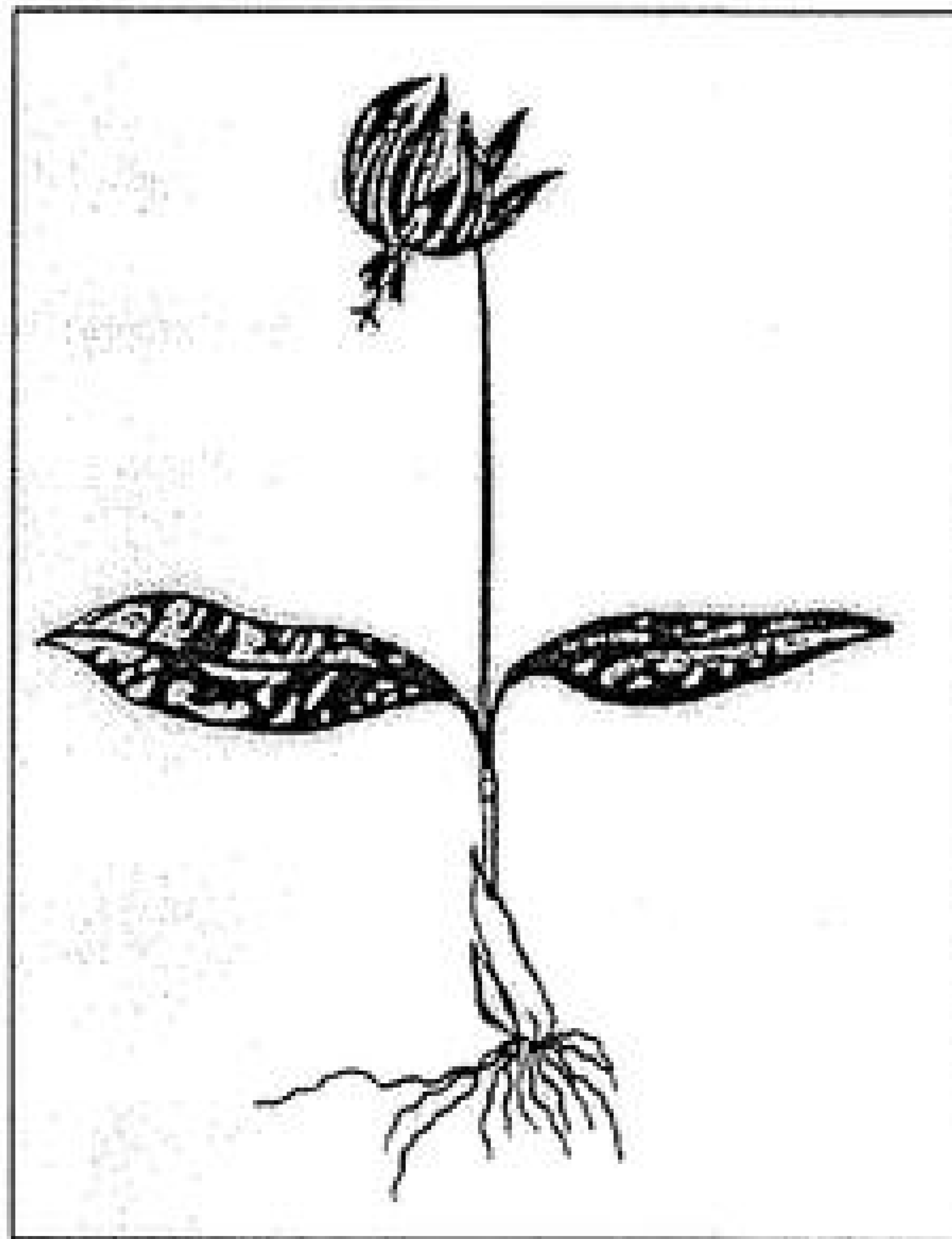


THE BULB
NEWSLETTER



Number 32

October-December

2000

The Bulb Newsletter No. 32

October-December 2000

ISSN 1463-967X

The Bulb Newsletter Team: Brian & Margaret Mathew
90 Foley Road, Claygate, Esher, Surrey KT10 0NB, U.K.

More new daffodils

One would think that, for a European genus that has been popular, and therefore intensely studied, for a very long time, there would be little else to be said. But in the case of *Narcissus*, the species keep on coming!

Three new ones have just been described by S. Ríos-Ruiz, D. Rivera-Nunez, F. Alcaraz-Ariza and C. Obon-de-Castro in the *Botanical Journal of the Linnean Society* 131: 153-165 (1999). These are all from the mountains of south-eastern Spain, in the Sierra de Alcaraz and Sierra de Segura and belong to subgenus *Ajax* (section *Pseudonarcissus*), the trumpet daffodils. The authors comment that although many *Narcissus* species have been described in recent years from Spain, most have originated from the centre and north of the country and that there has not been a great deal of detailed botanical study of some of the south-eastern ranges, such as the Sierra de Segura. The three new species are: *N. segurensis*, *N. alcaracensis* and *N. yepesii*. These are coloured similarly, with lemon yellow perianth segments and deeper yellow trumpets. Comparisons are made in particular with *N. longispathus* and *N. nevadensis*, since these are also 'southern' species, but the authors say that there is little resemblance between the new ones and these two. They regard the following as the most closely related species: *N. alpestris*, *N. primigenius*, *N. munozii-garmendiae*, *N. radinganorum*, *N. genezii-lopezii*, *N. calcicarpetus*, *N. eugeniae*, *N. confusus*, *N. nevadensis*, *N. longispathus* and *N. bujei*. Extensive comparative tables are provided showing details of a wide range of flower and leaf characteristics of 17 species in this group.

Confus-us is a very good name for a *Narcissus*!

For those who like the Solomon's seals and their relatives, the following might come as a bit of a shock. It is reported in *Guihaia* Vol. 20 (2000) by M.Y. Gui, B. Chen, J. Shen & Y.S. Tian that "*Smilacina atropurpurea* is a mass consumption wild vegetable in Zhongdian area, Yunnan province". The paper presents a study of its characteristics, nutrition value, cultivation, forcing, storage (canning, salting), etc. Some of us would quite like to have the chance to grow it before eating it!

If you wish to renew your sub. to *The Bulb Newsletter* for numbers 33-36 (2001), please do so now, on the renewal slip provided - some people put theirs away and then wonder in July why the BN has not arrived! (Yes, all right, we admit that we do the same with subscriptions to some other journals!).

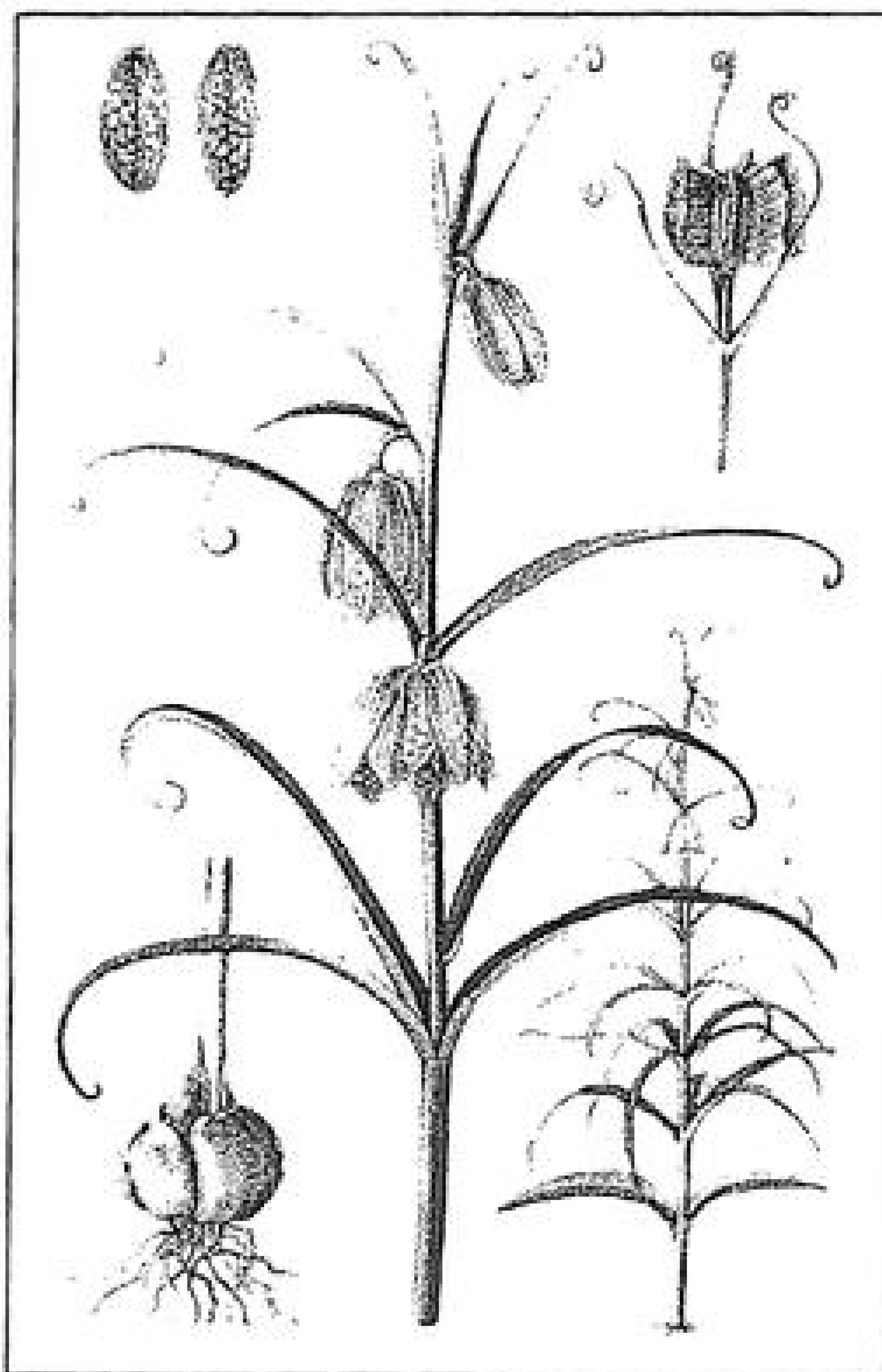
We do not send out another reminder.

