes of Ganden monastery and of the Potala in Lhasa were covered in *Arisaema flavum* but, apart from the piles of dwarf rhododendron leaves on sale as incense in Barkor Square, there was nothing else to distract us from soaking up the culture of the Forbidden City.

### Acknowledgments

Our grateful thanks for help in identification are due to:

Kenneth Cox (leader) - Rhododendron	Phillip Cribb - Orchids
Henry Noltie - Monocotyledons	John Richards - Primula
George Smith - Androsace	

### SELECTED PLANT LIST

Androsace adenocephala	Cypripedium tibeticum
A. ciliifolia	Dactylorhiza hatagirea
A. graminifolia	Diapensia himalaica.
A. strigillosa	Diplarche multiflora
Anemone obtusiloba	Fritillaria cirrhosa
A. rivularis	Gaultheria trichophylla
Arisaema elephas (aff. v. handelii)	Incarvillea younghusbandii
A. flavum	Iris chrysographes aff.
A. fraternum	I. decora
A. nepenthoides	I. gonicarpa aff.
A. propinquum	Lilium nanum
A. sp. (aff. elephas)	Lloydia flavonutans
Berberis temolaica	Mandragora caulescens
Bergenia purpurascens	Meconopsis betonicifolia
Cassiope fastigiata	M. horridula
C. selaginoides	M. integrifolia
C. wardii	M. pseudointegrifolia
Cephalanthera sp.	M. simplicifolia
Chionocharis hookeri	M. speciosa
Clematis barbellata	M. x harleyana
C. montana	Megacodon stylophorus
C. tibetana	Orchis roborowskii
Clintonia udensis	Paeonia lutea
Corydalis pachycentrum aff.	Paris polyphylla
Cotoneaster microphyllus	Pleione scopulorum
Cypripedium flavum	Podophyllum aurantiocaule
C. himalaicum	P. hexandrum



Potentilla anserina	Rhododendron charitopes v. tsangpoense
P. fruticosa	R. cinnabarinum ssp. xanthocodon Concatenans grp.
P. microphylla	R. forrestii v. repens
Primula advena ssp. euprepes	R. fragariflorum
P. alpicola	R. kongboense
P. atrodentata	R. lanigerum
P. baileyana	R. laudandum v. temoense
P. bellidifolia	R. lepidotum
P. calderiana	R. leucaspis
P. cawdoriana	R. megeratum
P. chionantha ssp. brevicula	R. mekongense
P. chungensis	R. nivale
P. dickieana	R. oreotrepes
P. falcifolia	R. parmulatum
P. florindae	R. phaeochrysum
P. jaffreyana	R. primuliflorum
P. jonardunii	R. principis
P. latisecta	R. pumilum
P. macrophylla v. ninguida	R. sinogrande
P. rubicunda	R. triflorum v. mahogani
P. sikkimensis	R. uniflorum v. imperator
P. tanneri ssp. tsariensis	R. wardii
P. tibetica	Rosa sericea
P. vernicosa	R. wardii
Rheum nobile	Sophora moorcroftiana
Rhodiola himalensis	Stellera chamaejasme
Rhododendron calostrotum	Streptopus simplex
R. campylogynum	Vaccinium glauco-album
R. cephalanthum Nmaiense grp.	
R. chamae-thomsonii	

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- Ward, F. Kingdon, 1926. The Riddle of the Tsangpo Gorges. Edward Arnold & Co., London
- (The books listed above are out of print but well worth reading)
- Chan, Victor, 1994. Tibet Handbook. Moon Publications, Chico, California, USA. (A comprehensive guidebook.)

# OXALIS LACINIATA AND ITS HYBRIDS

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by Harold McBride

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*Oxalis laciniata* is one of the most sought after and highly rated members of the genus. The exciting and variable colours of its flowers may range from lilac-blue, crimson or sometimes pink. The pink forms may have a dark centre (Fig.67 p.272); all colour forms show considerable veining on the petals. A white form has been found in its native Patagonia but does not seem to be in cultivation.

