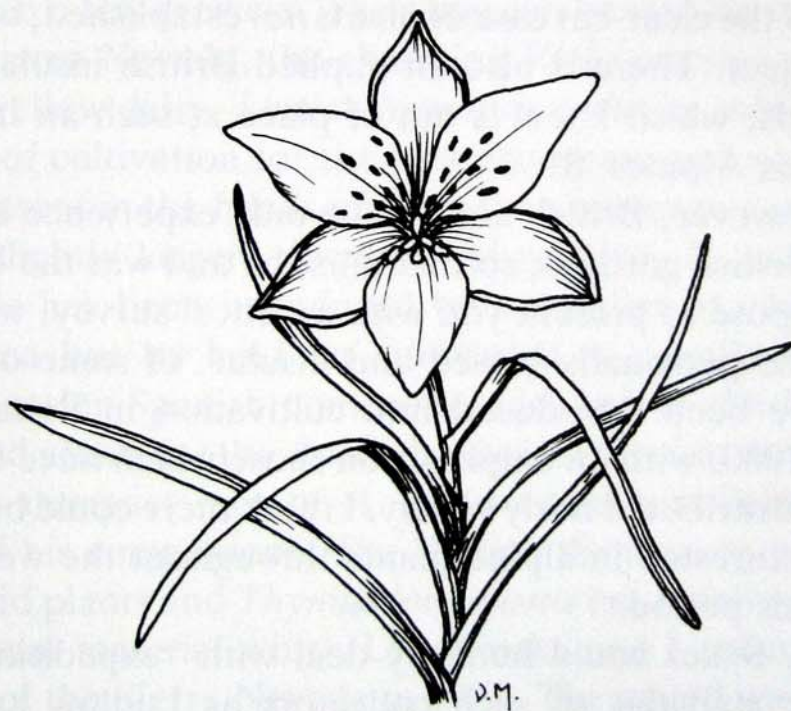


*The Introduction  
and Maintenance of New Plants*

JIM ARCHIBALD



*Alstroemeria pygmaea*



ranges of Europe provide the most accessible hunting-ground for new material. A considerable number of species has been established over the past twenty years but there still remain many plants deserving of cultivation but barely known to gardeners, particularly in the mountains of Spain, north-west Africa and the Balkans. What is disconcerting is that we seem no closer to evolving techniques to cultivate successfully many European alpinists, in spite of repeated introductions of fresh material from the wild. One of the more successful of recent introductions is *Ranunculus abnormis*, a yellow-flowered, tuberous-rooted species brought back from central Spain by Joyce and Lionel Bacon. *R. acetosellifolius*, the distinguished, white-flowered Sierra Nevada endemic, has, however, consistently proved less amenable and, although several collections have been made, has seldom been maintained for long by more than a few growers. The same can be said for its associates from the Sierra Nevada, the charming *Viola crassiuscula* and the prostrate, yellow daisy, *Leucanthemopsis radicans*, which has been in and out of cultivation for the past fifty years and which I doubt exists at present in the hands of more than one or two gardeners, if at all. Its slightly larger, silver-leaved relative, *L. pallida* subsp. *spathulifolia* has been introduced by a number of visitors to the Cazorla area but its hold on cultivation is equally tenuous. A somewhat easier Spanish composite and one of the best dwarf, silver-leaved plants for the alpine-house is *Artemisia assoana*, possibly a very compact race of *A. pedemontana*, collected by Ivor Barton and his companions. The Iberian thymes can provide several splendid plants and *Thymus longiflorus* has received an Award of Merit from material which Lyn Weeks and I collected on the south side of the Sierra Nevada in 1970. The award was given to a plant shown as *T. cephalotos*, another member of the Pseudothymbra Section with similar tubular, purplish flowers among showy coloured bracts. This latter species from southern Portugal is also established in cultivation, though it is not generally grown by amateur gardeners. Also in 1970, Lyn and I collected material of the genus *Sarcocapnos*, of which *S. crassifolia* has proved an extremely fine and long-lived plant, though much less willing to provide seeds than *S. baetica* or the better-known *S. enneaphylla*. It has nevertheless been possible to maintain all these



over the past ten years without difficulty in the alpine-house. This genus is much more in evidence in north-west Africa where it becomes quite variable with a large number of local races, none of which is known in gardens. Surprisingly, there has been very little collecting in the Atlas ranges since I visited them in 1962 and no new alpine or saxatile species appears to have been established, apart from *Catananche caespitosa*, an excellent, little silvery-leaved, yellow-flowered composite grown from a Peter Davis collection but proving difficult to propagate. Three high-altitude plants from above 3000 m in the High Atlas are now well established from seed I collected in 1962: the fascinating little cultivar of *Linaria tristis*, clonally propagated as 'Toubkal'; the stemless lavender-blue thistle, *Carduncellus pinnatus* var. *acaulis* and the white *Saxifraga pedemontana* subsp. *demnatensis*, an easy plant to keep alive but a challenge to grow to perfection. Most visitors are drawn to these ranges before the high-altitude plants are in flower far less seed but early collections such as Sheila Maule's reintroduction of *Narcissus watieri* have provided valuable and vigorous new material. My own 1966 collections of *N. bulbocodium* subsp. *albidus* from both Morocco and Algeria are also now well established and distributed but it is to Chris Stocken that the accolade must go for his collections of the genus *Narcissus* in Spain. *Narcissus cuatrecasasii* (originally grown as *N. rupicola* Grazalema form or *N. rupicola* subsp. *pedunculatus*) and the dwarf *N. papyraceus* subsp. *panizzianus* are two of his introductions.