A 'Frit' Part of Bot. Mag.

The latest part of *Curtis's Botanical Magazine* was devoted to the ever-popular genus *Fritillaria*. There are eight colour illustrations from original water-colours by two botanical illustrators, Reinhild Raistrick and Joanna A. Langhorne; a rather poor reproduction of one of Reinhild's is shown on the right, *F. thunbergii*. The other species included are:

F. tuntasia, *F. crassifolia* ssp. *kurdica* (the yellow-green form), *F. pudica* (in the selection known as 'Richard Britten'), *F. affinis* (used to be known as *F. lanceolata*), *F. involucrata*, *F. uva-vulpis* and *F. stenantha*.

The accompanying texts are written by Martyn Rix, Roger Macfarlane, and Brian Mathew. Richard Wilford of Kew Gardens has provided an article on the cultivation methods used in growing fritillaries at Kew and there is a paper by Kew's molecular biologists Mark Chase and Mike Fay giving an indication of the relationships of the currently accepted genera in *Liliaceae*, based on recent (and not yet completed) DNA studies. They hint that there is a question as to whether *Fritillaria* should really be split into two genera, or all of them 'sunk' into *Lilium*. The reason for this is that the American species (currently in *Fritillaria*) appear to be more closely related to *Lilium* than they are to the Eurasian species of *Fritillaria*, so those are two possible options. The BN office is fairly certain that any suggestion of sinking *Fritillaria* into *Lilium* would be met with glum faces: our sympathy would go out to the fledgling 'Fritillaria Group' of the Alpine Garden Society if there was no genus *Fritillaria*!



South African bulbs - the growing seasons

In response to a plea from Yvonne Matthews, and our subsequent request for detailed cultivation notes, particularly with regard to tender bulbs (see BN 31: 4-5), Terry Smale has responded with the following very helpful comments on some of the South African representatives:

"The growing season for South African bulbs can usually be determined by reference to the region in the wild in which they grow. The western part of the country has winter rainfall while the central and eastern parts have summer rainfall. Thus any species recorded from the South-west Cape, Namaqualand or the Richtersveld will be a winter grower. The main problem is with the plants growing at the border of the two rainfall regimes where precipitation is possible throughout the year.

This can be illustrated with the genus *Brunsvigia* in which *B. appendiculata*, *bosmaniae*, *comptonii*, *herrei*, *josephinae*, *littoralis*, *marginata*, *minor*, *namaquana*, *orientalis* and *radula* are all western winter-growing species. The large growing species from Kwazulu-Natal and neighbouring provinces: *B. undulata*, *natalensis* and *radulosa*, are summer-growers. The "in between" species in this genus are *B. gregaria* and *grandiflora* from the Eastern Cape; there is some confusion on these in the literature but in my experience they are winter-growers. Similar problems occur with the widespread South African genus *Haemanthus* and reference to Dee Snijman's monograph* will indicate which are winter and which are summer growers.

Of the other species mentioned by Yvonne Matthews, *Crossyne* (née *Boophone*) *guttata* and *Cybistetes longifolia* both grow very close to Cape Town and are very much winter growers. It is worth noting that the other *Crossyne*, *C. flava* from the Bokkeveld plateau, is also a winter-grower. The genus *Trachyandra* has about ten species recorded in the Namaqualand flora and these will all be winter growing. I have no experience of their cultivation but they have tuberous roots like the dwarf bulbines, which are quite happy with a dry summer rest. Since *Trachyandra* species are also found in summer-rainfall areas, it is again necessary to know the geographical origins of the species that one is cultivating."

Thanks from the BN Office to Terry Smale for these very helpful notes.

* *The Journal of South African Botany*, Supplementary Vol. 12, 1984, published by The National Botanic Gardens, Kirstenbosch, Claremont 7735, South Africa.

Notes on *Rhodophiala*

Prompted by the same request in BN 31 by Yvonne Matthews, we have been sent some comments by Don Lee of Welwyn Garden City on the South American genus *Rhodophiala*. Apologies are due to Don, because the last time we passed on some of his notes we moved him to Harpenden! He writes:

"I have some *Rhodophiala* which seem to behave as evergreen or late summer/winter leafing according to some whim of their own. These bulbs are the nth generation from seed from the Alpine Garden Society as *Hippeastrum elwesii*. Initially the flowers were yellow flushed with red/orange but over the generations they seem to have separated out into a yellow group (evergreen, but actually grey-leafed) with flowers about 2.5 cm wide and a red with yellow throat group with flowers about 2 cm wide which is more autumn- to winter-leafing. The leaves of the latter group emerge red.

The yellow group are quite hardy - in fact I have repotted just this week (early August, which is late summer in the UK) a batch which has been in pots in an unprotected frame for several years. Some years

ago when I had a surplus of bulbs I lined out some on my allotment where they survived and flowered for a couple of years until something got at them."

General comment from the office:

Rhodophiala species are from the Andes of Chile & Argentina and are thus hardier than the related but essentially subtropical to tropical hippeastrums. Their climate is on the whole cooler and more Mediterranean in character with winter rainfall, so commencement of growth is most likely to be in winter or spring, depending upon altitude - those from the higher altitudes (where they can experience snow) are unlikely to start leaf growth until spring. The summer is warm and dryish, so their dormant period lasts from early summer through until the following autumn - but perhaps some are sub-evergreen, we don't know about this. And maybe the AGS seed was of hybrid origin, segregating out again in succeeding generations?

Stamps

Thanks go to Manfred Koenen who has written from Bonn and stamped the envelope with three very pleasing German stamps depicting some modest, subtle bulbs. The 90 Pfennig stamp shows a violet Träubelhyazinthe, very clearly *Muscari comosum* showing the sterile tassel at the top, some fertile green/brown flowers and some of the characteristic 3-angled seed pods developing. The 50 Pf. one is of *Lilium martagon* (Türkenbund), and the 30 Pf. one is of Aronstab, *Arum maculatum*. For a change, the BN office does not need help with the translation of vernacular names into Latin!

A little lost *Moraea* found again

The journal *Africa - Environment & Wildlife* 8: 16 (2000) has reported that a population of a very locally distributed South African *Moraea* species *M. worcesterensis* has been rediscovered not far from its original (but now destroyed) site. This species was discovered in 1983 growing on 'rocky sandstone flats' in the rapidly-expanding suburbs of Worcester West (Cape Province) but had soon disappeared under (presumably) flats of a different sort. Peter Goldblatt, who named the species, wrote, in his superb monograph *Moraeas of Southern Africa* (1986), that it seemed likely that other populations would be found in the foothills of the Langeberg Mountains. In fact the new locality is reported to be within sight of the original location.

Moraea worcesterensis has blue-violet flowers with small yellow nectar-guides on all six perianth segments, the latter spreading out equally rather than producing an Iris-shaped flower with three 'falls' and three 'standards'. It is a slender species, only 12-25 cm in height.

The lily from Siroi

Our recent request for information about the Siroi lily (see BN 31, page 14) prompted an old friend (i.e. in the sense of long standing), John Ingham to reply, having looked it up on the internet.