Seedlings may show a great variation in both flower colour and leaf form. The leaflets are narrowly oblanceolate but folded lengthwise, are strongly waved, glaucous and sometimes have purple margins.

## CULTIVATION AND PROPAGATION

*O. laciniata* is often treated as an alpine house plant but it is quite at home in a trough or raised bed where its scaly rhizomes can spread at will. A well drained leafy soil seems to be all the plant demands. It benefits from adequate moisture during the growing season.

This oxalis usually sets copious seed. However, the difficulty of collecting the seed when it is ripe and before it 'explodes' is reflected by its rare appearance in seed exchange lists. The round seed capsules may be collected while still green and kept in a container with a lid which keeps the exploding seed within bounds. Seed should be sown fresh.

In my troughs and raised beds self sown seedlings often appear some distance from the parent plant. They seem very happy to share space with a cushion or mat plant.

*O. laciniata* may be propagated by division of the scaly pink 'shrimp-like' rhizomes which can be pot grown until established.

Captain Peter Erskine who has had considerable experience of *O. laciniata* in its natural habitat and in cultivation has expressed the view that it is probably seen at its best in the cooler areas of Great Britain.

## SELECTED FORMS AND HYBRIDS

The late E. B. Anderson raised a series of hybrids from *O. laciniata* x *O. emneaphylla*. This cross resulted in two excellent plants which have been named *O.* x 'Ione Hecker' (Fig.69 p.273) and *O.* x 'Beatrice Anderson', both of which are now widespread in gardens.

*O. x 'Ione Hecker'* has set viable seed when back-crossed with *O. laciniata* leading to a series of interesting and colourful plants. Recently *O. laciniata* has been crossed with *O. enneaphylla alba* ('Sheffield Swan') but the resulting seedlings have not yet flowered.

I have repeated E. B. Anderson's cross using a selected dark form of *O. laciniata* and *O. enneaphylla 'Rosea'*; this has resulted in a series of colourful hybrids. I have selected one particular plant which has rich deep pink flowers with very distinctive veining. This plant has been given the cultivar name of *O. x 'Gwen McBride'* (Fig.68 p.272). I am propagating this plant by division and it will be eventually become available from a Scottish Nursery.

## PESTS AND DISEASES

*O. laciniata* is subject to attacks from aphids particularly when grown under glass. Care should be taken when spraying with a pesticide as leaves and especially flower buds can be damaged or distorted. In the south of England several growers have reported that in drought conditions the plant has been attacked by a rust-type fungus.

## HARDINESS

*O. laciniata* and its hybrids were wintered out of doors in troughs and raised beds during the early 1996 severe weather. In January, temperatures of -15°C were recorded on several nights. All the plants came through the winter unscathed.

*O. laciniata* flowers in May and early June providing a good show over several weeks. The hybrids 'Ione Hecker' and 'Beatrice Anderson' often re-start growth in August and may have a second flowering in September and sometimes into October.

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## Corydalis Trial

The Royal Horticultural Society will be conducting a trial of *Corydalis* section *Corydalis* and *Corydalis* section *Radix-cava*. The trial will take place at Wisley Garden in Surrey and to date over 100 accessions have been promised.

To make this trial as comprehensive as possible, anyone wishing to submit material should contact The Trials Office, The RHS' Garden, Wisley, Woking, Surrey, GU23 6QB. Telephone: 01483-212331, Fax: 01483-211750. Plants will be required by mid-September 1997 and judging will take place during 1998/99

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## BOOK REVIEWS

### **A Botanical Tour round the Mediterranean**

by Christopher North

Published by New Millenium 1997

502 pages, 18 colour plates and 500 line drawings

Price £17.50 ISBN 1 85845 075 6

In the early 1980s, Christopher North wrote several articles for 'The Rock Garden' on Mediterranean plants and he has now incorporated material from these articles into a book which deals with a huge area from Portugal to Turkey and round to Israel and Tunisia and including the Mediterranean islands.