As far as eastern Europe is concerned, there has been a significant and I hope expanding exchange of material with amateur gardeners in Czechoslovakia. This is, of course, based on personal correspondence and must be considered apart from the official seed-exchange system operated between botanic gardens. The most worthwhile species which has been widely established is certainly *Soldanella carpatica* and its white form, though sadly the latter now seems much less vigorous than when we first had it. This is an outstanding and floriferous species and I hope that we can look forward to seeing many more fine plants well established in the near future. There is still much we could look forward to from Bulgaria in particular. Collections from Yugoslavia and Greece, however, have mainly been made by British and German travellers. Too little attention is paid to these accessible areas as sources of new



material. The past fifteen years have seen not only the successful establishment but the substantial increase of *Crocus scardicus* in the skilled hands of Harold Esslemont. Starting off with material I collected in the Šar Planina in 1964 he has built up and distributed a considerable number of this fine orange-yellow species by treating it like the alpine plant that it is—wet in spring, cool and moist in summer and dryish in winter. Similar treatment by the same grower is also paying dividends with a collection of *C. vallicola* var. *suworowianus* I made in the Turkish Pontus Mountains in 1966 and Brian Mathew's Yugoslavian collection of the predominantly Albanian, high-altitude, yellow *C. cvijicii* also now appears well-established and increasing. Many collections of *Crocus* by Brian Mathew, John Marr, Martyn Rix and others are carefully maintained by a small number of enthusiasts and these can be considered established to this extent.

Southern Greece has offered a pleasant and attractive hunting ground for the amateur over the past twenty years and the most outstanding result for the gardener has been the establishment of *Daphne jasminea* as an alpine-house shrub. This compact, saxatile species has been collected by a number of people but the majority of plants in cultivation would appear to stem from an introduction made and established by Ivor Barton in company with Ken Aslet in 1964. Another Greek endemic shrub, *Lithodora zahonii*, is also now well established from material brought back by Alexis Vlasto. It is less spectacular than its close relative, *L. rosmarinifolia* from southern Italy—at least in the forms we have in cultivation—but is a very worthwhile addition. Also closely allied is *L. hispidula*, grown from material collected in Crete by Lionel Bacon, and we can hope that this will also be propagated and distributed. It may come as a surprise to *Cyclamen* enthusiasts that twenty years ago few of us knew much about the extremely variable races of *C. repandum* from the Peloponnese nor of *C. repandum* var. *rhodense*. During these years, the habitats of both these races have become easily and cheaply accessible holiday-areas and there have been numerous introductions. The same cannot be said for *C. libanoticum* but we are fortunate to have this in cultivation from authentic wild material (surprisingly distinct from the long-cultivated race of unknown origin) collected by Eliot Hodgkin and Bertie Blount. The Caspian



forests of northern Iran are also no longer accessible and it is to be hoped that we can maintain stock of one of the more distinct races covered by the blanket name *C. coum* subsp. *caucasicum*. Though it is no doubt difficult to justify *C. elegans* botanically, its pointed leaves and elongated petals make it a tempting plant for the gardener, as well as being a challenging one, for it is much more difficult to grow well in Britain than the high rainfall of its native beechwoods might lead us to suspect. The high altitude, Turkish race of *C. coum*, *C. parviflorum*, is also temperamental in cultivation but with a number of recent collections becoming quite widely distributed, I think we can assume that this will soon become well-established and much better known. A paradoxical situation surrounds another Turkish species, *C. mirabile*, a little-known plant twenty years ago. Peter Davis originally introduced this and further collections made by John Watson and others saw it more widely distributed in the 1960s. Recently, however, this species has been imported annually on a massive scale from Turkey and is currently resold throughout the world, by way of Dutch bulb merchants as both "*C. neapolitanum*" and "*C. europaeum*", thus by-passing the pointless legislation regarding wild Cyclamen. From my own experience of Cyclamen in the wild, I feel that we have little cause for concern even over large-scale commercial collection; I could argue that they benefited from such disturbance. This is a genus adapted to maintaining a high local population level and to withstanding the depredations of animals which root about the forest floor, whether they be pigs or men.

However, I doubt if such remarks could apply to another recently introduced species, which it seems appropriate to mention here, although I have no personal experience of it. *Sternbergia candida*, the only white-flowered member of the genus, was discovered in Turkey in 1976, described in 1979 and suddenly became commercially available in 1980, in considerable numbers, both through the pages of our specialist publications and the lists of those who advertise in them. Even one such as myself, who is but a passive opponent to the politics and opportunism of "conservation" and a cynical bystander to the progress of this bandwagon along its primrose path, with our societies casting themselves upon it, could not but marvel at the blatant hypocrisy of it all.