In fact, John came up with an entry about the very stamp in question, one of a set of four 'Natural Heritage of Manipur and Tripura'. Of the other three, two are mammals and the fourth depicts a tree, a rare species of *Psidium*

(Guava). The Siroi lily is the beautiful *Lilium mackliniae*, known to Frank Kingdon Ward who introduced it into cultivation as the Manipur lily. His first sighting of the species was on Siroi peak, a 2628 m mountain between Assam and Burma. It was subsequently described and named in 1946 by J. Robert Sealy of Kew (we heard in August that Sealy has recently died). The name commemorates Kingdon Ward's wife Jean whose maiden name was Macklin. So there we are, another philatelic query solved, thanks to John, one of our valuable world wide web of contacts.

Mrs Collenette's green-flowered Narcissus referred to in BN 31 (page has prompted the following comment from Don Lee:

"I have often had green flowers on Narcissus cultivars caused by a severe frost at a critical stage of development of the flower. The most vulnerable are the doubles but the late flowering small-flowered (diploid?) white cupped ones frequently produce flowers with green tips or a green stripe down the petals. I have also had seedlings which open with a green cup rimmed with white which rapidly convert to all white cup. These varieties often have a green stain at the base of the petals. I have not bred on to try to enhance the amount of green."

Clearly we will have to await next spring to see what happens to Sheila's green double - will it revert to being a white? Don't miss the spring issue of BN!

A new Chinese *Polygonatum*

A few people may be cultivating the rather attractive Solomon's seal called *P. cyrtonema*, although it is far from common in gardens and, in the UK, is currently offered by only one nursery according to *The Plant Finder*. A new species has been described from Anhui Province, China, and it is said to be related to *P. cyrtonema*.

It is *P. jinzhaiense*, published by D.C.Zhang and J.Z.Shao in the journal *Guihaia* 20: 32-36 (2000). The paper, by these two botanists together with S.B.Zhou, X.P.Zhang and Y.Zheng, enumerates the species (11 in all) growing in the province and provides a key to their identification. The new species was found at Jinzhai Xian at 850 m, flowering in May. It has yellowish flowers, so differs in this respect from the green *P. cyrtonema*, but the authors say that it also differs from this in being a taller plant (110-160 cm) with a thick (2-3 cm) rhizome, and the flower clusters in the leaf axils are umbel-like with 10-15 flowers; the peduncle (i.e. the flower stalk on which each flower cluster is borne) is longer (5-9 cm long). The individual flowers are 1.5-2 cm long. From the description it sounds as if this would be quite a showy plant, but at only 850 m it may be rather frost tender. It is not yet known to be in cultivation.

We have no illustration of the new species, so to give some idea of the plant's appearance we are showing a much-reduced, monochrome version of Pauline Dean's beautiful painting of *P. cyrtonema*, taken from the *Curtis's Botanical Magazine* of February 1990 (Vol. 16, Part 1, Plate 358). This is a very delightful plant in itself, but one with clusters of 10-15 flowers should be quite something.



Request

The BN team has a particular interest in *Muscari* and their relatives. There is a variety of *M. azureum* (*Hyacinthus azureus*, *Hyacinthella azurea*) that has seems to have disappeared from catalogues, known as *M. azureum* 'Amphibolis'. It was around in the middle part of the last century (don't the 1950s-1960s sound a long time ago now!), appearing in several catalogues. It has been described as China blue and French blue and larger than the normal form; some say later-flowering, others say earlier. If anyone knows of a reliable source, please contact the office!

BN Editor makes nomenclatural slip in *Crocus*

In a recent paper on the *Crocus* species of the Peloponnese, a new subspecies was described by your BN Editor: *Crocus hadriaticus* subsp. *parnonicus*. It is a lilac variant of the species which has no trace of yellow in the throat so does not agree with any of the other subspecies that have been described. It inhabits the south-eastern Peloponnese in the Mt. Parnon-Monemvasia area. Thanks to Manfred Koenen and George Christensen we have been growing it in Claygate for about 14 years but I have only just got around to providing a name for it! It is described in the Greek journal *Botanika Chronika* 13: 259 (2000).

At the same time it was decided to 'upgrade' the wholly white *C. hadriaticus* forma *parnassicus* to subspecies status, in keeping with subsp. *parnonicus*. In order that such matters are validly published (in the botanical sense) there are certain requirements laid down in the International Code of Botanical Nomenclature. One of these is that the original name (known as the basionym) and its place of publication must be cited in full and, of course, correctly. The staff of Kew's *Index Kewensis* team, Rosemary Davies and Katherine Challis were on the ball and pointed out that unfortunately BM had made two mistakes. Firstly, the reference to the place of publication was incorrect (a wrong volume number: 3 instead of 2), and secondly the page numbers for the whole article were cited, not just the page on which the name appeared. The latter is in itself sufficient to invalidate the new name *C. hadriaticus* subsp. *parnassicus*!

So, we will put matters right by doing it again, here & now:

Crocus hadriaticus subsp. *parnassicus* (B.Mathew) B.Mathew stat. nov.

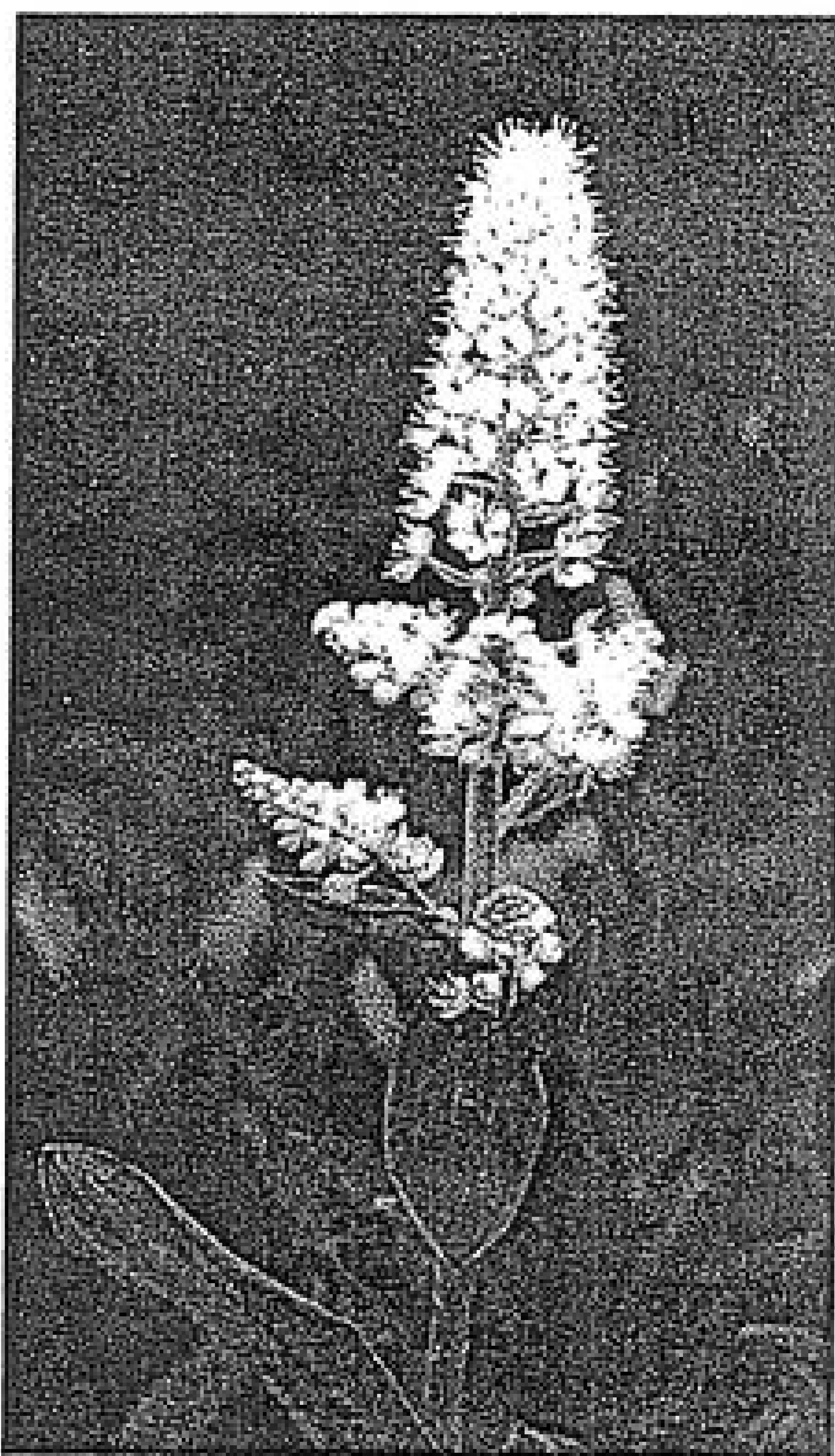
Syn. *C. hadriaticus* forma *parnassicus* B.Mathew in *The Kew Magazine* 2(3): 311 (1985).

The type specimen of forma (now subsp.) *parnassicus* was collected by Martyn Rix, number 2182, from Mt. Parnassus. This pure white version (with no yellow in the throat) has long been known from the area, but it is thought that it has now also been recorded in the central Peloponnese, hence its inclusion in the article.

