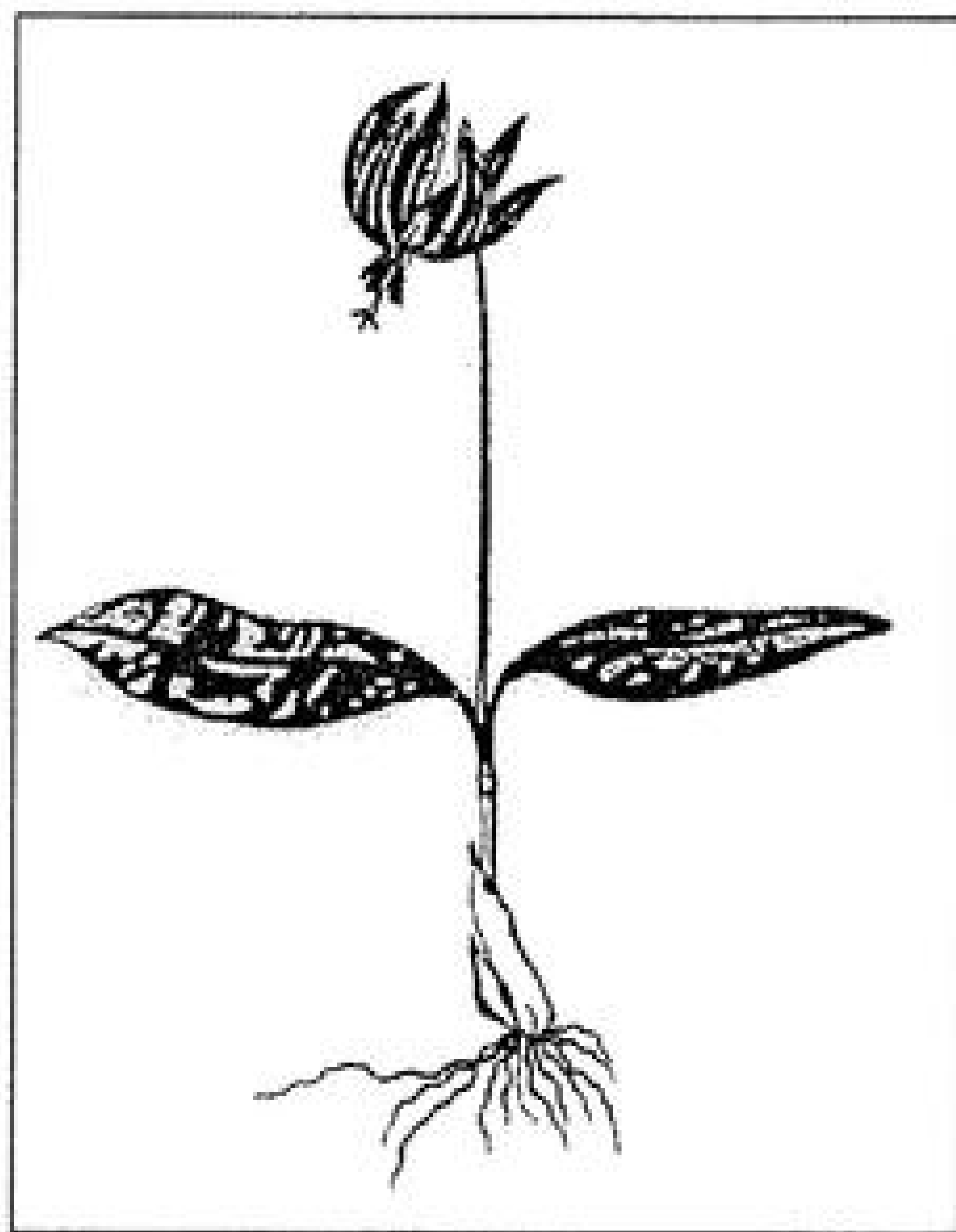


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Amana lives, long live Amana!

In the *Kew Scientist*, Issue 19 (April 2001), Kew's Dr Mike Fay reports on the molecular work that has been carried out on *Amana*. This little tulip-like eastern Asiatic group of *Liliaceae* that we have long grown and loved as *Amana* (*A. edulis*, *A. latifolia*, *A. erythronioides*), but which took a trip into the genus *Tulipa*, should in fact be treated as a distinct genus. The report notes that "Molecular data have shown this group to be as distinct from *Tulipa* s.s. [i.e. in the strict sense, excluding *Amana*] as *Erythronium*, and the three genera should be recognised." This is good news all round. I need not change the labels on the pots (they still labelled *Amana*), neither will I have to re-label all the *Erythronium* species as tulips!

Amana edulis is a remarkably persistent little plant. The bulbs of it in the BN garden were acquired in the early 1960s but had been in cultivation well before that, brought back to England by a plant enthusiast participating in the Korean war.

Although not as showy as the tulips, they are pleasing little bulbs with starry white flowers striped purplish-brown on the outside. It takes a fair amount of sun to encourage them to open, so in cool temperate gardens where the light intensity is poor in winter and spring, pot cultivation in a glasshouse is the best method of cultivation. With the extra protection and warmth, the flowers will open out almost flat.

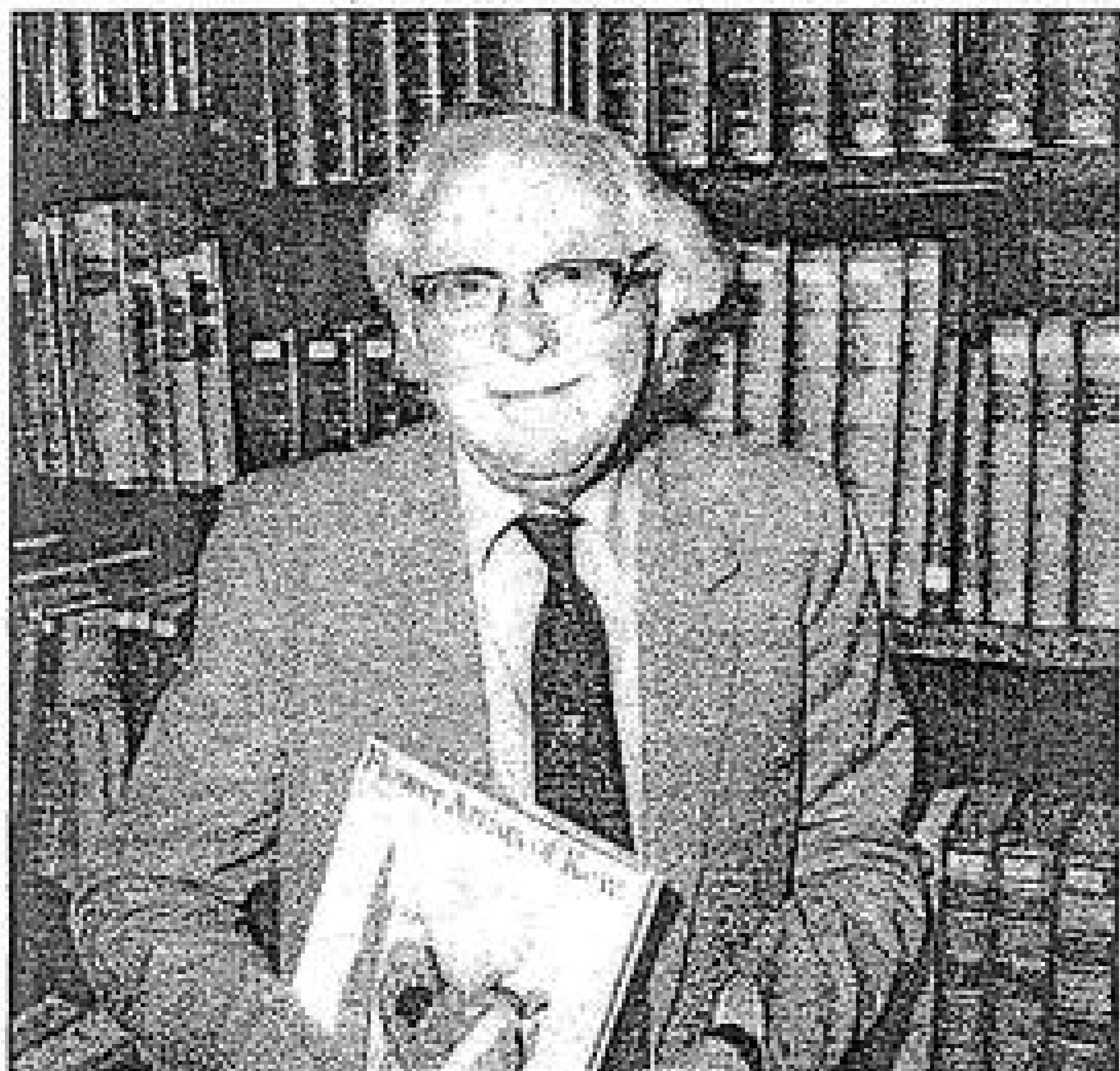
And from the same source, a note on Tulipa sprengeri