Just as our attitude towards wild plants may be influenced by the fashions of our time, so too our enthusiasm for particular genera may be stimulated by current vogue. *Fritillaria* have survived the damning criticism of Reginald Farrer to become very fashionable plants indeed. Enthusiasts, such as Martyn Rix, Jack Elliott and the late Vic Horton, have brought together and maintained remarkable and comprehensive collections of this genus during the past twenty years. Many have only a tenuous hold on cultivation and few have become widely distributed but it is to be hoped that Paul Christian's efforts to propagate and offer a wide range commercially will mean that many more become firmly established. Perhaps the species which has most endeared itself to alpine gardeners is *Fritillaria michailovskyi*, especially in its best forms, introduced from eastern Turkey by Brian Mathew, John Watson and others. Closely related and with similar mahogany-purple, yellow-tipped flowers, *F. reuteri* from the central Zagros Mountains of Iran also appears to be settling down well. Although less striking, *F. crassifolia* subsp. *kurdica*, brought back by most of us who have visited eastern Turkey or western Iran, has proved an especially adaptable plant, flowering relatively quickly from seed. *Fritillaria carduchorum*, only recently discovered, sometimes grows along with it in a few localities in eastern Turkey. It too is now well established and increasing well vegetatively from both Rix and Watson collections. It has distinctive, narrow, brick-red flowers and glossy, green leaves. Coming from comparatively high altitudes, it should be of particular appeal to the alpine gardener. Sadly, the beautiful, pink *F. alburyana*, also a very recently discovered and locally restricted plant from eastern Turkey, is not proving so easy to maintain in Britain, in spite of numerous introductions by John Watson and others. However, it appears somewhat less troublesome with some gardeners in continental Europe, growing material collected by Erich Pasche. The similar but more eastern *Rhinopetalum* group confront the grower with similar problems. The pink *F. gibbosa* and others still linger but seldom increase vegetatively and, in my experience, even the most conscientious attempts at hand-pollination between a number of clones, when one was fortunate enough to have them, are quite fruitless. Seed is, however, distributed by several botanic gardens in Soviet Central Asia and from this source,



*F. stenantha*, another *Rhinopetalum* new to cultivation, has been raised by several enthusiasts in Britain. In this context, I must mention the seed-exchange lists of the world's botanic gardens and institutes as a source of new material for the alpine gardener. The sad dichotomy between the professional botanical world and that of the amateur specialist is reflected in the fact that, when gardeners were eagerly welcoming new material of such species as *Crocus michelsonii* or several of the Juno irises, these and many other plants also native to Iran and Afghanistan were listed in seed-lists from Ashkhabad, Dushanbe, Tashkent and Alma-Ata. For instance, from such sources I once grew and propagated (but have now lost) *Eritrichium sericeum* from seed collected in the Tien-Shan and others have established that most compact and desirable of acantholimons, *A. diapensioides*. At present, Soviet Central Asia is becoming more accessible to visitors, who travel in organised groups, and we can hope for further interesting material from this source. In general, however, I feel that our failure to deal competently with this great volume of important monocotyledonous material over the past twenty years vastly outweighs the successes. The many collections of Juno and Reticulata irises are but memories to most of us. Recently, we have seen Syrian *Iris nusairiensis* discovered, described, introduced and successfully cultivated, a pattern we have seen with *I. hymenospata*, *I. porphyrochrysa* and many others. Will its fate be the same? As I cannot recollect having seen even such a homely Juno as the Spanish *I. planifolia* truly established over the past twenty years, I feel pessimistic. I shall say nothing of Tulipa or Colchicum! Even with Fritillaria, whose successes I dwelt on, I can wonder from my own, limited personal experience, whatever happened to the thousands of *F. kotschyana* seedlings which should have been raised from a substantial seed collection I made fifteen years ago in the Elburz Mountains or how long the last irreplaceable bulbs of Iranian *F. chlorantha* or Lebanese *F. alfredae* will linger in cultivation.

We have not succeeded any better with the dwarf herbaceous and shrubby plants of south-west Asia. No-one has done more than John Watson to collect and distribute seeds of such material from Turkey but we have little to show for his efforts, spread over the past twenty years. While it may not excite the specialist, his



that the finest clones have been derived. It always saddens me that we cannot credit the first introduction of this superlative plant to this charming, generous and most remarkable man. Indeed, we may search in vain for some original introduction, which is both well established and of outstanding significance in our gardens; a plant we can present as a token memorial to Paul Furse. If this failure is a monument to our inadequacies as gardeners, we can console ourselves with the facts that Furse's wide collections of dried herbarium specimens from Iran and Afghanistan have already ensured him a respected position in the botanical history of this area and that his accounts of his journeys will always fascinate those who may delve into the gardening history of our time.

It was also from Furse collections that *Dionysia tapetodes* became widely distributed, though I believe it was first grown in Britain at Ingwersen's nursery from Afghan material collected by Mrs Priemer. This yellow-flowered species is the most variable and widespread of the tight-cushioned Bryomorphae dionysias, of which it is the easiest to grow and propagate. Of the Iranian members of this subsection, I think my collection of *D. janthina* can now be considered well established though little known as we seldom see its pink flowers. Plants from my re-introduction of *D. michauxii* and Tom Hewer's collection of the related *D. lamingtonii*, both yellow-flowered, still survive and are propagated by one or two enthusiasts though their position is more tenuous. I had considered that the long-term prospect of maintaining the violet-pink *D. bryoides* was even more uncertain until Eric Watson told me that he is now raising his second generation of cultivated seedlings. We may yet see this widely established. In the Caespitosae Subsection, we still have one or two surviving plants of *D. diapensiifolia* and *D. caespitosa* fifteen years after I collected seed of them but these are very difficult plants to propagate and without constant propagation their future with us is likely to be short.