In addition to the above there was a further change, this one involving *C. goulimyi*. I took the opportunity to alter the status of the eastern-most, essentially white-flowered, populations of *C. goulimyi* that had been described as var. *leucanthus*, to *C. goulimyi* subsp. *leucanthus*. But this was carried out in accordance with all the rules, so further comments are not required!

A stunning *Veratrum* - Brian Mathew

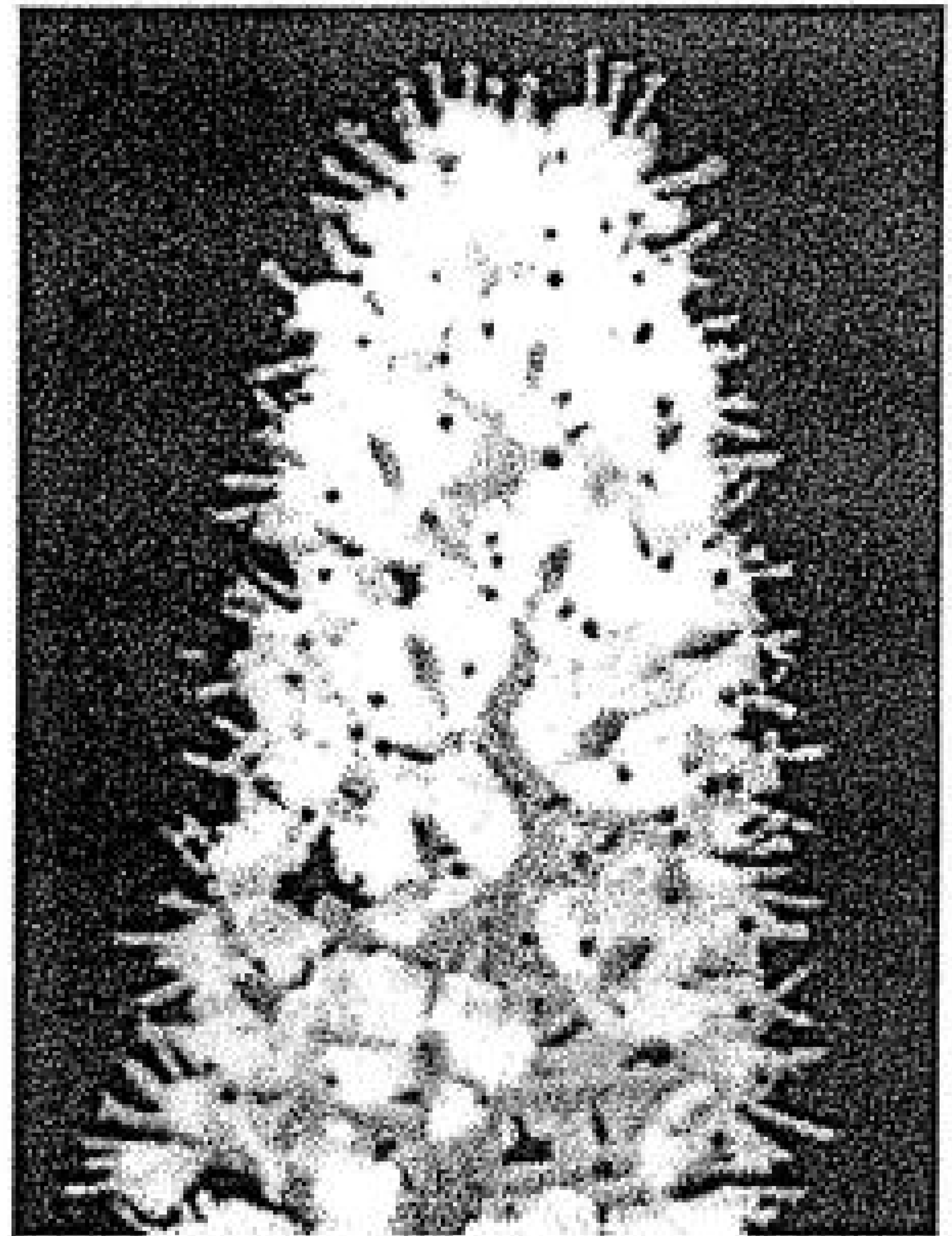
This year has been a *Veratrum* year, which is really welcome since this tricky (taxonomically) genus has been the subject of a long term interest. They are also rather fine garden plants, belonging to that group known as 'architectural plants' which seems to mean that one individual standing on its own can make an impact. Checking the identities of various plants in collections around the UK has led to the view that most people are growing forms of the very widespread *V. album* which can have white, yellow-ish or (most frequently) green flowers. It is hardly surprising that it is variable as it is distributed throughout the mountain ranges of Europe right across Asia and into Alaska - assuming it is all the same 'thing'. In North America the green-flowered *V. viride* is not that different and some botanists consider that it is really another variant of *V. album*. This is where one problem has arisen in gardens in the past, for some people have assumed (and logically!) that the white veratrum is *V. album* and the green ones *V. viride*; after all the blackish-purple ones are *V. nigrum*, so why not carry on with the flower-colour-based epithets. Unfortunately life is not that simple and the *V. album* complex is one of the trickiest problems in the genus and still requiring a convincing solution. On the whole it can be said that the flower head of *V. viride* looks a little different from forms of *V. album* because the side branches are drooping in the former and not so in *V. album*. Even the apparently very distinctive broad-leaved, black-flowered *V. nigrum* is not as clear-cut as it seems, for it tends to merge with the small, narrow-leaved *V. maackii* and its variants in eastern Asia.



Veratrum stamineum near Tateshina

So, it is a great relief to see a very distinct species of *Veratrum*, and this I had the pleasure of doing in Japan in June. Whilst on a lecture visit at the Barakura Flower Show I was given the opportunity of a trip into the mountains near Chino City and there, in full flower,

was a drift of this lovely white-flowered plant. It is, in stature, rather like *V. album* but is immediately recognisable because the flowers have long-protruding stamens - hence the name. In foliage it is also distinctive since the leaves are scattered up the stem rather than clustered near the base, so it is quite a 'leafy-looking' plant. The populations that I saw were growing in very wet situations, in open sub-alpine mountain meadows alongside streams in very boggy conditions - rather wetter than the places in which I have seen *V. album* growing. Hopefully one day I will have the chance of growing this in the garden for it is certainly one of the best of all that I have seen.



It is to be hoped that DNA studies in the United States by Dr. Wendy Zomlefer, Curator of the University of Georgia Herbarium, will elucidate some of the considerable taxonomic problems in *Veratrum*. The review of the genus that I provided for the June 1989 issue of *The Plantsman* (Vol. 11, Part 1) is of some assistance but should not be regarded as a definitive account!

Other petaloid monocots seen on the same trip and in the same general area were the local variant of lily-of-the-valley, *Convallaria keiskei*, *Hosta sieboldiana* (odd to see hostas as roadside 'weeds!'), the dwarf *Polygonatum humile*, *Heloniopsis orientalis* in a yellowish form, *Clintonia udensis*, *Trillium smallii* and *T. tschonoskii*, *Paris verticillata*, *Smilacina japonica*, the very attractive *Iris ensata* var. *spontanea*, *Iris sanguinea*, several *Arisaema* species and many terrestrial orchids including *Calypso bulbosa*.

However, perhaps the most extraordinary sight was on a visit to the nursery of Mr Hitachi where there were hundreds (if not thousands) of the gorgeous *Dicentra peregrina* growing in pots (retail stock for sale), in every possible shade from white through various pinks and rose to deep wine, often markedly bicoloured. These were potted in a pumice mix and all in perfect health, each one a fairly certain medal winner at any alpine show in England! I managed to refrain from bringing any back - I would not have given their chances of survival here in our dry atmosphere in the south-east more than just a few weeks.

British 'Bulbs' - by Brian Halliwell

British gardeners tend to consider bulbs from other countries far more desirable than their own natives, a view that is perhaps justified since our limited range of bulbous plants is not especially exciting. However, some certainly have merit and are among the most-appreciated of our wild plants.

There are, for example, three British representatives of the squills and their relatives. Although distributed also in northern and western Europe, *Hyacinthoides non-scripta*, the bluebell, is very characteristic of deciduous woodlands in Britain where it often carpets the ground and is one of the spectacular sights of spring. On the whole it is far better left where nature intended for although suitable for naturalising in large estates it can become a nuisance in a small garden and can be very difficult to eradicate. The spring squill, *Scilla verna*, is locally common in a number of places in southern and western Britain and I have seen it in the short turf on Cornish headlands. It should be coveted by alpine garden enthusiasts, being a very compact species, but appears to have been overlooked in favour of other more spectacular species. In somewhat similar conditions, near to the sea, occurs the autumn squill, *Scilla autumnalis*. This is another species that has been neglected by the rock gardening fraternity, which is surprising when there are not that many desirable autumn flowering bulbs.