Dr Fay reports that the fascinating *Tulipa sprengeri* (see BN 35: 8-9) appears to fit in with the group of tulips known as subgenus *Eriostemon*es (along with such species as *T. biflora*, *T. sylvestris*, *T. orphanidea* and *T. humilis*) although, unlike the other members of that subgenus, its stamens are without hairs at the base of the filaments. The species forming the other subgenus, now known as subgenus *Tulipa* (formerly *Leiostrimon*es) have hairless filaments (e.g. *T. agenensis*, *T. praecox*, *T. kaufmanniana*, *T. fosteriana*, etc.).

Personalities in the Bulb World 15 - William T. Stearn

It is with great sadness that we record the death on 9 May 2001 of an old friend and colleague, William Stearn. Perhaps it is wrong to suggest that he was a 'bulb man', for he knew so much about so many things, but he did do a lot of valuable work in the study of monocots, so it is appropriate to include him here in our series of 'bulbous personalities'.

William Thomas Stearn was born on 16 April 1911 in Cambridge,



William T. Stearn in the Library at Kew.
Courtesy of the Royal Botanic Gardens, Kew

England and was, from an early age, intrigued by country matters in the local environs and on his uncle's farm in Suffolk. His love of books and plants soon became apparent - his first job on leaving school was in a Cambridge bookshop and he attended Cambridge University's botany school. In his 'spare' time he studied languages and, as a result, the spheres of botany and gardening have benefited enormously from his very valuable works *Botanical Latin* and the

Dictionary of Plant Names for Gardeners. Stearn's first botanical paper was published when he was 18 and, at the age of 22, he caught the attention of E.A.Bowles who recommended him for the post of Librarian to the Royal Horticultural Society. After a wartime period in the RAF he became involved in compiling the later parts of the *RHS Dictionary of Gardening*. Then, in the 1950s he joined the staff of the Natural History Museum in London where he remained until retirement in 1976. 'Retirement' was, in William Stearn's case, a meaningless term as he continued to be extremely productive for another quarter of a century!

During all his time in full-time employment and subsequently, he published an enormous quantity of books and papers on a wide range of subjects. In the bulb world, we can pick out *Lilies of the World* (Woodcock & Stearn) and his copious studies and writings on *Allium*, especially accounts for various Floras including *Flora Europaea* and the *European Garden Flora*. He was of great help to Elmer Applegate when the latter was working on the western North American species of *Erythronium*. Botanical illustration was also a

special interest and some splendid books were written on the subject, for example *The Art of Botanical Illustration* (with W.Blunt) which is essential reading for anyone with the slightest interest in the subject, *Flower Artists of Kew* and *An English Florilegium*.

William Stearn's last major piece of work was nearly completed before his death but is not yet published (it will probably appear later this year), a monograph of *Epimedium* and other herbaceous *Berberidaceae* which includes the tuberous genera *Leontice* and *Gymnospermium* (see this BN, page 6). This will be published by the Royal Botanic Gardens, Kew, in the *Botanical Magazine Monographs* series. For his services to botany and horticulture he was awarded the CBE (Commander of the British Empire), VMH (Victoria Medal of Honour), the Swedish accolade Commander of the Order of the Star of the North, for his works on Linnaeus; he also received honorary doctorates from such notable establishments as Cambridge, Leiden and Uppsala universities. Willy Stearn was an inspiration to us all, with his infectious enthusiasm and zest for acquiring knowledge - we will miss him very much.

Problems, problems

Mary Randall has written to ask if we have any comments to make over some aberrations that have appeared in her collection of *Arisaema* species this year. She writes:

"Having admired a pan of *Arisaema kiushianum* on the show bench I acquired, at great expense, a selection of dwarf arisaemas. They all flowered last year, the *A. kiusiana* looking for all the world like a scops owl peering out under a green umbrella, and it set what I hope will be viable seed.

This year something odd has happened. *A. thunbergii* var. *urashima* has produced a double-spathed inflorescence - the inner spathe which contains the spadix is fully enveloped by a larger outer spathe. *A. kiushianum* also has a double spathe but with each spathe facing the other, containing a single spadix but with the overhead spathe extensions making love, as it were. Is such doubling at all common?"

Curiously enough, on the same day that Mary's letter arrived, we were looking at a batch of *Arisaema candidissimum* flowering in the greenhouse (not the usual place they are grown but we were going to lend them to the Surrey NCCPG for their Chelsea Show exhibit, for which they received a Silver Medal - well done! 'Were going to' is the correct tense because they failed to flower in time, having ignored all our warm invitations to flower earlier than normal). One of them has a double spathe, the first time any abnormality has been noticed. This took the form of a very large spathe, in the usual lovely shade of

pink with white striping, and this was stemless; inside it was a completely normal spathe on a stalk, containing the spadix, etc. as normal. Really quite an impressive plant (right).

The first port of call on such occasions is Peter Boyce, aroid specialist of the Kew Herbarium. Peter says that he has heard of various malformations in the spathes of aroids, particularly in the case of tropical ones, but that he has not seen oddities like this in hardy arisaemas.

Exactly what causes such problems is not known, but they probably occur as a direct result of some external factors such as temperature or moisture levels at a critical time of development. In these cases it is doubtful that the 'doubling' will be repeated next year, but it is worth keeping a watch on them to see what happens.



Daffodil & Tulip Yearbook 2000-2001

In addition to the many reports of shows, new cultivars, etc. this valuable annual journal contains a very varied selection of articles on *Narcissus*, but this time very few on tulips. Derrick Donnison-Morgan writes about a visit he made to Spain looking at some of the new *Narcissus* species that have been described in recent years - *N. yepesii*, *N. segurensis* and *N. alcaracensis* (see BN 31:1 for a notice about these). There are useful observations and descriptions (with measurements) of all three, based on live specimens, and colour photographs are provided. Kath Dryden has written a review of some of the smaller daffodils with some very useful cultivation notes, and Christine Skelmersdale has an article on the various jonquils and their hybrids. There is also a very enthusiastic account by Brian Duncan, giving his impressions from a first visit to Spain looking at wild daffodils; these include some enormous forms of

N. triandrus, as much as 37 cm tall with up to 5 flowers per stem. Although supposedly confined to *Narcissus* and *Tulipa*, a few other things squeeze their way in. so we find an item on the variations in snowdrops, *Galanthus nivalis*, in the Czech Republic by John Grimshaw. Other useful information concerns that awful pest of amaryllids, bulb scale mite (by Andrew Tompsett), the rapid propagation of narcissi using tissues taken at the base of the scape, from within the bulb, and many articles on *Narcissus* breeding.