Species in the Revolutae Subsection have generally proved somewhat easier to propagate and, apart from *D. aretioides*, we still have *D. revoluta*, both in the type race from my collection and in its grey-leaved subspecies, *D. revoluta* subsp. *canescens* from Tom Hewer's seed. The high-altitude, pale-violet flowered *D. archibaldii* too is now surprisingly widely grown though at times in its early history it



survived only as a single plant in cultivation. I am, however, always apprehensive for the long-term future of any species which has been propagated from a single clone and offers little hope of providing us with seed. These more obviously shrubby dionysias bring us to the primitive Mirae and Scaposae Subsections, which would be of little interest to most gardeners if their name was not *Dionysia*. *Dionysia mira* from Oman, Turkish *D. teucroides*, Afghan *D. paradoxa* and *D. lacei* from Pakistan are all in cultivation though the best-grown plants of these are more likely to be seen at Edinburgh or Kew, where there is more freedom from the prejudices of amateur gardeners, who are generally going to lavish most attention on plants which they or others consider "good" or "worth growing".

By present standards, all the pink- and violet-flowered species from Afghanistan are certainly "worth growing" and are no more difficult to grow than any others, if we could only propagate them successfully. Twenty years ago most of these were unknown to science as well as gardeners. The first we saw was *D. freitagii*, raised from seed collected by Hedge, Wendelbo and Ekberg in 1969. Two years later, in 1971, much valuable material was received from the journeys of both Grey-Wilson and Hewer and Bob Gibbons and his companions. The enthusiasm and expertise of Chris Grey-Wilson in particular greatly extended our knowledge of the Afghan species. Seed of *D. viscidula* and *D. microphylla* germinated particularly profusely and many plants were raised. I can remember the unique sight of a group of well-flowered young plants of the former, bedded out in the black peat of a nurseryman's exhibit at an R.H.S. show. Too many plants meant too little care. Over-confidence and complacency have resulted in these species becoming extremely rare in cultivation within a few years. The most recently introduced *Dionysia*, *D. involucrata*, the most northerly species from the Pamir-Alai, has reached Britain from Czechoslovakian sources and is so far proving remarkably accommodating. It is most striking planted out in the new alpine house at Kew, producing its candelabra of bright-pink flowers over a very long period, and in the skilled hands of Stan Taylor, a batch of seed from cultivated material is already being raised. I hope that we are learning from past experiences. Sadly, I fear that there will be no opportunity to obtain further wild seed of this genus from either Iran or Afghanistan over the next decade.



Although *Dionysia* may be considered the development of *Primula* in this area, true primulas do occur also and we have acquired an excellent garden plant in *P. warshenewskiana* var. *rhodantha*. Material of this little, sugar-pink species was collected by Mrs Priemer and reached Britain by way of Wilhelm Schacht at Munich. It is this Afghan form which we know in gardens but I have been given material of the type-race from the Pamirs by Hans Simon. I fear I found this less easy to grow and have now lost it.

The genus *Primula* can take us eastwards into the vast mountain ranges of Asia. As others, better qualified than I, will tell you of this area, as well as about North America, Australasia, and South America, I shall be yet more discriminating in my assessment of the new plants which have been established recently from the rest of the world. In fact, this is not too difficult a task for there has been comparatively little, considering the vastness of the areas and the increased number of travellers. Many people have visited Nepal in particular and there have been a number of re-introductions of significance but I cannot, for instance, find any new alpine plant widely established from the journeys of Roy Lancaster and Len Beer. Of course, many travellers had left before the seed had ripened at the highest altitudes and others, like Chris Grey-Wilson, have been concerned with collecting botanical material rather than seed for gardeners. This was not the case with John Jackson, however, who made some interesting collections around the Annapurna Himal in late October, 1978. It is yet premature to judge if anything will emerge as established from this collection but, as I have yet seen no result from his many collections of the desirable *Stellera chamaejasme*, I suspect that it is once again our competence as gardeners which is questionable rather than the competence of the collectors. One very interesting new *Primula*, which has been grown from seed collected by a group of students from the Royal Botanic Garden, Edinburgh, is *P. barnardoana*, a very distinct species with pale-yellow flowers which I hope will be maintained in cultivation. The related genus *Androsace* has provided more, mainly due to the satisfactory solution to this problem of establishing new plants, worked out by George Smith and Duncan Lowe. By retaining a relatively small amount of new material in the hands of



one or two skilled growers, who are able and prepared to propagate it, we now have *A. delavayi*, *A. globifera* and *A. muscoidea* var. *longiscapa* well established and widely distributed from George Smith's Nepalese collections. Proving somewhat more difficult and not yet widely known are *A. zambalensis* and *A. tapete*. Similarly, *A. mucronifolia* from Dieter Schacht's Kashmir collection is none too easy to keep, far less keep in character. Among the Smith saxifrages, *S. stolitzkae* is now quite widely grown, though, like the androsaces, not at all easy to flower well. I think we can look forward to more plants entering general cultivation in the future from this successful teamwork.