There are currently several Mediterranean floras in print but in this book, Dr North has produced what he describes as "a travellers' guide to the flora of specific parts of the Mediterranean". It indicates which species may be found in selected areas but does not give exact information for identification. In some ways it is similar to Lionel Bacon's 'Mountain Flower Holidays' but gives much more detail and can be recommended for gardeners travelling to the Mediterranean. The 500 line drawings are a useful guide to the naming of plants seen but are of limited use for exact identification, so that a Flora would be a necessary adjunct.

The Index only relates to the plants in the line drawings; there is no Index to the many other plants mentioned. The Bibliography has a large number of mistakes, mainly references in the text which are omitted in the Bibliography.

PC

### **Wild Plants of Mount Cook National Park**

by Hugh Wilson

Published by Manuka Press PO Box 12179, Christchurch, NZ. 1996

35 colour plates and 545 drawings. Price \$NZ 35

Having recently visited the Mount Cook National Park and enjoyed its dramatic scenery with its rich assembly of flowering plants in alpine grasslands and valleys, I am sure I would have found this Field Guide very useful. It is a second edition of a book first published in 1978; it incorporates additional information and the results of taxonomic research over the last 18 years. The author, who is one of new Zealand's foremost naturalists states that "The Wild Plants of Mount Cook is first and foremost a Field Guide" and it is certainly ruggedly bound and suitable for use in the mountains". It will also prove useful anywhere along the central mountain chain but less useful in the distinctly different western side of the alps.

The Field Guide illustrations cover species of grasses, trees, shrubs, flowering herbs and ferns and aslo a small selection of mosses, lichens, fungi and algae. Within these groups, plants with similar appearance are featured together; this may not correspond with botanically significant similarities so that the Index must be constantly be brought into play.

The book includes many plants which are not alpine; indeed one fifth of the featured plants arrived in New Zealand with human help mostly

from the British Isles. The drawings and the general key will be of great assistance in helping the visitor to identify the rich assembly of plants both native and intruders which are to be found in the National Park and, indeed, beyond its boundaries.

H C A McB

### **The Genus Clematis**

by Magnus Johnson

Published by Magnus Johnson AB 1997

896 pages, 170 colour plates and 100 drawings

This book is written in Swedish with the basic terminology of around 200 words translated into English, French and German so it is of limited interest to the average SRGC member. But because it is obviously a major work on the genus *Clematis* it is likely to be a useful reference book for serious scholars.

For further information about this book and its price, contact:

Magnus Johnsons Plantskola AB

von Posts väg 1

S-151 39 SÖDERTÄLJE, Sweden

### **Margaret Mee – Return to the Amazon**

by Ruth Stiff

Published by The Stationery Office 1997

190 pages illustrated in colour throughout

ISBN 011 2501133 Price 20

This book celebrates the life and work of a remarkable botanical artist, Margaret Mee, who lived in Brazil for 36 years and made 15 journeys into the Amazonian rain forests, painting detailed 'field notes' which were the basis for her exquisite and accurate plant portraits. Seventy six are reproduced in superb colour. Bromeliads and orchids predominate but many rare species of other genera are illustrated including a tree as yet unnamed.

Her work brought the richness of the Brazilian forest floor, and the urgency of conservation, to the notice of botanists worldwide. Having survived the dangers of tropical rain forests and still active at 79, she died tragically in a car accident in England.

HS

### **Rock Garden Plants of North America**

An Anthology from the Bulletin of the North American Rock Garden Society

Published 1996 by The North American Rock Garden Society

459 pages 105 colour plates ISBN 0 88192 3435

Price \$49.95

Few of our members receive the Bulletin of the North American Rock Garden Society which is full of interesting and instructive articles, many of which are of direct interest to rock gardeners in the UK and elsewhere. The NARGS is, therefore, to be congratulated on producing this anthology of the best of the Bulletin over the last 50 years. It is both an excellent read

and also a reference book. Many of the articles have been updated before inclusion.