Meadow saffron, *Colchicum autumnale*, on the other hand, is not uncommon in gardens although other species are considered superior. The flowers appear in August or September, rather naked because the leaves follow later and are quite substantial when fully developed. This is locally common, usually in grassland, and I have seen it in such situations in Norfolk. It has been cultivated in English gardens for more than 500 years and there are a number of selections both single and double.

Probably the most beautiful of our bulbs is snake's-head fritillary, *Fritillaria meleagris*. In nature it is confined to a few areas in southern England, usually in managed water meadows. It was one of our own natives that was taken early into gardens and has been popular for centuries. Whilst it grows naturally in wet soils, it will grow satisfactorily in any garden soil that does not become too dry.

Lloydia serotina has a circumpolar distribution and although it does occur in Britain it is rare, confined to a few places in the Snowdon range, hence its common name Snowdon lily. This is a very desirable plant suitable for a rock or peat garden but is seldom seen thriving; forms from the European Alps seem to have a stronger constitution than our native race.

The genus *Gagea* is a large one, but the many species are a challenge to grow and keep for more than a year or two. *Gagea lutea* is a British native and is among the easiest; a colony on the Wisley rock garden has certainly lasted for at least 50 years. This species is to be found locally in a few places in southern England.

The genus *Allium* is more important for its utilitarian species than for ornament,

the oniony smell being unacceptable in the flower garden to many people. Our native ramsons, *A. ursinum*, which carpets deciduous woodlands, can be beautiful in the countryside which is where it should be left for it can be a serious weed. However, I do allow chives, *A. schoenoprasum* into my garden. This species, which is said to have a wider natural distribution in the northern hemisphere than any other plant that we cultivate, also occurs in Britain and has been in cultivation for at least 2000 years.

Another deciduous woodland carpenter is cuckoo pint, *Arum maculatum*. Dormant from summer, it comes into growth in January and produces yellowish green spathes, sometimes spotted or blotched with brownish purple. It is curious rather than beautiful, but the spikes of bright berries are a redeeming feature in summer. Italian cuckoo pint is best known for the forms with attractively patterned leaves for winter interest. The British form, *A. italicum* subsp. *neglectum* (sometimes given specific rank), has plain leaves appearing in November. Some may consider the whitish-green spathes of value, but again it is the red berries that are its best feature. This is locally common in southern England.

Lodden lily, *Leucojum aestivum*, takes its name from the river where it occurs, and seems confined to the Thames valley. Although cultivated for several centuries it has never been highly esteemed; perhaps it is just too easy to grow. It has merit in flowering for a very long period, and some of the selections are more desirable than the 'straight' species. Also in the *Amaryllidaceae*, *Narcissus obvallaris*, although treated as a species may be of hybrid origin. There are myths and legends about its origin, but it seems to have been brought to southern Wales in early medieval times by Italian monks, although it was not described as a species until 1796 by R.A. Salisbury in *Prodromus ad Chapel Allerton*. This, the Tenby daffodil, is a fine garden plant with a smallish, wholly golden yellow flower. Perhaps the native bulb that has the most impact in British gardens is the common daffodil, *N. pseudonarcissus*, which is locally common in a number of areas in England and Wales. It has been much used in hybridising and its cultivar offspring are much better known which is a pity, for it has an elegance that the so-called superior forms lack. It flowers a little later than the Tenby daffodil and is bicoloured, with a pale yellow perianth surrounding a deeper yellow tubular corona.

There are also quite a number of bulbs apparently native but are probably garden escapes, perhaps from centuries ago. Bath asparagus, *Ornithogalum pyrenaicum*, grape hyacinth, *Muscari neglectum (atlanticum)*, blue-eyed grass, *Sisyrinchium bermudianum*, and sand crocus, *Romulea columnae* all fall into this category. [Possibly also the snowdrop, *Galanthus nivalis*? -ed.]

Mariposa

The Newsletter of the Calochortus Society is always really good value and full of some very detailed information, all for a sub. rate of just \$9 a year. They are working systematically through, species by species giving very precise details of the plants, their habitats and diagnostic characters separating related species. In the July 2000 issue, for example, botanist Frank Callahan compares *C. coxii* with *C. umpquaensis* and *C. howellii*, Good colour photos accompany each issue. Contact: Robinett, P.O. Box 1993, Brookings, Oregon 97415.

Those bulbs, those bulbs, those dry bulbs

Recently, some dry bulbs arrived for identification. The enquiry was along the lines of: are they *Tecophilaea cyanocrocus*, and if not what are they? Thanks go to our good friend Michael Upward, for it has provided food for thought and a piece for the BN!

Now, given only a bulb, where do you start? Not so much in trying to work out what it is immediately (unless it is instantly recognisable), but by ruling out as many others as possible. This one is clearly hardy, since Michael has it growing in an ^{un}heated frame, so that rules out nearly all the tropical and southern hemisphere bulbs.

It was a true bulb, with tightly wrapped scales inside a brown membranous tunic, so that rules out *Tecophilaeaceae* - they have corms with a fibrous outer layer. Members of the *Iridaceae* can be discounted since they nearly all have corms or rhizomes; the *Reticulata*, *Juno* and *Xiphium* groups of irises do have bulbs, but in the first of these groups the bulb tunics are netted, and the other two groups can be ruled out on the grounds of either having thick fleshy roots attached, or only a few scales to the bulb, certainly not many scales arranged in concentric circles.

That leaves us with *Liliaceae* (in its widest sense) or *Amaryllidaceae*. Taking *Liliaceae*, it is now generally accepted that this should be split into several smaller families. The only ones in the 'splits' that have 'bulb-like' underground parts are *Liliaceae* in its true (reduced) sense (*Lilium* & relatives *Tulipa*, *Fritillaria*, *Erythronium*), *Alliaceae* (*Allium*, *Nothoscordum*, *Ipheion*, etc), *Themidaceae* (*Brodiaea* & kin) and *Colchicaceae* (*Colchicum*, *Merendera*, etc). The true *Liliaceae* can all be counted out, for *Lilium*, *Nomocharis*, etc. have loose or few scales, and usually often with no tunics, *Tulipa* has few scales and is a slightly lop-sided distinctive shape, *Fritillaria* has few scales and no tunic, and *Erythronium* has a very elongate, lop-sided bulb. *Alliaceae* often have few scales, and they mostly reek of onions, *Themidaceae* have corms, often with netted coverings, *Colchicaceae* have curiously shaped tubers (?corms) with a 'foot' at the base, or they are elongated into long finger-like tubers. So, our mystery bulb fits into none of these groups.

However, *Hyacinthaceae* (*Scilla*, *Muscari* and their allies) and *Amaryllidaceae* are distinct possibilities since these both have bulbs consisting of tightly wrapped scales. There are not that many genera of small, hardy *Amaryllidaceae* - *Narcissus*, *Galanthus*, *Leucojum*, *Sternbergia* are the main ones. *Galanthus* can be ruled out since Michael indicated that this bulb increases very rapidly by offsets but does not flower (he would have identified if it did!). Snowdrops do not behave like that, and *Sternbergia* does not increase as rapidly as

this one clearly does. On the other hand, the bulbs do smell like a member of the *Amaryllidaceae* (sorry, I cannot describe it!), so the guess is that it is a *Narcissus* (such as the shy-flowering *N. canaliculatus*) or a *Leucojum* (some of the smaller ones increase readily by offsets). The alternative is a *Scilla* or *Muscari*, but the bulbs don't have quite the right smell.

All this may seem an useless exercise, but it was most interesting, highlighting the fact that a lot of our bulbs are recognisable, at least to genus, by their underground parts; useful when labels get lost.

We shall see what Michael's bulb is - if it ever flowers!

The results of our enquiries are.....