The Narcissus and Tulip Yearbook may be obtained from the RHS at 80 Vincent Square, London SW1P 2PE.

More Moraeas - new species found

There seems no end to the novelties that keep turning up in Southern Africa in the genus *Moraea*, a genus now approaching 200 species, partly due to new discoveries and partly the result of incorporating other genera, e.g. *Galaxia*, *Gynandriris*. In a recent paper (*Novon* 10:14-21, 2000) Peter Goldblatt & John Manning describe 4 new ones:

Moraea vespertina has large (5-6 cm across) white, fragrant (lemon-scented) flowers that open in late afternoon/evening (hence the choice of name). It is a tall plant, up to a metre in height, with a branching habit. It has been placed in subgenus *Visciramosa* and has the characteristic feature that gives the group its name - sticky patches on the stems just below each node. It grows in heavy red clay where the ground is waterlogged during the growing season. The type locality is in the Northern Cape Province on the Bokkeveld escarpment in Calvinia District where it flowers in late October/early November.

Moraea deltoidea is from the Western Cape in the Klein River mountains near Hermanus, flowering in late November on rocky (sandstone) slopes. It is a slender species, 30-40 cm in height with pale yellow flowers about 2.5 cm across, dark speckled on the outer three segments which are strongly reflexed. The epithet *deltoidea* refers to the short, triangular style crests.

Moraea vigilans comes from the Drakensberg mountains and takes its name from Sentinel Peak, hence 'vigilant'. Since it occurs on the eastern side of Southern Africa its growing season is from November to March (equivalent to May-September in Northern Hemisphere), and flowers in January or February (July-August in NH). The habitat is in peaty loam on steep slopes. It has white flowers faintly suffused mauve and speckled or banded with blue or mauve towards the base of the outer three segments. The height is 50-70 cm.

Moraea melanops would be a *Galaxia* if the genus had not been 'sunk' into *Moraea*; now it belongs to *Moraea* section *Galaxia*. This is from the Western Cape, from Bredasdorp District, flowering in August

or early September and growing in heavy clay where the vegetation is sparse due to burning. Like other galaxias it is a dwarf, tufted plant only 4 cm in height with the short leaves lying almost on the ground. Several erect flowers are produced, widely cup-shaped in pale to deep purple with a blackish-purple zone in the centre (the name *melanops* means 'black eye'). Unlike the three species above, this, like other galaxias, has six more or less equal segments whereas they have three larger outer segments and three smaller inner ones (like the 'falls' and 'standards' of an *Iris*). Doubtless, like other galaxias that we have grown, the flowers are very short-lived - a few hours at best.

And another Colchicum

Almost as prolific as new moraeas are colchicums from Greece and western Asia! This one, *C. leptanthum*, described by Karin Persson in the *Botanical Journal of the Linnean Society* 135: 85-88 (2001), is from north-east Turkey. It is an early spring-flowering species with small flowers having segments 1.3-1.9 cm long and only 1-3 mm wide (*leptanthum* = slender-flowered), white or slightly flushed pale purple-pink at the base. There are three narrow leaves, produced at the same time as the flowers. In general appearance it is similar to some of the other small-flowered spring colchicums such as *C. serpentinum*, but this one has a corm which is 'sobiliferous', horizontal and elongated allowing the plant to spread. This happens in several other species such as the autumnal *C. boissieri*, *C. psaridis*, and some of the closely related merenderas.

C. leptanthum was described from a plant cultivated in Göteborg that had been collected by Helmut Kerndorff and Erich Pasche in north-eastern Turkey near Yusufeli, in stony steppe country at 660m.

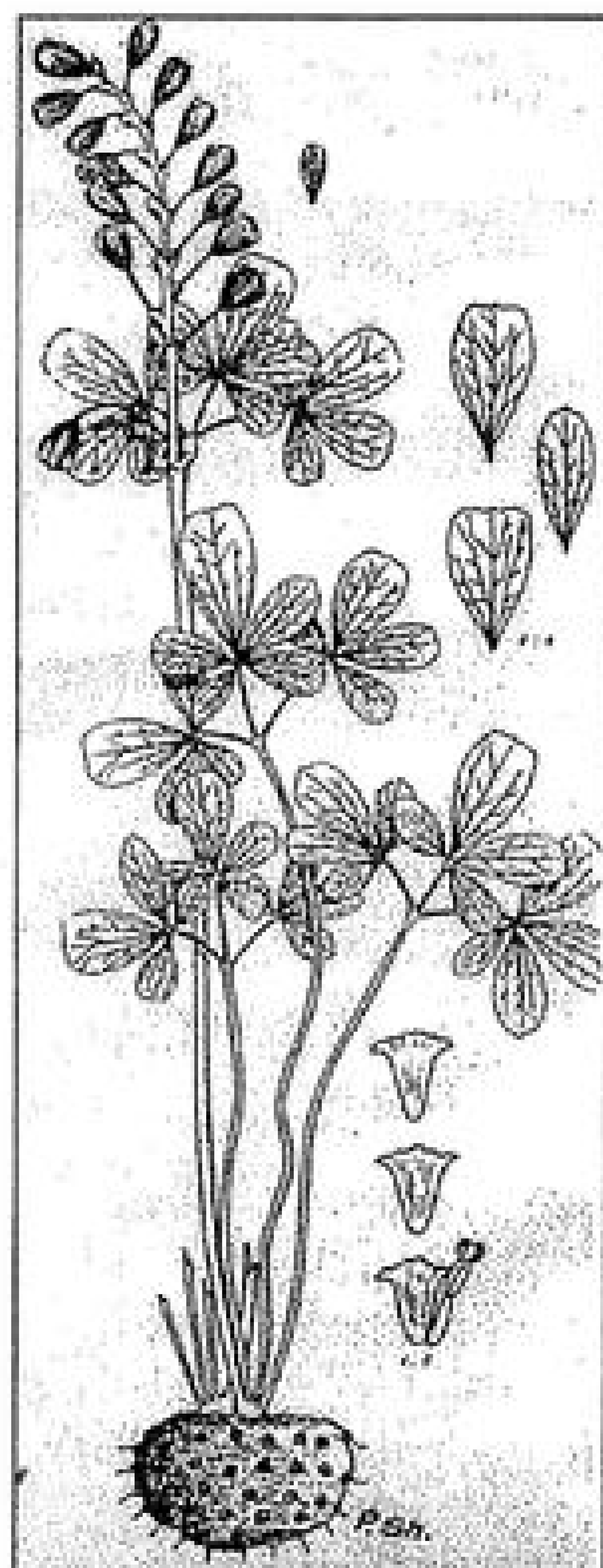
Albania yields some secrets: a new Gymnospermium

Not a monocot, we know, but most definitely tuberous and of interest to bulb enthusiasts. Gymnospermiums (sometimes included in *Leontice*) are herbaceous members of the *Berberis* family; if this seems hard to accept, just look at the flowers of a *Leontice* and compare with a *Berberis*. To take this further, dig up and compare the tubers and roots with the stem and roots of a *Mahonia* or *Berberis* - they are yellow in colour and even smell the same! These are *Berberis* relatives that have taken to the herbaceous/tuberous habit in order to survive long dry summers. There are three closely allied genera involved: *Leontice*, *Bongardia* and *Gymnospermium*, which encompass several species distributed from south-eastern

Europe eastwards to Central Asia. The western-most occurring *Gymnospermium* was formerly thought (e.g. as in *Flora Europaea*) to be *G. altaicum*, a Central Asiatic species that is also found in the Crimea and eastern Roumania. Recently, two events occurred in the BN office that show that this is now known to be incorrect. While editing an article for *Curtis's Botanical Magazine* by Peter Barnes on botanical exploration in Albania, I came upon a name that I had not encountered: *Gymnospermium shqipetarum*.