Readers of The Stone Column over the last 15 years will have learned a lot about North American plants but it is great to have this collection of original articles in one volume covering ever so many groups of plants that we grow here in the UK. The authors of the 70 chapters are quite eminent in their own fields so that here we have authoritative accounts which are also good reading.

The book is splendidly produced and the colour plates are quite outstanding. This is a book to buy for your reference shelves; it would also make a wonderful gift for a keen rock gardener. Highly recommended.

PS

## Rock Gardening

by H. Lincoln Foster

Published by Timber Press, Portland, Oregon 1968 (reprinted 1982)

457 pages No colour plates

\$24.95 ISBN 0917 304 292

The foreword extols the fact that, at long last, Lincoln Foster's book has been reprinted. To many American rock gardeners this book has been a bible so that copies have been wearing out while newcomers have been unable to obtain a copy. Timber Press have now re-issued the reprint.

The book will be quite useful to gardeners in the UK who are beginners; many of the techniques described and the plants listed are applicable to them but more advanced gardeners are likely to find the book disappointing. There are many books which deal better with specialist subjects. For example, the chapter on primulas is somewhat disjointed. *Primula denticulata* is listed under "Primulas of Unique Form" whatever that may mean.

It is a cheaper book than the one reviewed above but the quality of the production is disappointing and there are no colour plates. In my view it is not a patch on the anthology reviewed above. If you can afford the dearer book, go for it.

PS

### The Sedum Society

Many members may not be aware of the Sedum Society which is now 10 years old. The principal aim of the Society is to preserve as many species and hybrids of the genus *Sedum* and related genera as possible. Ron Evans, their founder and mentor who wrote the *Handbook of Cultivated Sedums*, used to say that the best way of preserving them was to spread cuttings of plants to as many people as possible and begging a piece back if you later lost one. The Society actively encourages this through the *Cuttings Exchange* and *Seed Distribution Scheme* and publishes a regular Newsletter.

The subscription rate for the UK is £7.50.

Further details can be obtained from : Ray Stephenson, 55 Beverley Drive, CHOPPINGTON, Northumberland, NE62 5YA

## OBITUARY

### Dr Donald M. Stead and Mrs Joan A. Stead

When Don Stead died suddenly on 7 March 1997 and his wife Joan passed away just one month later on 7 April, the Club lost two long-standing members. They were, of course, much more than that, each making notable contributions to the Club over the years.

**Joan** was elected as a member of Council in 1971 and went on to serve in this and other capacities over the next 15 years. She was Lanarkshire Convener during this period, acting as Chairman of the Group Conveners' Committee for a time, then helped the West of Scotland groups as Show Secretary before relinquishing that post to become President in 1979. As President she instituted the Golden Jubilee Salver Award to recognise the efforts of others on the Club's behalf. She was a very capable Show Judge for many years.

**Don** also served for two periods on Council and was never afraid to speak his mind when he felt the discussion required it; his considerable intellect and down-to-earth Yorkshire manner often ensured lively debate. For 10 years he was the Club's Publications Manager and instituted the selling of books as a service to members, which was not only appreciated but helped Club funds in no small way. For this he was awarded the Golden Jubilee Salver in 1985. He also helped the West of Scotland groups as their Treasurer, was Lanarkshire Convener for a time and was Overseas Liaison Secretary from 1986-90. In 1992 these exceptional services to the Club were recognised by his election as an Honorary Vice-President which delighted this modest man very much.

**Joan** and **Don** at their home in Thorntonhall, designed and made a wonderful garden, or rather, gardens, because each had separate areas of ground to pursue their particular enthusiasms, a reflection perhaps of their very individualistic personalities. At their Ardnamurchan cottage, another garden gave them experience of completely different conditions. As well as entertaining lecturers and overseas members, they welcomed many visitors to their home. In the true spirit of the Club, they encouraged, shared and befriended. Joan and Don were skilled growers and had great enthusiasm for showing, always as individuals; at most shows Don conceded defeat ruefully when he found that Joan had gained more awards. Both made many contributions to the Journal and gave talks jointly on their travels.