We enjoy the little queries that come into the BN office, for they often arouse our curiosity. A letter recently from Hal Robinson (Great Yeldham, Essex) contained three requests, and all were of some interest. Two of them concerned members of the Aroid family, so friend and colleague Peter Boyce at Kew was paid a visit. One of the photographs included two arums growing in Hal's garden, one of them clearly the very fine yellow *A. creticum*, the other a much taller plant with a larger white spathe carried on a deep purple stalk. Hal comments that the white one appears through the ground about two weeks earlier than the yellow; however, in most respects they appear to be similar. Peter Boyce confirmed them as being different forms of

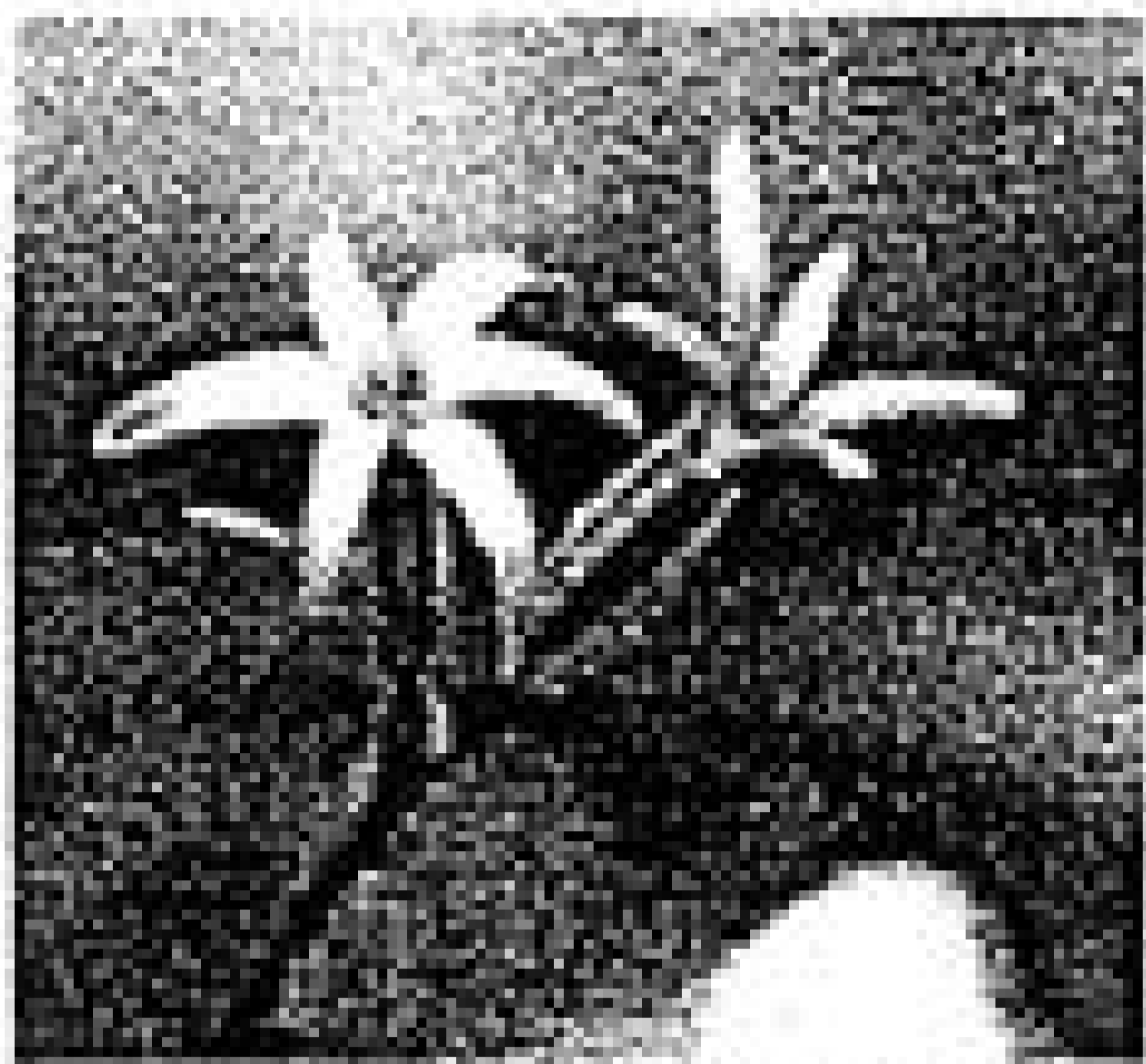
A. creticum, the yellow one the typical form from Crete but the large white one is most probably from south-western Turkey. We have seen very robust forms of the species growing on the Marmaris peninsula, not in flower at the time but the stalk was purple. The yellow form of *A. creticum* is perhaps the most desirable of all hardy *Arum* species and the white looks as good. They are certainly different enough from each other to make both worth growing. As can be seen from the photograph on the right, the white one is around twice the size of the yellow.



Hal Robinson's other aroid query involved the superb *Arisaema candidissimum*. He ask whether there are green-spathed forms of this species. The most frequently seen form in cultivation is striped pale pink and white. Here again, Peter Boyce came to our aid. He says that there is much variation in the species in the wild from white through

to quite a deep pink, and that it can be white with green striping. However, there is a so-called 'green candidissimum' in cultivation that is actually a green-spined form of *A. fargesii* and it is most likely that this is the plant that Hal has heard about.

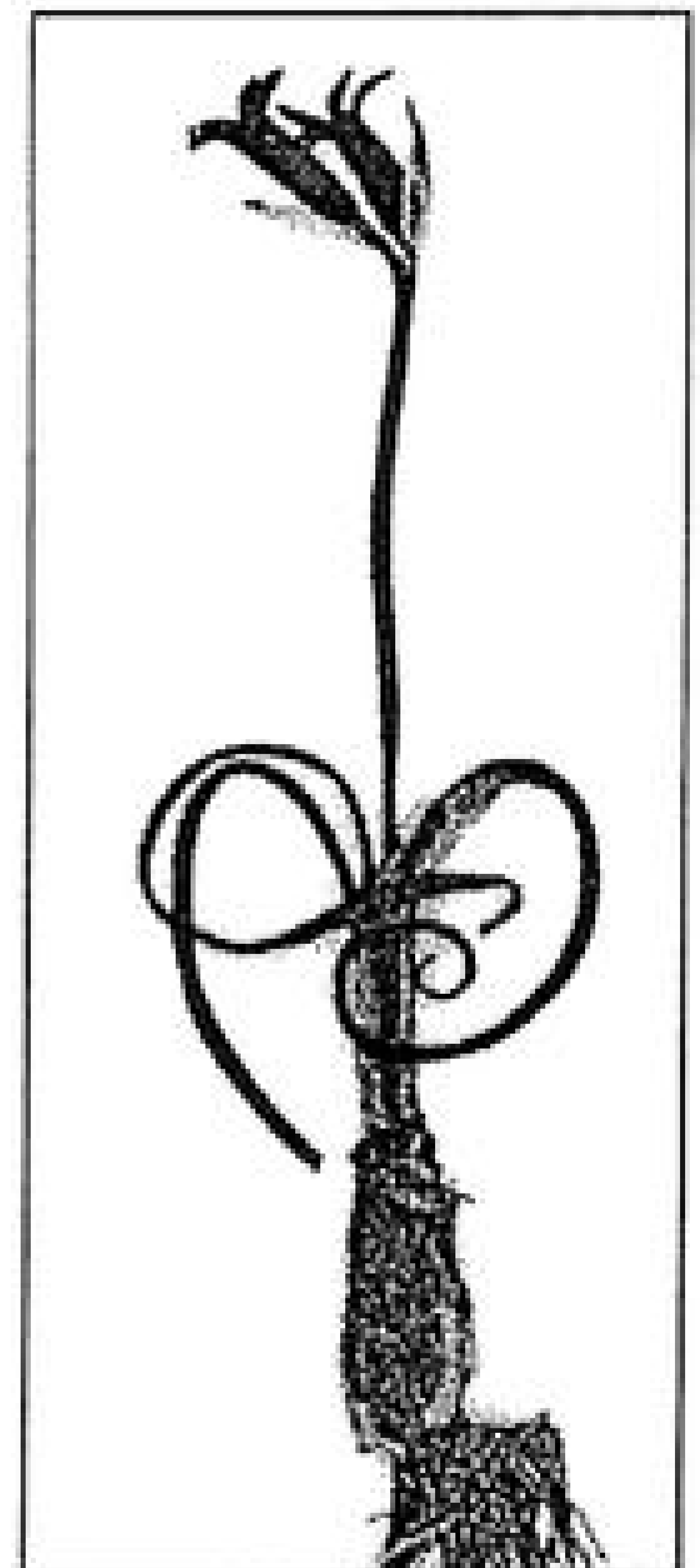
The third part of this interesting enquiry concerns a plant which Hal received as 'Tristagma rivale'. The accompanying photograph



shows two yellowish, narrow-tepalled flowers on a short stem, accompanied by narrow, strap-like leaves (see left). It is clear that this is *Tristagma nivale* (not 'rivale') from Chile and Argentina, but we were puzzled by the pale flower colour since the forms we have grown have been a dark or purplish green. Consulting herbarium specimens

is always helpful and a check at Kew revealed a number of them, with useful field notes attached.

Mrs R. Tweedie made it sound a very exciting plant: 'black-green succulent flowers' and 'about 2" high, dark purple stem arises from dark blue-green succulent leaves, scented'. However, specimens collected by Harold Comber revealed greater variation: 'low plant 2-3" [high] with curled leaves found in sandy soil. Flowers in 1s, 2s or 3s scented, same colour as leaves, whether that be pale green, dark green or purplish bronze' and 'flowers green or purplish green, sweet scented, leaves nearly always curled'. Dr C.R. Worth noted that the flowers could be 'yellow green, tube reddish'. In the *Flora Patagonica* Vol. 8, Part 2 (1969), P.F. Ravenna recognised two forms of this, forma *nivale* with the flowers on pedicels 1-3.5 cm long and forma *australe* with pedicels almost absent or up to 4.5 mm long. The scanned illustration on the right shows a plant of forma *australe* with very short pedicels and very curly leaves. It is our experience in cultivation that bulbs with curly or wavy-edged leaves often do not retain this attractive feature, probably due to less harsh growing conditions.