Also on the office desk for editing is the new monograph of *Epimedium* (which includes all the other herbaceous *Berberidaceae*) by William T. Stearn (see Personalities, page 2, this issue of BN). This also has a reference to the same species. The Albanian journal in which it appears could not be easily located, but contact with a helpful botanist from Tirana (Petrit Hoda) resulted in a photocopy arriving. It was described quite a while ago by Kolë Papparisto and Xhafer Qosja in *Buletin i Shkencave te Natyres* 2: 95 (1976). The first

collections were made near melting snow in the mountains near Krujë and Elbasan (north-west and south-east of Tirana respectively) at 1000-1400 m altitude; flowering time was late March. There is a full description in Latin and this shows it to be quite similar in appearance to other *Gymnospermium* spp. with the usual yellow berberis-like flowers and ternate leaves with divided leaflets. The drawing, which gives a good overall impression of the plant, is reproduced here.



And an Albanian Leucojum....

The same two Albanian authors who described *Gymnospermium shqipetarum* (see above) have named a new subspecies of *Leucojum valentinum*. The discovery of this species in Albania is interesting and probably a new record for the country. The species is otherwise known only from Spain and the nearby Greek island of Cephalonia (but see BN 33:8). The new subspecies of it, named *L. valentinum* subsp. *vlorense* by Papparisto & Qosja, appears to differ from the Cephalonian plants mainly in details of measurements of various parts of the flowers. It was collected near the coastal town of Vlore, approx. 40° 30' N, 19° 30' E.

Wild tulip chase ends in buttercup meadow

Our comments on hunting for *Tulipa sprengeri* rang a bell with Alan Edwards, who has supplied the following note:

"Reference the quest for *Tulipa sprengeri* in BN 34 and Brian's suggestion that a photograph might be a useful aid when enlisting the help of local villagers. I was reminded of the occasion a few years ago when my wife and I were in the Turkish Republic of North Cyprus in pursuit of *Tulipa cypria*. After a fruitless search around the orange groves near Myrtou (a Desmond Meikle* locality) we stopped in a small village nearby and sought help from a passing citizen who fortuitously spoke fluent English. Could he tell us where we might find 'Lale'? (Turkish name for tulip). 'Why yes, of course', he knew exactly where they grew in great abundance and he would be delighted to take us there directly.

He promptly made himself at home in the passenger seat and directed me along a series of dirt tracks through fields of wheat and barley. After a couple of miles he said 'stop here, they are just over there'. Eagerly we jumped out and followed in his wake. After a few yards our cicerone extended his arms with an authoritative flourish and exclaimed 'here they are'. I peered around somewhat mystified as we were very definitely standing in an extensive colony of *Ranunculus asiaticus*. 'I can't actually see any tulips' I said hesitantly. 'You are standing on them our guide insisted. 'No, these are Ranunculus' I countered. 'Ah, well we call them tulips' came the terse reply. After that impasse there was really nothing more to say and we returned whence we came in awkward silence. Back in the village our 'tulip specialist' quickly exited the car without a backward glance and proceeded on his way, demonstrably miffed.

Later that day - a little farther on in the Gecitköy area we encountered groups of local children offering bunches of *Tulipa cypria* for sale to passing motorists. We soon found the tulips growing at the side of a barley field and, after a herculean excavation, secured three bulbs. Sadly, despite giving them the best possible quarters in the Surrey hills and a warm, dry summer rest, they faded away after flowering just once. Can any readers claim to have had any prolonged success with the cultivation of this attractive dark crimson species? I would be glad to have their advice.

As a postscript I would add that in Dr. Viney's excellent work *An Illustrated Flora of North Cyprus*, one of the Turkish names for *Ranunculus asiaticus* is listed as 'Sakayik Lalesi', which perhaps explains how the misunderstanding arose in the field."

* R.D.Meikle, *Flora of Cyprus*, Vol. 2 (1985)

***Eleutherine bulbosa* by Chris Lovell**

I enjoyed the reference to this species in BN34 (page 16), 2001. Indeed, it seems to be widespread in the tropics - my present bulbs come from the splendid Saturday market in Bangkok (well worth visiting - as well as the usual plastic buckets and linen there is an intriguing plant market; I only wish I could understand the Thai growing instructions!).

Eleutherine is one of the most beautiful bulbs I know (literally) - the smooth shiny bulb tunics are a rich purple-red. The fugaceous flowers aren't bad, freely produced on branched stems during the summer. My clone appears to be unscented and, sadly, self-sterile, but it produces offsets fairly readily.

According to *Medicinal Plants in Thailand* (Saralamp *et al.*, 1996: ISBN 974-8364-43-7), the fresh bulb is carminative; mixed with *Kaempferia galanga* (*Zingiberaceae*) rhizome it is applied locally to the forehead for colds and nasal congestion in children.

And some more notes on Eleutherine, by Maurice Bouusard

Concerning the 'fragrance' of *Eleutherine bulbosa*, Maurice writes from Ventabren, France to say "several strains I grew over the years all gave off a rather unpleasant 'goaty' scent, not unlike our native orchid *Himantoglossum hircinum* (Latin *hircus* = billy goat), which probably implies pollination by some flies. Several other tigridioides [i.e. South American *Tigridia*-like plants - ed.] have that scent (e.g. *Calydorea azurea*, *Cipura paludosa*). I also have a few seedlings of *Eleutherine citriodora* but yet unflowered so I cannot comment on its perfume."

Obviously this is an interesting topic, so we invite BN readers to conduct sniff tests on any of their 'tigridioids'. The first criterion is that you have to be around when they happen to be in flower, as most of them last only a few hours.

A new view of European *Hyacinthella*

We gave some space to the interesting little bulbous genus *Hyacinthella* (*Hyacinthaceae*) in BN 23:8-9, but a paper* by Karin & Jimmy Persson calls for a short amendment. Dealing with the European species, they now recognise only two in the Balkans. The former *H. atchleyi* is now included in *H. leucophaea*, as subsp. *atchleyi*, which is common in Attica but extends north to Bulgaria and Serbia. The typical subspecies, subsp. *leucophaea*, is more northerly in distribution, mainly Bulgaria, Romania and Ukraine. The other one is a Dalmatian species, from Croatia, Montenegro & Bosnia to which the name *H. dalmatica* has been restored after a period as *H. pallens*.

* In *Candollea* 55: 213-225 (2001).

New autumn squills in Crete

It may come as a surprise to those who are familiar with the very common, widespread *Scilla autumnalis* that, in Crete, they may not have not been looking at this at all, but one of the several new species that have just been described from the island. And furthermore, in the opinion of Franz Speta, they were looking at species of *Prospero*, not *Scilla*. In a recent paper in *Linzer Biologische Beitrage* 32: 1323-1326 (Nov. 2000), he describes six new species of autumn-flowering squill, which are differentiated by "a number of morphological and colour characteristics of the bulb, leaf and inflorescence area, of blossoms, fruits and seeds". Also, their chromosome numbers were determined.

The new species are:

Prospero (Scilla) minimum (from Impros), *P. idaeum* (from Mt Psiloritis), *P. rhadamanthi* (from Karoti), *P. depressum* (from Omalos), *P. hieraptynense* (from Kavousi) and *P. battagliae* (from Lasithi). Unfortunately, although there are long and detailed Latin descriptions, the differences between the species are not picked out, so it is quite laborious to go through them and try to work out how they might be recognised. There is also no indication as to how they differ from the extremely widespread and very variable *Scilla autumnalis*.

These six new species are in addition to *Scilla talosii*, described from Crete by D.Tzanoudakis and Z.Kypriotakis in 1998 (see BN 24:15).