I shall leave China to whoever may speak on this subject in ten years' time except to comment that, even with the increasing accessibility to this vast country, we should remember that life has changed since Forrest organised his armies of trained collectors and that it is unlikely that we shall be submerged in a deluge of new material. Yet further east, Taiwan has produced the prostrate *Rhododendron nakaharai*, dwarfest of the azaleas and extremely late flowering, though it needs its wood ripened by hotter summers than we have in Britain to give of its best. This will doubtless be of great importance in hybridisation, as will the dwarfer forms of *R. pseudochrysanthum* from the same island at similarly high altitudes. Very dwarf clones of the variable Japanese *R. keiskei*, originating from that extraordinary reservoir of pigmy plants, Yakushima Island, have also rapidly endeared themselves to alpine gardeners. I feel, however, it is invidious to talk of new introductions from Japan, when the Japanese have a far longer history of gardening than we have in Britain. There are, however, many Japanese plants still little-known in British gardens. *Corydalis ambigua*, which has become quite well known and sought after in recent years, is but one example.

Another Primula, *P. tschuktschorum*, can move us across the Bering Sea from Asia into North America. It also illustrates an insoluble problem of establishing some new plants. While I do not think it is with us any longer, I can remember seeing a very large number of plants, which that exceptional grower, Jack Crosland, had raised from his own seed. These were widely distributed but no-one else seemed to be able to grow it. There is maybe no point in



introducing and propagating new plants if there are not enough skilled growers to give them to; on the other hand, we can often only learn how to grow a species by losing it. It is unreasonable, however, to expect that others should make more effort than us and to look for repeated fresh collections from the wild. Twenty years ago, Carl Worth was making annual journeys to collect seed from the Rocky Mountains. We may still have *Aquilegia scopulorum*, *Eriogonum ovalifolium* and *Polemonium confertum* from his collections but these are scarcer in cultivation today than they were a decade ago. Many more species which he collected, not once but many times, are no longer grown in Britain. Today, thanks to the regular efforts of Sally Walker, plants from her Arizona and New Mexico collections, such as *Primula ellisiae*, *P. rusbyi* and *Dodecatheon ellisiae*, are widely distributed among British gardeners. Several Mexican plants of her collecting, from which I might single out the dwarf species of *Tigridia* as especially fascinating, are also being grown here by a few specialists. We cannot anticipate such collections will be repeated indefinitely. In the exceptional case of the very dwarf *Dodecatheon*, which we grow here as *D. hendersonii* (Sooke form), we cannot anticipate any more material at all, as I am told that its only known habitat on Vancouver Island has been built over. I am glad to say that this has been propagated in Britain, though it is a slow-growing little plant and not too easy to flower well. Also on the credit side, I think such plants as the temperamental, wine-red *Douglasia dentata* and *D. laevigata* var. *ciliolata*, the fine Columbia River Gorge race, are becoming increasingly well known here. Ten years ago, shortly after the last Conference, I received seed of the needle-leaved, Montana-endemic *Phlox missoulensis* from Jim McPhail and Bob Woodward and an ice-blue clone of this is now quite widely grown. Much larger, though I fear challenging to propagate, are the stunning forms of *P. nana* collected by Paul Maslin. It is early yet to form an opinion on these in Britain but they are currently growing superbly at Kew, planted out both under glass and outside, in both yellow and orange-red forms. I suspect that these, like the pink-flowered plant we already grow as *P. nana* subsp. *ensifolia*, may expect a limited circulation among a few specialists, though it will be exciting if they can be more widely grown. *Phlox* 'Chatta-



hoochee', a wild plant from Florida, in spite of the cultivar name, with its luminous lavender-blue flowers is now very well known indeed, whereas *P.* 'Fullers White', another form or hybrid of *P. divaricata*, rated more highly than it initially, is not at all well known. The selection, *P. adsurgens* 'Wagon Wheel' also does not seem to have lived up to early expectations of it in Britain and Kath Dryden predicts a more glowing future for another clone, 'Red Buttes'. Several variants of that other exclusively North American genus, *Lewisia*, have also come to the fore in recent years. We now have white forms of *L. tweedyi* and *L. cotyledon*, two of which have received awards as 'Alba' and 'Kathy Kline'. Particularly exciting, however, is the Jolon race of *L. rediviva*, which explodes into especially large, ivory-pink flowers and of which several generations have now been raised from English seed. Among monocotyledonous plants, very dwarf, pink forms of *Trillium ovatum* from the far west of Vancouver Island and grown as *T. hibbersonii* have become coveted plants. These have set seed and germinated well with several growers here. The name is difficult to justify botanically, as they appear to be the extreme end of a cline, but at their most compact they are distinct and desirable plants for the alpine gardener. Also now of somewhat doubtful status botanically, *Fritillaria roderickii* must be mentioned, not only as one of the best and easiest American species we can grow in Britain but also so that we can acknowledge the considerable amount of work Wayne Roderick has done in collecting material of the plants of western North America and his vast knowledge of these plants in their homes.

Turning our attention to the southern hemisphere, while others are dealing with the plants of Tasmania and New Zealand, no-one is talking about the few but interesting alpine plants from the mountains of south-east Australia. From this area, *Ranunculus muelleri* var. *brevicaulis*, with its varnished, bright-yellow buttercups, may well become established. I can remember being with John Kelly when he unpacked a small plant of this species sent by Otto Fauser. This plant survived and was subsequently rescued by Joe Elliott, with whom it has set seed on a number of occasions. The problem is growing on the seedlings but I think a solution will be reached. If so, we may yet grow the beautiful white *R. anemoneus*, which in spite



of several fine seed collectings, does not appear to have been grown successfully in Britain. As both the starry, pinkish *Caltha introloba* and little *Aciphylla glacialis* from these same Australian Alps have grown well here in the open garden, I think we may feel some optimism.