Although *Tristagma nivale* is not a spectacular bulb, it is interesting and worth growing in the alpine house where it behaves as a winter grower and is dormant in summer. In the wild it is a very widespread plant (from southern Argentina, Tierra del Fuego, at least as far north as Coquimbo in Chile), flowering between September and January and growing in rocky, sandy and peaty soils at up to about 1000m.

A query in *Cyrtanthus*

Hal Robinson was puzzled to find that self-sown seedlings from his red *Cyrtanthus parviflorus* had flowered yellow, but he could find no reference to yellow ones.

Without seeing the plants we cannot be sure of the answer, but it appears to be associated with an old taxonomic and nomenclatural problem which was (hopefully) sorted out by C. Reid & R.A.Dyer in their *Review of the Southern African Species of Cyrtanthus*, published by the American Plant Life Society (now IBS) in 1984.

Cyrtanthus parviflorus was a name published in 1891 by the Kew botanist J.G.Baker (for biography see Personalities, BN 11:8). He used the name again in 1896 in *Flora Capensis*. Unfortunately it appears that he was combining two species in his concept of *C. parviflorus*, one of them his own *C. brachyscyphus* described a few years earlier, and the other *C. bicolor*, described by R.A.Dyer in 1939 when he clarified the situation in *Herbertia* 6: 87 (1939). So, *C. parviflorus* could be (in part) a synonym of either species. Our guess is that Hal Robinson has *C. bicolor* since that species, according to Dyer, has both red and yellow forms. To quote: 'This species is apparently rather variable, as populations have been studied in which the flower colour ranges from red, through red with yellow lobes to orange and clear yellow'. *C. brachyscyphus* is said to be in shades of red and orange-red. The main difference between the two, which is used to distinguish the species in the key, is in the comparative length of the perianth lobes: 5-6 mm in *C. brachyscyphus*, 10-12 mm in *C. bicolor*.

Some extended distributions in eastern Turkey

Fevzi Özgökçe and Lütfi Behçet of Van University, Turkey have been recording the monocots growing at the far eastern end of Turkey, in the mountainous country leading up to the Iranian border, especially near the village of Özalp. Among the more interesting of the petaloid monocots noted were *Bellevalia rixii*, a blue-flowered species related to *B. pycnantha* but smaller, with falcate (curved) leaves, *B. fominii*, a species with greenish flowers which are distinctive in having black-tipped perianth lobes, the brownish-orange *Fritillaria minuta* (*carduchorum*), *Allium kharputense* (an *A. orientale/A. nigrum* relative), the *Oncocyclus* irises *O. paradoxa* and *O. sari*, and the Juno iris *O. aucheri*. Although it is not really surprising that these species have been found in the area, it is good to know that there are other localities for them farther to the east than those recorded in the *Flora of Turkey*.

The full records for these and many other monocots in the area are published in the *Turkish Journal of Botany* 24: 85-89 (2000).

Bulbs -the new publication from IBS

The International Bulb Society seems to be gathering strength at a great pace, and their new quarterly publication, replacing the Newsletter, is up and running. Taking the Spring 2000 copy as an example it looks as if it will be a valuable addition to the literature available to petaloid 'bulbous' monocot (geophyte is the 'in' word for this group, although coined ages ago) enthusiasts. This is in addition to the seriously technical *Herbertia*, the latest volume of which seems more substantial than ever.

The articles in *Bulbs* are of a more practical nature, aimed one imagines at growers rather than scientists, and the items include how to defend your plants against moles, gophers and squirrels, growing hippeastrums from seed, an item on the currently popular genus *Tulbaghia* by the NCCPG Collection holder David Fenwick, a review of bulbs for the winter solstice by Rod Leeds, items from the IBS internet forum and an article by Linda Dodge on geophytes as cut flowers.

The IBS offers these two publications, a seed exchange, a website, discounts on books, an e-mail bulb forum and a bulb exchange. Subscription rate is \$30 for US members, \$40 International (by air mail), \$35 (by surface mail). Payments should be made in US funds only, by cheque, international money order or credit card to IBS, and sent to David Lehmler, Membership, 550 IH-10 South, # 201, Beaumont, TX 77707, USA.

Catalogues

Although it is too late to order for this year, I am sure that bulb enthusiasts would like to know about Terry Smale's Xerophytes and Geophytes List Number 2 (issued in July 2000 after BN 31 had been distributed). This contains mainly South African species, and a very choice selection it is, with a good number that are difficult to obtain elsewhere (at least, difficult in the UK). There are several *Brunsvigia* species (for cultivation hints concerning season of growth see page 3 of this BN), *Crinum buphanoides*, *C. campanulatum* and *C. variable*, some unusual *Haemanthus*, a lot of *Lachenalia* spp., *Rhadamanthus*, *Whiteheadia* and some of the Cape irids. The interesting section on hardy bulbs also has some rarities - such as *Allium akaka*, *Corydalis macrocentra*, *Crocus biflorus* ssp. *isauricus* and *Chionodoxa nana*. Although these may not be available next year, it does give an idea of the range of curiosities that Terry offers. The succulents (with a speciality in *Conophytum* spp.) are on a separate list. Terry Smale, 28 St. Leonards Road, Epsom Downs, Surrey KT18 5RH, England. 01737-350834
e-mail terry@smale1.demon.co.uk

The seed list of Jim & Jenny Archibald is always mouth-watering and the latest, August 2000, is as good or better than ever. Nearly two pages of *Alstroemeria* species gives an idea of the quality, 19 separate accessions from coppery-red forms of *A. aurea* to pale lilac *A. ? zoellneri*. We have never succeeded with the little shrubby monocot *Luzuriaga marginata* (related to *Philesia* and *Lapageria*) from the Falkland (Malvinas) Islands, but it is offered here - maybe one more try? The small yellow nothoscordums are delightful little bulbs and *N. ostenii* is particularly appealing with umbels of bright yellow flowers; this came from Alberto Castillo to the BN editor and hence to Jim & Jenny - it is good to see it 'in the trade' at last. Also in the *Allium* family is *Tristagma* and we were delighted to see *T. nivale* (see page 14, this issue) and *T. (Ipheion) sessile*. We have cultivated the latter for many years and find it a most attractive, very dwarf bulb suitable for the alpine house; it has white, fragrant flowers on very short stems. Other South Americans include some good *Sisyrinchium* species and *Solenomelus pedunculatus* which has bright yellow, well rounded flowers - not as starry as in most sisyrinchiums. Southern Africa is not overlooked, and in the monocots we find the very appealing *Agapanthus inapertus*, so very different from the norm with its long, dangling, deep blue tubular flowers. Dieramas are undergoing a period of great acclaim, and rightly so, so the list offered here should be popular: *D. dracomontanum*, *erectum*, *galpinii*, *igneum*, *insigne*, *medium*, *pallidum*, *pauciflorum*, *pulcherrimum*, *reynoldsii*, *robustum* and *trichorhizum*! It is good to see *Cyrtanthus breviflorus* in a list. We used to grow this (as *Anoiganthus*) many years ago, from Mrs Ruth McConnel who grew it outside in her *Rhodohypoxis* nursery on the west coast of Scotland; almost certainly the same stock as Jim is offering, originating from Mrs Milford's collection of the early 20th century from the Drakensberg; it has umbels of funnel-shaped *Sternbergia*-like yellow flowers. Other summer-growing Southern Africans included are a good range of *Gladiolus* (the two gorgeous red ones *G. cardinalis* and *G. saundersii* (confirmed as hardy in Surrey), pinkish-lilac *G. crassifolius*, various forms of *G. dalenii*, *G. ecklonii*, *G. longicollis* and several others we are not familiar with. Kniphofias also feature very prominently, some 21 species! *Massonia*, an un-named species from 2900 m in the Drakensberg, sounds rather tantalising too, and the dwarf scillas *S. kraussii* and *S. dracomontana* (see BN20:3) are certainly worth having - for the frost-free glasshouse. Tulbaghias, and several *Watsonia* spp. complete this feast, but there is one very special item from 'down under'. It is the Tasmanian endemic *Isophysis tasmanica*, a fascinating little iris-like plant with starry red-brown flowers. Jim is probably correct in saying that it is most likely not in cultivation [in the UK]. We did grow for several years in a pot of

sphagnum moss, and we raised seedlings on sphagnum - but as we don't have it now, maybe this was not the correct recipe! Jim & Jenny Archibald, 'Bryn Collen', Ffostrasol, Llandysul, SA44 5SB, Wales.