Although beset by serious health problems in their latter years, they never lost their passion for growing plants and made valiant efforts to attend meetings. Don was looking forward to sowing the seed he had requested from Gothenburg.

Our sympathies go to the family in their sad loss

Lyn Bezzant    Anne Chambers

# 1ST ISSUE

*We began this issue by commenting on our 100th issue and how the Journal had changed over the years. What better way to close the 100th issue than by referring to the 1st issue in 1937?*

It is obvious from the Journal that rock gardening, as we know it, was in its infancy in 1937 and the topics covered would seem old hat to most of us nowadays. In addition, the style was somewhat ponderous but that was the fashion of the time.

To give you a flavour of what the 1st Journal contained here are excerpts from an article entitled '**Heaths and Heathers**' by the late R. E. Cooper of the RBG, Edinburgh.

"Heaths and heathers — what pictures these words create, they are a heritage of memories and tradition for one nation, although they grow in other lands as well.

. . . . . Why is heather so-called? What distinguishes it from 'heath'? Heath, heather and ling are three terms in common use, but it is difficult to say which plant may be referred to in any particular case. The sense of a 'blasted heath' whereon witches exercise the ritual of their particular craft is absolutely different from the affectionately considered 'land of brown heath'.

. . . *Heather* is of uncertain origin: commonly viewed as related to *heath*; but the form *heather* appears first in the 18th century, and the earlier *hadder* seems on several grounds to discountenance such a derivation. The word appears to have been originally confined to Scotland (with the contiguous part of the English border); the northern English equivalent as in Yorkshire &c., being *ling* from Norse.

. . . Some recent botanical writers have essayed to limit the original names, *heath*, *ling*, *heather*, to different species; but each of these names is, in its own locality, applied to all the species there found. And pre-eminently to that locally most abundant. On the Yorkshire and Scottish moors the most abundant is *E. vulgaris*, which is therefore the 'Common Ling' of the one, the 'Common Heather' of the other, but in other localities, especially in the south-west, *E. cinerea* is the prevalent species, and is therefore the 'Common Heath'. Scottish distinctions are *dog-heather*, *he-heather* (*E. vulgaris*), *Carlin-heather*, *she-heather* (*E. cinerea*).

. . . In conclusion, all attendants at the shrine of that much appreciated soul-alleviator, *Nicotiana*, will appreciate the position of the plants which are used to hold the burnt offering in France known as 'bruyère arborescent' (*E. arborea*) and 'bruyère a balai' (*E. scoparia*)."

*Not quite the style we are used to and not perhaps as understandable as we might wish but typical of what the early Journals were like.*



THE ANNUAL GENERAL MEETING  
will be held at the Battleby Conference Centre,  
Redgorton, Perth  
on Saturday 1 November 1997 at 2 pm.

### **SRGC ON THE WEB**

The Club now has a world wide web site. The site has two main functions. First it will give us a platform to show to the world who we are and what we do. For any potential new member, there is information on the cost of membership and how to join. The second function is to provide a means of communicating club information. When you look at the site you see two main sections one about local groups, the other about shows. The group section has an individual page for each group, with information such as the name of the convener, where and when they meet, and also the winter lecture programme.

The show section has information about each show – the name of the show secretary, the location of the show and the time of opening etc. There is up to the minute information about changes to venues and you can also look up the show results shortly after the event.

I have taken a computer with the web site along to some recent Club events, so that as many people as possible can see what all this looks like.

The site is a club site, so if you think that information could be displayed in an alternative way or additional ideas could be added, then it's up to you to pass this information on to me. In particular I would like to be able to put on all the winter lecture programmes. This year I used the winter syllabus that group conveners sent to Henry Taylor. If you would like your programme on the web then please make sure that we have a syllabus.

**The address of the web site is**

**<http://www.dundee.ac.uk/~fbcaudwe/srgcwebsite.htm>**

Barry Caudwell

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