So much material has reached British gardens from New Zealand over the past twenty years that it is difficult to nominate a few representatives or to determine which plants can be considered established and which are replenished periodically by fresh collectings of wild seed. In this particular case, we hardly need trouble ourselves over this, as many mountain areas in these islands are accessible to amateur enthusiasts without too much trouble and occasional seed collections from the wild are of trivial significance to natural populations. We do maintain many of these more recent additions, such as some of the celmisias, both from seed and cuttings in this country. I can remember when the first batch of cuttings from that choice little silver-plated shrub, *C. hectori*, was propagated at Jack Drake's nursery over twenty years ago and we still have this with us. This nursery has always been successful with New Zealand alpinists, which enjoy its cooler, northern summer climate and Jack Drake has himself visited New Zealand, bringing back and continuing to maintain such interesting plants as the hybrid *Raoulia* × *loganii*. While this and the even more successful *R. hookeri* are propagated here, this is less frequently the case with the "vegetable sheep". Species like *R. mammillaris*, *R. rubra*, *R. eximia* and *R. buchananii*, which first made their debut here twenty years ago, are now comparatively well known, though their cultivation will, I suspect, always be limited to a few enthusiasts and we shall always be dependent on material from such sources as the members of the Canterbury Alpine Garden Society, whose excellent seed-list has contributed greatly to the distribution of such plants. There are, of course, many more-easily-grown New Zealand plants. We even have a British nursery, run by Graham Hutchins, specialising in these and, I am sure, listing much material which is new to cultivation here. One unexpectedly easy plant to grow and propagate, and with which I was involved initially, is *Cotula atrata* subsp. *luteola*. This fascinating little alpine with its ivory and maroon buttons over mats of grey and red-tinged foliage is restricted in nature to the



The other part of the world which I should have considered would have had a great potential for British alpine gardeners is the temperate Andes of southern Chile and Argentina. We have made shockingly little progress with plants from this area over the past twenty years. In the 1950s we had much interesting material from lower altitudes in south-eastern Argentina brought back by Ruth Tweedie. *Oxalis laciniata* is now well known from her introduction and we still have a few plants like the little brick-coloured *Symphostemon lyckholmii*, and the congested little shrub, *Nardophyllum bryoides*, which I do not think has ever flowered in captivity, more or less established. On the other hand, how many of us have seen *Cruckshanksia glacialis*, a superlative scree-plant with long-tubed, scented, yellow flowers, which was grown for some years from a Tweedie collection in a trough at Edrom Nurseries, by Alex Duguid, until some evil and covetous individual removed it. This and the more incredible but no more beautiful *C. hymenodon* with its spectacular rose-coloured calyces are but dreams to us, twenty years later. This will surely not always be so as we have had recent fine collections from these southern ranges by Lt. Col. Anderson and Dr Rolf Fiedler. It would be premature to attempt an assessment of our successes and failures with the seed distributed by either of these two collectors but we can certainly look back critically on our performance as gardeners with the material collected by John Watson and his companions in 1971. Once again, I feel we have given a very poor account of ourselves. The only introduction which has become quite well known was of a dusky buff-pink, as yet unnamed species of *Mimulus*, fancifully referred to by John as "Andean Nymph". While we have seen nothing of the sumptuous *Calandrinia affinis* or *C. sericea*, the little, garishly charming *C. rupestris*, with bi-coloured red and yellow flowers, might just become better distributed over the next few years. The most important plant for the alpine enthusiast, however, is surely *Ourisia microphylla*. Although a re-introduction, it is new to most of us and its profuse, pale-pink flowers over mounds of thready stems, clothed tightly in Cassiope-like leaves, ensure its appeal to the enthusiast. It is by no means easy to grow well or to propagate and the large number of plants which were raised initially has been dwindling steadily until recently. It has,



however, been very successfully maintained at Kew and I think that they and the few enthusiasts, who have started to make a special effort with this, will make certain that this is not lost again. A larger spectacular scarlet *Ourisia*, possibly *O. alpina*, has been introduced and grown by Lt. Col. Anderson. One might hope that his proximity to those very skilled and experienced Scottish growers, Henry and Margaret Taylor, might lead to the establishment of some Chilean and Argentinian material, as the result of the same sort of fruitful liaison that was developed between George Smith and Duncan Lowe.

Several collections made by John Watson have become scarce through a neglect which I suspect stems from the fact that the genera are not at present fashionable with alpine gardeners. The genus *Alstroemeria* is the most striking case, as the collected seed of these germinated particularly well. We already had the tiny, orange-yellow species distributed by E. B. Anderson from material sent to him by Dr Wygnanki in Chile, as *A. pygmaea*, but several Watson collections, such as the beautifully marked, pale-pink *A. pulchra*, sumptuous violet *A. sierrae* and speckled *A. xanthina*, were still comparatively dwarf plants. They were not, however, satisfactory plants in the open garden, they dislike the confinement of pot cultivation and worst of all, I fear, were not sufficiently "alpine-looking" to become cult-plants like *Dionysia*.