Similarly, the Flores & Watson seed list from South America is also guaranteed to have something to tempt every bulb enthusiast. Here again, in amongst all those astonishing Andean dicots such as the rosulate *Viola* spp., there are some very choice species of *Alstroemeria*, *Olsynium* (i.e. the rush-leaved sisyrinchiums), including the orange or brick-coloured *O. lyckholmii*, the very desirable rhizomatous *Oxalis loricata* and *Tristagma nivale* again, but this time forma *australe* (see page 14 this issue), so with luck you could acquire both forms from these two seed suppliers! John Watson & Anita Flores de Watson, c/o M.J.Cheese, Silvercove, Lee Downs, Ilfracombe, North Devon EX34 8LR, UK.

It is getting a little late for ordering the winter-growing bulbs, but last orders are taken by Norman Stevens of Cambridge Bulbs up to October 15. There are some treasures to be found here in these 10 closely typed A4 pages and I can pick out just a few to give an idea of what the rest must be like: the superb white-spated *Arisaema saxatile* (possibly is not that species according to Peter Boyce, but an excellent plant), *Colchicum boissieri*, *C. minutum*, *Corydalis darwasica*, *Crocus candidus* (rarely offered), *C. gargaricus* ssp. *gargaricus*, *Fritillaria* (many, including some of the newer Chinese species such as *F. tortifolia* and *F. yuminensis* forms), *Galanthus fosteri*, *Hyacinthella millingenii*, *Lilium medeoloides*, *Paris fargesii*, *Scilla melaina*.....need I say more? Cambridge Bulbs, 40 Whittlesford Road, Cambridge, CB2 5PH, UK Tel.: 01223-871760.

Bookends

Aroids - Plants of the Arum family by Deni Bown. This was first published in 1988, but this is a very much up-dated version with twice as many colour illustrations (73 excellent photographs), a new guide to cultivation and incorporating recent taxonomic and nomenclatural changes. There are also quite a lot of good quality line drawings. Inevitably many of the plants dealt with are tropical or sub-tropical, but all the hardy favourites are there as well - *Arisaema*, *Pinellia*, *Arum*, *Biarum*, *Dracunculus*, *Eminium*, etc. There are chapters on topics such as edible aroids, their chemistry and toxicity, their pollination mechanisms and the very useful cultivation section, dealt with alphabetically by genera. Also very helpful is the checklist of the numerous aroid genera showing in tabular form the

Latin name, number of species, distribution, habit and ecology. This is altogether a very informative and interesting book, to be highly recommended. Published by Timber Press, ISBN 0-88192-485-7 at \$34.95 or £25.

The Wild Flowers of Tibet by Xu Feng-Xiang and Zheng Wei-Lie (published 1999). This essentially pictorial account of some of the wild flowers of Tibet understandably involves mostly non-monocots. However, it does include some photographs of rarely-seen monocot species, so is worth a mention here. There are, for example, good photos of *Iris potaninii* (yellow form), a great drift of *I. lactea* ("ensata"), *I. latistyla* (although this species is probably the same as *I. decora*), *I. chrysographes* (the photo probably shows *I. bulleyana*), *Streptopus simplex*, *Chlorophytum nepalense* (looks very like an *Ophiopogon* or perhaps *Theropogon*), *Disporum bodinieri*, *Roscoea purpurea* var. *gigantea*, some *Paris*, several orchids, *Arisaema* spp., and, of course, some delightful dicots. The text is in both English and Chinese. The arrangement of the book is in habitat types: semi-arid plateau and alpine, moist alpine, semi-arid to semi-moist valley region, temperate forest, and subtropical. ISBN 7-5032-1605-0.

The Flora of Southern Africa is one of these splendid on-going projects, publishing the families (or bits of them) as separates, as and when they are completed. Volume 7, Part 2, Fascicle 1, written by Miriam de Vos and Peter Goldblatt and published in 1999, contains part of the family *Iridaceae*, namely the genera *Ixia* (51 spp.), *Tritonia* (26 spp.), *Crocasmia* (9 spp.), *Duthiastrum* (1 sp.), *Chasmanthe* (3 spp.), *Devia* (1 sp.) and *Sparaxis* (15 spp.). *Dierama* (38 spp.) is also included but no botanical details are given, since it follows exactly the book *Dieramas* by O.M.Hilliard and B.L.Burtt with illustrations by Auriol Batten, published by Acorn Books in 1991. Southern Africa in the sense of the *Flora* covers South Africa, Lesotho, Swaziland, Namibia and Botswana. In addition to the usual keys and descriptions that one expects in a good *Flora*, there are line drawings and distribution maps. Another part of the *Iridaceae* was published in 1983, Fascicle 2 containing *Syringodea* and *Romulea*.

The Bulb Newsletter is published quarterly and is obtainable from:
Brian Mathew, 90 Foley Road, Claygate, Esher, Surrey KT10 0NB, U.K.
Rates are as follows: [Airmail postage is included]
• UK: £12.50 per year
• Europe: Eurocheque or International Money Order for £15 per year
• USA and other countries: US \$30 year (or Int. Money Order for £15)
Cheques payable to B. Mathew please, not the Bulb Newsletter

INDEX TO GENERA -2000

- Agapanthus 29:2-3
 Allium 29:12,16,18; 32:10-11; 32:15
 Alstroemeria 31:3
 Anthericum 31:3
 Antholyza 29:3
 Arisaema 29:2; 31:14; 32:13
 Arum 29:13; 32:11,13
 Bellevalia 29:6; 32:15
 Boophone 31:4-5; 32:3
 Brimeura 29:6
 Brunsvigia 31:4; 32:3
 Calochortus 30:7
 Calydorea 30:3
 Camassia 30:7-8
 Chionodoxa 29:6
 Chionoscilla 29:6
 Clivia 29:20
 Colchicum 29:13-14; 32:10
 Convallaria 31:3
 Corydalis 29:10
 Crinum 30:4; 31:2
 Crocus 29:3,9,10,12,13; 31:10; 32:7
 Crossyne 32:3
 Cybistetes 31:4-5; 32:3
 Cyclamen 29:12,13; 30:16
 Cyrtanthus 31:3; 32:15
 Dracunculus 30:2
 Erythronium 29:11; 31:3
 Eucharis 31:5
 Eucomis 31:5
 Eucrosia 30:14-15
 Ferraria 30:3
 Forbesia 30:12-13
 Fortunatia 30:7-8
 Fritillaria 29:3,10,11,19; 30:3; 31:3,4,7;
 32:2,10; 32:15
 Gagea 30:8; 32:10
 Galanthus 29: 7,9,10; 30:6
 Galtonia 31:5
 Gladiolus 31:5
 Haemanthus 31:9; 32:3
 Hannonia 29:17
 Haylockia 29:3
 Herbertia 30:3
 Hippeastrum 29:3; 32:4
 Hyacinthella 29:6
 Hyacinthoides 29:6; 32:10
 Hyacinthus 29:6
 Hymenocallis 31:5
 Iridodictyum 30:1; 31:11
 Iris 29:2-3,4,11;30:1; 31:6,11; 32:12,15
 Ixia 31:5
 Kaempferia 29:4
 Kniphofia 29:3
 Lachenalia 31:3
 Leucojum 32:11
 Lilium 29:4,19; 30:5; 31:5,8; 32:5,12
 Liriope 31:15
 Lloydia 32:10
 Massonia 29:14
 Merendera 29:13-14
 Moraea 31:5; 32:5
 Muscari 29:5,6; 32:6
 Narcissus 29:11; 31:16; 32:1,11; 32:5
 Nectaroscordum 29:17
 Nerine 29:15; 31:3
 Ophiopogon 31:15
 Oziroë 30:7-8
 Pancratium 29:17; 31:3-4
 Paradisia 31:3
 Paramongaia 31:5
 Polygonatum 32:6
 Puschkinia 29:6
 Ranunculus 30:10
 Rhodohypoxis 30:12; 31:5
 Rhodophiala 31:4; 32:4
 Roscoea 29:3,12; 31:8
 Saniella 30:12
 Scadoxus 31:9
 Scilla 29:6,10,11; 32:10
 Smilacina 32:1
 Sparaxis 31:5
 Sprekelia 31:4
 Stenomesson 31:4-5
 Strangweia 30: 16
 Tecophilaea 29:10; 32:12
 Tigridia 31:13
 Trachyandra 32:3
 Tricyrtis 31:3
 Trillium 29:1; 31:3
 Tristagma 32:14
 Tritonia 29:2
 Tulbaghia 31:1
 Tulipa 29:10
 Urceolina 31:5
 Vagaria 29:17
 Veltheimia 29:2
 Veratrum 32:8-9
 Zingiber 29:17

***IF YOU WOULD LIKE TO RECEIVE *THE BULB NEWSLETTER* IN 2001 ***
 PLEASE RETURN THE ENCLOSED RENEWAL SLIP SOON