And a Cretan Sternbergia

If someone had suggested that all autumn sternbergias in the Mediterranean - *S. lutea*, *S. sicula* and *S. greuteriana* - should be sunk into one species I would not have been at all surprised. On the other hand, to find that yet another species has been described from Crete is very surprising indeed, considering the enormous variation that can be found in even in quite small areas of Greece and Crete. This one is *S. minoica*, described by P.Ravenna in *Onira Botanical Leaflets* Vol. 5, No. 10 (2001). It was collected on a rocky hill between Agia Gallini and Nea Krysia, the only site noted. It is difficult to comment without having seen the plant but it appears from the description to be similar to the very variable *S. sicula* in having narrow dark leaves with a pale stripe along the centre, although the author says that it differs in leaf morphology. He also gives as one of the main distinguishing features, the fact that the flower stem is very short, carried underground, and the ovary too is subterranean (as it is in *S. clusiana* and *S. colchiciflora*).

Requests

Darren Sleep writes: "Dear 'BN Team'. I wondered if it would be possible to appeal on my behalf for corms/tubers of the following; *Gynandriris monophylla* (aka the 'monophylla' form of *Gynandriris* (or is it now *Moraea*?) *sisyrinchium*). And/or a single (i.e. 'wild' type) yellow-flowered form of *Ranunculus asiaticus*. I have raised (wild) seed of *R. asiaticus* from a number of seed exchanges in the last few years and now have no shortage of red and white ones! Even a white form with a pink 'picotee' edge turned up from a Cretan collection - but never a yellow. The *Gynandriris* I was very attracted to when I saw it in western Crete but do not know if it would stay so miniature in cultivation here; I'd like to try it though." If anyone can help, please contact Darren directly:

Darren Sleep, 28 Foxfield Road, Barrow-in-Furness, Cumbria LA14 3SJ.

Two new Amaryllids from Brazil

Even in the 21st century, when one would think that there was little of the world left to be explored, new species are being described at a remarkable rate - 'like there was no tomorrow', as the saying goes. [Maybe there isn't, if we believe some of the dreadful predictions].

BN often includes new species but we seldom have the opportunity to include new genera. In *Onira Botanical Leaflets* Vol. 5, No. 3, P. Ravenna has described two new ones, *Tocantinia* and *Cearanthes*.

Tocantinia contains one species, *T. mira*, which is said to be similar to *Hippeastrum solandriflorum*, so it has large, white funnel-shaped flowers with a long perianth tube (8-8.6 cm long). In fact, the author says that the bulb, leaves, flowers, stamens, style and stigma are all similar to this species. The genus is said to differ from *Hippeastrum* in that it has a "solid ancipitous scape [i.e. the flower stem is not hollow and is 2-edged], a one-valved spathe, and peculiar ovules". The 'peculiar' nature of the ovules is that the "ovules are placed in two rows on the axil of each ovary cell. Their shape is clavate-capitate [club-shaped with an enlarged head], an unusual form in the family." *Tocantinia* is from the municipe of Parana, Brazil, in Tocantins State, growing in woods in sandy soil, flowering in November.

Cearanthes is said to be related to *Griffinia* but differs in ovule characters (axile instead of basal placentation), and has a 3-lobed stigma, rather than an undivided (capitate) one, but in general they are similar. The one species is *C. fuscoviolacea* which comes from the municipe of Viçosa do Ceará, Brazil, growing in sand in shade near a spring at 755 m. It has 4-5 flowers per stem, funnel-shaped and dull purplish with perianth segments only 27-32 mm long. It is known only from a dried specimen without leaves in the Rio de Janeiro herbarium.

A new publication from The Cyclamen Society

The Cyclamen Society always has something 'on the go', whether it is scientific fieldwork, promoting some particular line of research, Cyclamen shows or publications. The latest effort, which will appear in July or early August is a booklet *The Cyclamen of Turkey*. This is a fully colour-illustrated guide to the 10 species (by far the richest country for *Cyclamen* species) that occur naturally in Turkey.

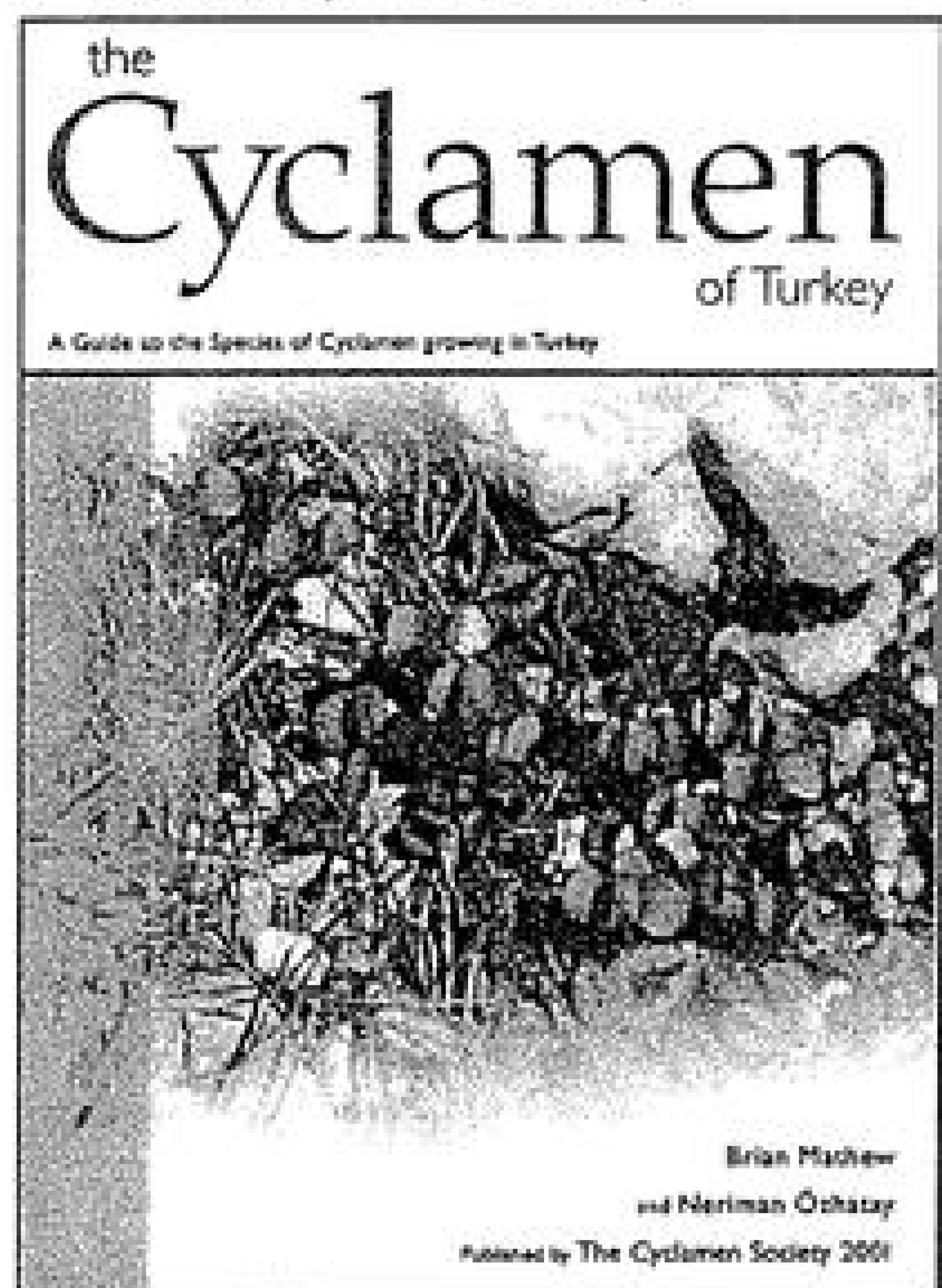
This is described as a guide for 'travellers to Turkey, cyclamen enthusiasts and plant lovers alike'. It provides historical and general background information as well as growing hints, notes on conservation and a province-by-province guide to where the species occur in Turkey.