The Chilean and Argentinian plants most likely to become the next cult-plants are, of course, some of the violas, whether they are of the habit of the rosulate *V. congesta*, the columnar *V. fluhmannii* or the cushion-forming *V. chamaedrys*. If Rolf Fiedler and others continue to send back seed, I might predict that we shall know rather more about growing these in ten years' time. I might also predict that we shall not be able to grow them in character without adapting existing concepts regarding pot-culture, composts and the treatment of the more difficult alpine plants.

In the case of that other genus of potential cult-plants, *Nototriche*, which can take us north into Bolivia and Peru, I should be even more dogmatic in asserting that we shall have to change our whole concept of cultivation to grow these. Fortunately, we have not yet had the opportunity to waste a collector's time and effort by losing these, for we are not yet ready for them. It is time for that



clumsy and outdated makeshift attempt to adapt our climate, the alpine-house, to be replaced by something more effective. Even today, it would cost less than the price of ten metres of custom-built, conventional alpine-house for us to purchase the dehumidifier, refrigeration or air-conditioning equipment, appropriate lighting and circulatory fans to convert a spare room into a growing-room. What we cannot yet obtain is a ready-made programme to feed into the small home-computer which could control all these and enable us to reproduce with sufficient accuracy the climate, daylight-length and spectrum of the Bolivian altiplano. Gardeners are conservative souls, in general, but we have all accepted such artificial concepts as the alpine-house or even the rock garden itself as means towards the more successful cultivation of alpine plants. Perhaps the refrigerated bench with its attendant lighting in the new alpine-house at Kew might make such paraphernalia more acceptable. There is no denying the success, which comparatively simple and limited equipment has brought to the maintenance of Arctic species in cultivation.

We may not, in fact, need any highly sophisticated arrangement to grow some species. When I visited the northern Andes of Colombia, I was so pessimistic about gardeners' capabilities to grow the plants of such mountains that I did not even collect seed from the genus *Espeletia*. Since then, Kew has successfully raised and grown *E. schultesii* from seed collected in Venezuela, though the plants are showing no sign yet of developing the extraordinary, columnar habit which they acquire on their native paramo. A few plants of *Gaultheria*, *Pernettya* and *Gentianella* from the limited seed collection I made in Columbia in 1978 are progressing slowly in the hands of a few enthusiasts but the real problem with these tropical alpiners is that their summer and winter are compressed into each twenty-four hours and that we cannot expect them to do more than half-heartedly survive in the protracted warmth of a British summer or the long cold northern winter. A fairly satisfactory solution with alpiners from among the chilling, drifting clouds of the moister tropical mountains is simply to keep them growing all the time in frost-free conditions. As they are, in any case, used to a low light intensity, winter can be less of a problem for them than long, hot summer days. It was in a hot summer that I lost the exquisite, little



*Gentiana cruttwellii* from Papua New Guinea but this species as well as several other New Guinea alpines has been maintained at the R.B.G. Edinburgh since Paddy Woods brought back material in 1962. If enthusiasts are unwilling to adapt their growing conditions to suit these alpine plants, I see no reason why they should expect to have material to kill by treating it like a plant from the European Alps. On the other hand, large collections of the Malesian Rhododendrons are growing in the San Francisco area and parts of Australia. Even among these there are a few exquisite high-altitude plants, like the mat-forming, red, New Guinea *R. saxifragoides*, which should be of great interest to alpine gardeners. It is to be hoped that, if any experienced alpine enthusiasts, from areas where these plants might be growable outside, do come forward, material will be made available to them. Certainly seed from the exquisite little Dendrobium species, around *D. cuthbertsonii*, which grow in the moss- and lichen-encrusted "elfin wood" high on the New Guinea mountains, has been quite widely distributed by Edinburgh. Few alpine gardeners have either the expertise to raise orchids from seed or even to grow these tiny, jewel-like plants, which could be considered more genuinely alpine than the species of *Pleione* so fashionable with alpine growers at present. Is it too much to hope that one day we shall have special classes in our show schedules for tropical alpines and that New Guinea dendrobiums will be as well known as pleiones are today?

The genus *Pleione* has not always been popular, however. They have always been, I am told, held in rather low regard by most tropical orchid growers, and alpine enthusiasts showed a marked disinterest in them until very recently. Farrer does not mention them at all and Clay dismisses them briefly. The newcomer to alpine gardening might be forgiven for thinking that *Pleione forrestii* is a recent introduction for it has only been esteemed by alpine growers within the last twenty years. Its importance and significance to enthusiasts today are well illustrated by the remarkable and beautiful exhibit of its hybrids, staged at the Conference by Dr Harberd. It has, in fact, survived for over seventy years at the R.B.G. Edinburgh from an original Forrest collection. It is hardly fair to criticise Edinburgh for its initial slowness in distributing this species when one sees them as suddenly confronted by a



horde of clamouring amateurs from a gardening world, which had shown nothing but apathy about the plant for fifty years. Such a problem could have been resolved diplomatically and impartially if some accepted channel had been created for the interchange of material between the professional, botanical world and the amateur gardener. It is surely up to our societies to create this. There must also be an acceptance by the botanical establishment of the fact that the amateur specialist-growers constitute a vast reservoir of expertise and plant material, which could easily be made available to them.

At present, however, it is becoming increasingly difficult to distribute and keep track of particular plants in the amateur world alone. The days when the grower could afford to be irresponsible and careless because there were sufficient skilled and knowledgeable nurserymen around to replace lost plants are long past and the expanding plant-sales at A.G.S. shows are of more significance as fund raisers than as means of distributing scarce material to competent growers. It is impossible to ascertain who might be able and willing to handle new material or to find out the status of a particular species in cultivation except through personal conversation with one's own immediate acquaintances. If this survey appears biased or inaccurate, this is the obvious explanation.

I cannot, for instance, give you an accurate assessment of the position in cultivation of three plants which were introduced by Peter Davis and all, I suspect, subsequently lost before being re-introduced on a number of occasions by John Watson: that distinctive pink, scree-crucifer *Ricotia davisiana*, the brilliant orange *Hypericum capitatum* and the little, blue borage, *Alkanna aucheriana*. The last is, I should guess, lost once again but I do know of a few plants of the other two—perhaps there are still many more. Those who do have such plants must never imagine that someone else is more competent than they are and must always propagate and distribute them to others whom they think may be able to grow them. In the absence of any organisation which might have given one person responsibility for maintaining a particular introduction, we must each assume this responsibility, ourselves. I have, for example, made up my mind to try to trace and bring together as many surviving clones as I can from the *Oncocyclus* and *Regelia Iris*



collections made over the last twenty years, in the hope that it might be possible to increase these by seed. In planning this, I may well be trying to assuage my guilt at abandoning the cultivation of these plants some years ago but I also feel that my previous experience of them may be of some advantage in maintaining them in cultivation. It may be too late to recover *Iris heweri* but we can still hope to raise successive batches of seedlings from the existing clones of the beautiful *Iris afghanica* and to ensure that this is more widely established in cultivation, as one of the finest and most appropriate tributes possible to Paul Furse, who discovered this plant.

Such a scheme may seem too grandiose or pretentious to many of you but far greater challenges lie within easy reach of any European alpine gardener. I mentioned at the beginning of this article that we have made little progress towards the successful cultivation of some of our European alpine species. We certainly cannot claim that species like *Gentiana pyrenaica*, *Eritrichium nanum* or *Ranunculus glacialis* are "established" in cultivation. Why not? Must we continue the pathetically negative attitude towards these plants for another twenty years? Conventional methods have not brought success, so we must try the unconventional: take an autumn holiday to collect some seed; raise a good batch of seedlings; try them under an ultraviolet lamp; put them in the deep freeze—anything is better than the present pessimism. If you would like a single plant to devote the next decade to, I suggest *Jankaea heldreichii*, surely one of the world's most beautiful saxatile plants and one which is as scarce in cultivation today as it was twenty years ago. One seed capsule of such a gesneriad contains thousands of seeds; can no one try to propagate this from seed in quantity?

In spite of the impression I may be giving, there have been successes and steps forward in recent years. The most notable is surely that *Paraquilegia grandiflora*, that incomparable cliff plant from the Himalayas and eastern Asia, has suddenly become widely available. Joe Elliott alone tells me that he has over two hundred seedlings at present. This was for so long the exclusive speciality of Branklyn, where I think the stock had come from a 1949 Ludlow and Sherriff collection which even then was a reintroduction, that many of us had despaired about ever seeing it widely grown. Not



only do we have the violet Branklyn form from Bhutan but the little, western race, *P. afghanica*, has been raised from a Bob Gibbons collection, and the white Kashmir and Ladakh races have come from seed collected by Barry Starling and his companions and by Oleg Polunin. I think we may hope to do these more recent collections justice. At long last, too, the recalcitrant but beautiful Spanish *Viola cazorlensis* appears to be becoming established and successfully propagated, after hovering in and out of cultivation for over forty years. We have learned a great deal about these plants, as well as about the genus *Dionysia*, over the past twenty years and I think that there has also been a healthier attitude developing among alpine gardeners and a greater realisation that our main enemies are ignorance, over-confidence and selfishness.

Although I have attempted to be reasonably objective and constructive in my assessment of our recent alpine-gardening history, I am sure that I have antagonised some of you, who must be thinking what an overcritical and arrogant individual I am. I can assure those who may be ignorant of my record that I speak from a position of considerable authority. It may well be that I was actually asked to deal with this subject because no-one could think of anyone else, who has killed as many new introductions as I have. I think it is fitting that I leave you with what may well be recorded as my greatest achievements in this field. The more historic of the two is my recent assassination of the last cultivated plant of *Dionysia lindbergii*, which my late friend Peter Edwards had failed to kill in the seven years he grew it. It was especially noteworthy as possibly being the most beautiful of the dionysias and it will be an especially long time before a collector can see its soft, grey-velvet cushions studded with violet flowers, growing upside down under the overhangs of its native Afghan Darreh Zang, far less bring seed of it into cultivation. I believe that this might earn for me a position of greater significance than that enjoyed by my chairman, Roy Elliott, who can merely claim to be the man who killed the last *Primula rufa*. I have also recently killed *Dionysia afghanica*, which is a very slow-growing, firm-cushioned species with pale-violet, dark-eyed flowers, discovered and introduced by Chris Grey-Wilson in 1971. In this case, however, I have confounded myself by giving a plant to Eric Watson, who has cunningly kept his alive, thereby ensuring



that he has the last plant. However, an old horticultural hit-man like myself does become a little bit tired of it all at times and it is really with some relief, perhaps tinged with a glimmer of maliciousness, that I leave the last *D. afghanica* to Eric.

*Himalayan Plants in the Wild*

GEORGE ENGELMANN