The booklet is being published separately in English and Turkish and will be distributed in Turkey by DHKD, the Society for the Protection of Nature, who plan to make it available to schools and universities as well as a more general audience. It is hoped that this will help to encourage interest in the native flora among young people, and especially in the conservation of plants.

Each species is illustrated with photographs, selected from a large number sent in by Cyclamen Society members; these include close-up portraits of the plants and habitat shots, so this is a most attractive publication. The project is regarded as fulfilling one of the Society's charitable objectives, that of spreading knowledge about *Cyclamen*, so the booklet (32-pages) is very reasonably priced at only £4 to members and £4.50 to non-members (both editions same price); this includes postage, but if ordering outside Europe and would prefer to have it sent air mail, add £1 to this.

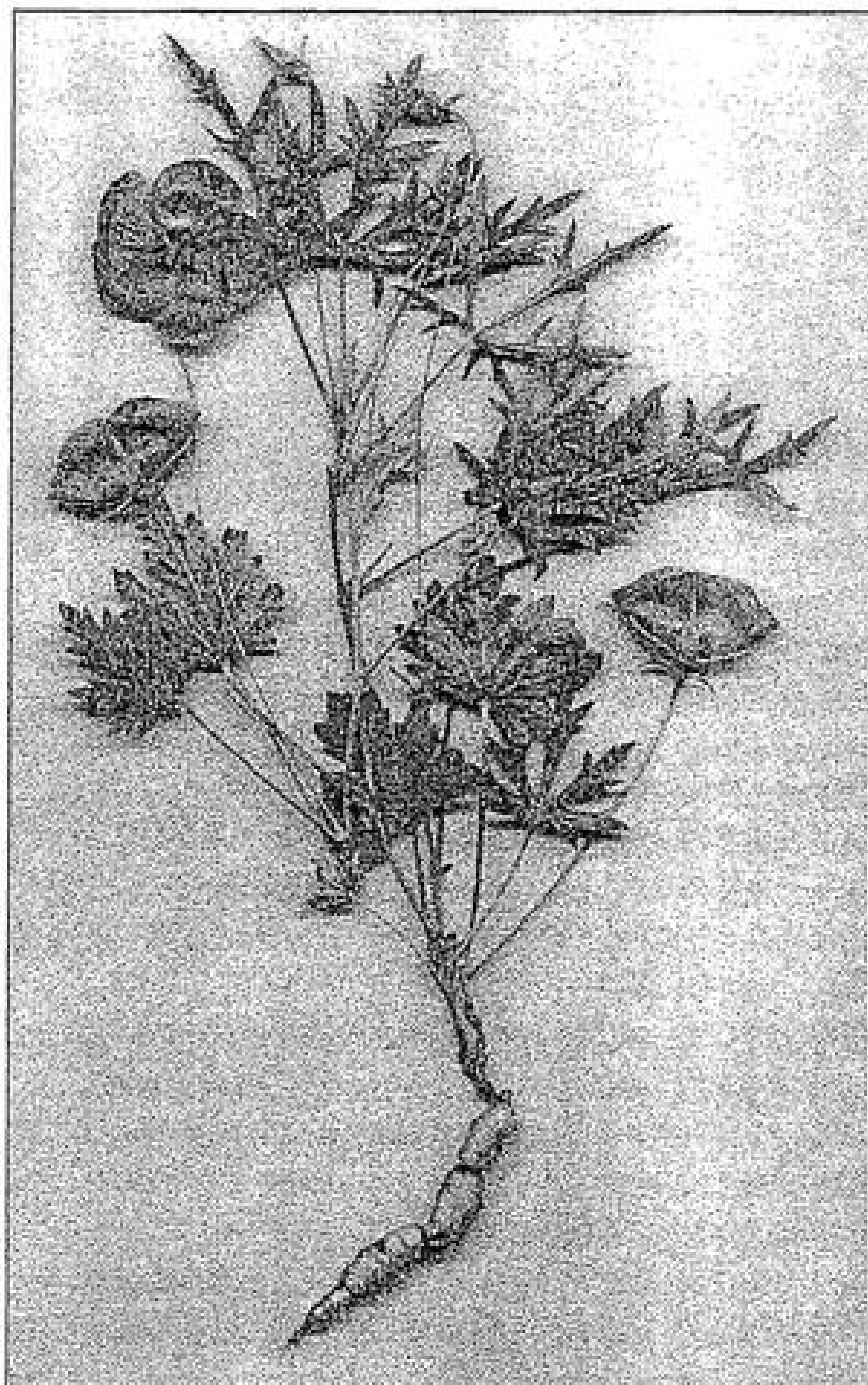
Orders & payment to: Richard Bailey, 5 Dower Avenue, Wallington, Surrey SM6 0RG, England. It seems to be increasingly difficult to move money around & the instructions on the order form are:

Payment should be made in £ sterling by cheque or postal order (or by cheque drawn in Euros on a Euro account) made payable to THE CYCLAMEN SOCIETY. For amounts less than the equivalent of £50 sterling, cheques drawn in US\$ on a US\$ account may be used. Cash, which must be sent by registered post, is acceptable only in sterling or US dollars. Payment may be made by overseas members (except in USA) by Post Office Giro transfer to GIROBANK Account No 35 008 4505 in the name of The Cyclamen Society, 196A Cromwell Road, London SW5 0SN; please add £3 to cover conversion costs.



A splendid 'Honorary Bulb'

As far as I am concerned, the first person to use the term 'honorary bulb' was Ken Aslet, the delightful Superintendent of the Rock Garden Department at Wisley in the 1960s. The term was used for all those non-monocots that possess swollen storage organs, hence requiring much the same treatment as the bulbous, cormous and tuberous monocots - that is, they need a dry period at some time in their annual growth cycle. Plants such as *Cyclamen*, *Eranthis*, a few of the *Ranunculus* spp., some *Anemone* spp. - all those sort of things that tend to find their way into a bulb nursery catalogue. I like to think of them collectively as 'those plants that can be dug up, dried and put in a packet'!



I had not thought of any of the mallows, *Malvaceae*, as being 'honorary bulbs' until the plant shown above arrived from our plantsman friend in Argentina, Alberto Castillo. His gift, some tubers of *Modiolastrum gilliesii*, has been very much-appreciated and is most definitely an Honorary Bulb. It is a summer grower, so the tubers are dormant in winter and in cold areas can be stored almost dry, away from serious frosts, although I have no doubt that it is quite a hardy species - the dreaded combination of cold and wet is our main problem with winter-dormant bulbs.

The elegant leaves (very variable in shape even on one plant) and rounded, magenta flowers 3-4 cm across give it a geranium-like appearance, and it was called *Malva geranioides* at one time, although this is now a synonym. It is a native of Argentina and Uruguay.

Greater production of Saffron in future?

In *Acta Botanica Sinica* 43(5): 475-479 (2001), J.Zhao, F.Chen, F.Yen, L.Tang and Y.Xu (Sichuan University) point out that using conventional methods of cultivation the supply of Saffron (derived from the style-stigma branches of *Crocus sativus*) cannot meet the demand. Taking this as the starting point for a new line of research they set out to explore micropropagation techniques as a means of producing Saffron - not with a view to bulking up the corms of *Crocus sativus* but to actually grow the red stigmas on a culture medium in laboratory conditions. In the past two decades there have been similar studies into tissue culture, resulting in stigma-like structures; however, these have been derived from tissues taken from either the ovary, the style itself or from perianth segments. The research reported here used the stamens of *C. sativus* - to be more precise, tissue from the base of the filaments. The methodology is described in detail and there are colour photographs showing the red stigma-like outgrowths on the various tissue cultures. Of these, the stamen tissues gave the best results - better even than the style itself which is surprising - leading them to state that these [i.e. the stamens] 'are more suitable to be taken as materials for large-scale medicinal production'. Importantly, they found a higher level of active ingredients of Saffron (crocin, safranal and picrocrocin) in stigma-like growths derived from stamens than from other tissues. Even if this laboratory technique proves to be successful in boosting the world's production of Saffron we doubt that it will affect the cultivation of *C. sativus* for those beautiful long, rich red Saffron threads that one buys in local markets.

Two more *Nothoscordum* species from southern Brazil

The genus *Nothoscordum*, for gardeners and botanists, is a bit of a problem; for the former it offers some very attractive small, yellow-flowered species (*N. ostenii* and its relatives are delightful) but at the same time there are some awful weeds [*N. gracile (fragrans)* is one of the world's pests]; for botanists, their classification is very tricky - no-one seems sure which genus they belong to (see BN34:15).

Furthermore, there are lots of them and new ones are being found, this time two from Brazil. In *Onira Botanical Leaflets*, P.Ravenna has described *N. aparadense* and *N. luteomajus*. The first is from Santa Catarina State and has 7-10 cm stems carrying 4-6 white flowers in an umbel, each nearly 1 cm across. The latter is yellow-flowered with about 5 flowers on a stem 15-20 cm tall; each flower is 8-12 mm across. This is said to be related to *N. minarum* and *N. montevidense*, both splendid plants which we grow here.

A double *Sternbergia lutea*

The latest copy of *The New Plantsman* contains a new feature 'Plant Focus', a forum for plant enthusiasts. One of the many interesting items is the report of a double *Sternbergia lutea* observed last autumn in the Peloponnese during an Alpine Garden Society tour led by its very bulbous (in interests, that is!) President, Rod Leeds. This was a one-off amid thousands of normal ones and the accompanying photographs show both the drift of *S. lutea* where it was seen, and a close-up of the double form.

As 'double' monocots go, it is a very neat one with extra, smaller perianth segments inside the large outer whorl of 6 - it is a bit difficult to count them but it looks as if all six stamens have been converted, as well as the style/stigma becoming petaloid. This is interesting since it is clearly a very rare occurrence - I have never seen such a 'happening' in this species, but many years I named a double form (as cv. 'Golestan') of *S. fischeriana*, collected in eastern Iran. This was very odd, since in that case the whole population consisted of clumps with double flowers, presumably reproducing vegetatively. I grew it for a while and there was no trace of stamens or style in the flower, so it could not reproduce any other way.

Watch out for.....

Bulbs of North America, compiled by specialists and knowledgeable members of the North American Rock Garden Society and edited by Jane McGary who is herself a very enthusiastic and accomplished bulb grower from Oregon. This eagerly awaited volume will be published by Timber Press in autumn 2001 at \$34.95. It contains reviews of all the bulbous plants of North America, illustrated by over 100 colour photos. ISBN 0-88192-511-X.

Timber Press, 133 SW Second Avenue, Suite 450, Portland, Oregon 97204, USA.

or

Timber Press, 2 Station Rd., Swavesey, Cambridge CB4 5QJ, England.

Stamps, well almost.

Our old friend Wayne Roderick has sent us a batch of envelope seals depicting several monocots with a note: 'hope these will make you happy' These are sold for charity - the Easter Seals mission to help the disabled. The set of six contains three lilies, a *Hemerocallis*, a *Eucomis* and a *Zantedeschia*.



Anyone heard of *Erythronium quinaultense*?

Neither had the BN team until mid-July. Browsing through some journals, suddenly there was the exciting news that a new species of *Erythronium* had been described - *E. quinaultense* from the south-western Olympic Mtns (Grays Harbor and Jefferson Counties), in the State of Washington. In *Systematic Botany* 26: 263-272 (2001), Geraldine Allen gives a very detailed account of how she came to the conclusion that this new tetraploid ($2n=48$) species has arisen through hybridisation between the two well-known diploid ($2n=24$) species *E. montanum* and *E. revolutum*. This is a very thorough investigation based on chemical analysis (enzymes) of the leaves, chromosome studies and morphology, mainly involving details of the perianth segments and stamens.

In appearance, it is hardly surprising that *E. quinaultense* is more or less intermediate between the two parents. Its leaves are green to faintly mottled and the flowers are described as 'white to pale pink at base, darker pink towards tips, yellow-banded at base'. The filaments (the stalk of the stamens) are not as slender as those of *E. montanum*, but at the same time not as wide as the very obviously flattened-triangular ones of *E. revolutum*.

In terms of its distribution and

habitat, it occupies an area between the lowland *E. revolutum* and the subalpine *E. montanum*, in wet montane conifer woods at 500-850 metres.

Some may say, isn't this just a hybrid population where the two species meet. However, this is undoubtedly the way in which a great many of the plants that we regard as 'species' have arisen, and Geraldine Allen makes a very convincing case for regarding this one as, quite literally, a new species. The paper includes a drawing of the plant and its flower parts, and a key that picks out differences between this new species, the similar *E. elegans* from Oregon (also thought to have arisen by hybridisation), *E. montanum* and *E. revolutum*.

Monksilver Open Day 2001

Joe Sharman and Alan Leslie of Monksilver nursery have become noted as suppliers of unusual perennials. Their 'Open Days' are a lot more than just that, for they invite other specialist nurseries along to join in. This one, the 9th, is to take place on Sunday 16 September from 11 am to 5 pm and will include exhibits from 11 nurseries as well as their own. The nursery is north of Cambridge, not far from (east of) the A14 Cambridge-Huntingdon road. For further details contact Joe Sharman at:

Monksilver Nursery, Oakington Road,
Cottenham, Cambridge CB4 8TW, UK
plants@monksilver.com

'BULBS' - the new all-colour version

As mentioned in BN 32:16, the quarterly newsletter of the International Bulb Society, *BULBS*, is now something to look forward to and this time it is in colour. The first colourful issue to appear is September/December 2000 - a bit delayed, but the wait is worth it. There are many points of interest, but I must pick out the article by Rod and Rachel Saunders, 'Bulbs of Southern Africa'. This gives valuable information about the summer-rainfall and winter-rainfall regions, so crucial to the understanding of growth patterns of bulbs from the area. The whole article is illustrated with excellent photos - and well reproduced - of some of the mouth-watering 'bulbs' of South Africa, including some that we have never seen illustrated before, e.g. the gorgeous white *Gethyllis campanulata* (*Amaryllidaceae*), dwarf yellow, crocus-like *Geissorhiza corrugata* with leaves coiled like watch-springs on the ground and intense purple *Lapeirousia pyramidalis*. There is also an article, again well illustrated, on *Fritillaria* by Jack Elliott who, sadly, is still very unwell after a stroke. BN subscribers will surely wish him and his wife Jean all the very best in the months to come.

Contact: IBS, PO Box 92136, Pasadena CA 9119-2136, USA.

Catalogues

Buried Treasure never fails to impress with its mouth-watering selection and Bulb List No. 6 is well up to standard - it also underlines the fact that a gaudy, full colour catalogue is not necessary when selling to enthusiasts! What is important is that the bulbs are of impeccable pedigree and good quality. Here we have an excellent array of unusual species and selections from all the usual genera - *Crocus*, *Colchicum*, *Fritillaria*, *Muscari*, *Narcissus*, etc., and a good number of genera that are seldom seen in lists: *Gagea*, *Hyacinthella*, *Lapiedra*, *Dipcadi*, *Solaria*, for example. What is *Solaria* some may say - it is one of those curious South American bulbs, probably related to alliums, nothoscordums, and so on - this one has nearly black flowers. So, let us just pick out a few items of particular interest. There is *Colchicum boissieri*, one of the autumnal species with soboliferous (creeping) corms ('Twiglet-like' is a very apt description, but don't try eating them like Twiglets! It is doubtful that *Colchicum davisii* (see BN 23:15) and *C. parlatoris* have been listed very often, if at all. A greeny form of *Crocus abantensis* is exciting, and it sounds as if the form of *C. minimus* var. *sardous* that is offered is a particularly good one; this Sardinian plant has only one bract (i.e. the bracteole is lacking), but this feature is hardly a great selling point alone.

Rannveig and Bob Wallis are great bulb enthusiasts, who are

renowned for their knowledge of fritillaries; the spin-off is that the list contains a very choice selection, including the very dainty and difficult *F. japonica*; the western American *F. glauca* is not that easy either, so to be able to offer it for sale is quite an achievement. Really good to see *Iris histrio* in the list; we have been surprised at the success of this outside - it has been increasing for the last few years in a raised, gritty position, quite contrary to expectations. *Narcissus* species & forms are just too numerous to list, but just take it that this is a remarkable collection. There are some good *Romuleas* too, a much-neglected genus. Rannveig Wallis, Buried Treasure, Llwyn Ifan, Porthyrhyd, Carmarthen SA32 8BP, UK.

Terry Smale has an enticing list, divided into 'tender bulbs' and 'hardy bulbs'. In fact this means that the first list contains predominantly South African bulbs (a few S. American) and the second, Eurasian and North American. There is a great deal of interest here for those who are willing to provide just a little heat in order to grow some of the amazing array of southern hemisphere bulbs. Several of the *Brunsvigia* species are on offer - so impressive when you get them up to flowering size; these are 3-year old bulbs, so much of the work has been done. *Haemanthus* too, so good to see something other than the usual ones (*H. barkeriae* and *H. crispus* are in the list!), and *Hessea* and *Strumaria*, such delicate little amaryllids to look at but in fact very easy to grow. The long list of *Lachenalia* species is most impressive, and accompanied by several relatives: *Massonia*, (so irresistible with their broad, flat leaves on the ground), *Polyxena* and *Whiteheadia*. The family *Iridaceae* is represented by *Babiana* spp. (including the scented *B. truncata*), *Freesia* spp, several *Sparaxis*, the splendid yellow *Romulea saldanhensis* and a few other choice items. The 'hardy list' also has quite a range of specialities - *Gymnospermium albertii* caught the eye (see page 6, this issue), *Crocus oreocreticus*, dwarf purple *Allium platycaule*, *Triteleia hendersonii* and the yellow, tuberous *Corydalis macrocentra* with wonderful grey-blue foliage. Terry Smale, 28 St. Leonards Rd., Epsom Downs, Surrey KT18 5RH, UK; Tel.: 01737-350834; www.smale1.demon.co.uk

While on the subject of South African geophytes, **Rupert Bowlby's** catalogue is well worth acquiring as he is now specialising in 'bulbs' from this region. There is a lot of interest here, including a good range of the lovely and very easy *Tritonia* spp. Don't forget that the S. Africans start to grow earlier than most Mediterranean bulbs, so get them soon so that they are potted in September at the latest. The Bulb Nursery, Gatton Park, Reigate, Surrey RH2 0TA, UK.

John Shipton & Alison Foot run a nursery in Wales specialising in British native bulbs, although they offer quite a list of other bulbs and perennials suitable for naturalising. So, here is the place for your Lent Lilies, Tenby Daffodils, Bath Asparagus and Herb Paris - even some Clychau'r Glas if you really want them: Bluebells to non-Welsh speaking peoples, for the Welsh names are here too. For a northern country, it is surprising how many bulbs there are in Britain, and most of them - all home grown, not collected - are on sale here; most are easily cultivated and ideal for planting in rough grass or under deciduous trees and shrubs. *Scilla verna* is better in a sunny raised bed, and a delightful little bulb it is too. The nursery also offers some historical varieties of Daffodil such as 'Mrs Langtry', 'Seagull' and 'Lucifer'. **John Shipton Bulbs, Y Felin, Henllan Argoed, Whitland, Carmarthenshire SA34 0SL. e-mail bluebell@zoo.co.uk or web site www.bluebellbulbs.co.uk**

Avon Bulbs were awarded a Gold Medal at the Chelsea Show this year for a terrific exhibit, and their Autumn 2001 catalogue gives a good idea of the great range of species and varieties that went into it. This year it is larger in format and beautifully illustrated. Apart from many of the old favourites, which are no doubt the 'bread-and-butter' plants, there are some less frequently seen subjects, for example named *Amaryllis belladonna* forms, including the Galaxy hybrids in a range of shades, and *Dracunculus canariensis*, a white-spathed species from the Canary Islands. It is good to see some of the named selections and hybrids of *Eremurus* - let us hope these dramatic plants will become popular again, as they were in the late 19th and early 20th centuries. *Maianthemum kamtschaticum* looks to be a very superior plant to the usual *M. bifolium*, with much larger racemes of white flowers, and there are two very special selections of *Eucomis comosa*, 'Avon's Avarice' with purple leaves and deep pink-purple flowers, and 'Cornwood', white with a dark purple ovary in the centre. The list includes a fine array of *Galanthus* cultivars (and a few species), and the last page has a tempting list of 10 different *Tulbaghia* species, variants and hybrids. If you are tempted to go for some tulbaghias, take my advice and lift at least part of each clump for the winter and grow them with a little protection; we lost nearly all of ours outside last winter in Surrey - they hate wet and cold combined. **Avon Bulbs, Burnt House Farm, Mid Lambrook, South Petherton, Somerset TA13 5HE, UK. e-mail info@avonbulbs.co.uk or see their web site: www.avonbulbs.co.uk (catalogue is £2)**

Broadleigh Gardens also received a Gold Medal at the Chelsea Show 2001 so congratulations to them also. A good range of bulbs is always

to be found in their catalogue, but especially *Narcissus* cultivars - pages of them, including some of the old Alec Gray hybrids and I was delighted to find 'Kenellis' this year - an excellent small *bulbocodium* hybrid. Seeing that lovely white, blue-centred form of *Tulipa humilis* reminds me that squirrels cleaned out ours last winter; most discerning of them! Broadleigh Gardens, Bishop's Hull, Taunton, Somerset TA4 1AE. www.broadleighbulbs.co.uk

Telos Rare Bulbs catalogue (\$2) is well worth checking through for a great range of *Calochortus* and other N.American, Mexican and S.American bulbs: *Tigridia* spp., *Ipheion* spp., *Cypella* spp., *Bessera*, *Miersia*; also some good S.African spp. - a very exciting collection! Telos Rare Bulbs, P.O. Box 4978 Arcata, California 95518, USA.

Bookends

Wild Flowers of Yunnan and Central China by Beryl M. Walden. ISBN 962-86092-1-1. Although a general book on the flowers of this area, there is a good representation of monocots, and the bulb enthusiast will find much of interest. In a flora that reputedly consists of 16,000 species, Yunnan must rate as one of the world's richest places and here we have 516 of them illustrated in watercolours by Beryl Walden. As well as the plates there are descriptions, distribution and ecological notes, and notes about any uses of the plants; for example we find that in the case of *Reineckia carnea* the whole plant is used in Chinese medicine for treating diseases of the lungs and kidneys. The paintings are pleasing and give a good idea of the plant, but in some cases it looks as if the plant might have been wilting by the time it was illustrated. Here are just a few examples of the monocots shown: *Lilium bakerianum* in several varieties, *L. speciosum gloriosoides*, *L. ochraceum*, *L. wardii*, *Smilacina henryi*, *S. yunnanensis*, *Veratrum yunnanense*, *Polygonatum prattii*, *P. stewartianum*, *Paris polyphylla*, *P. fargesii*, *Tricyrtis formosana*, *T. macropoda*, *Allium bulleyanum*, *A. prattii*, several *Arisaema* spp., *Disporum*, *Nomocharis*, etc. It is privately published but there are web sites where further information can be found: www.sinoflora.com and www.sinoflora.co.uk.

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