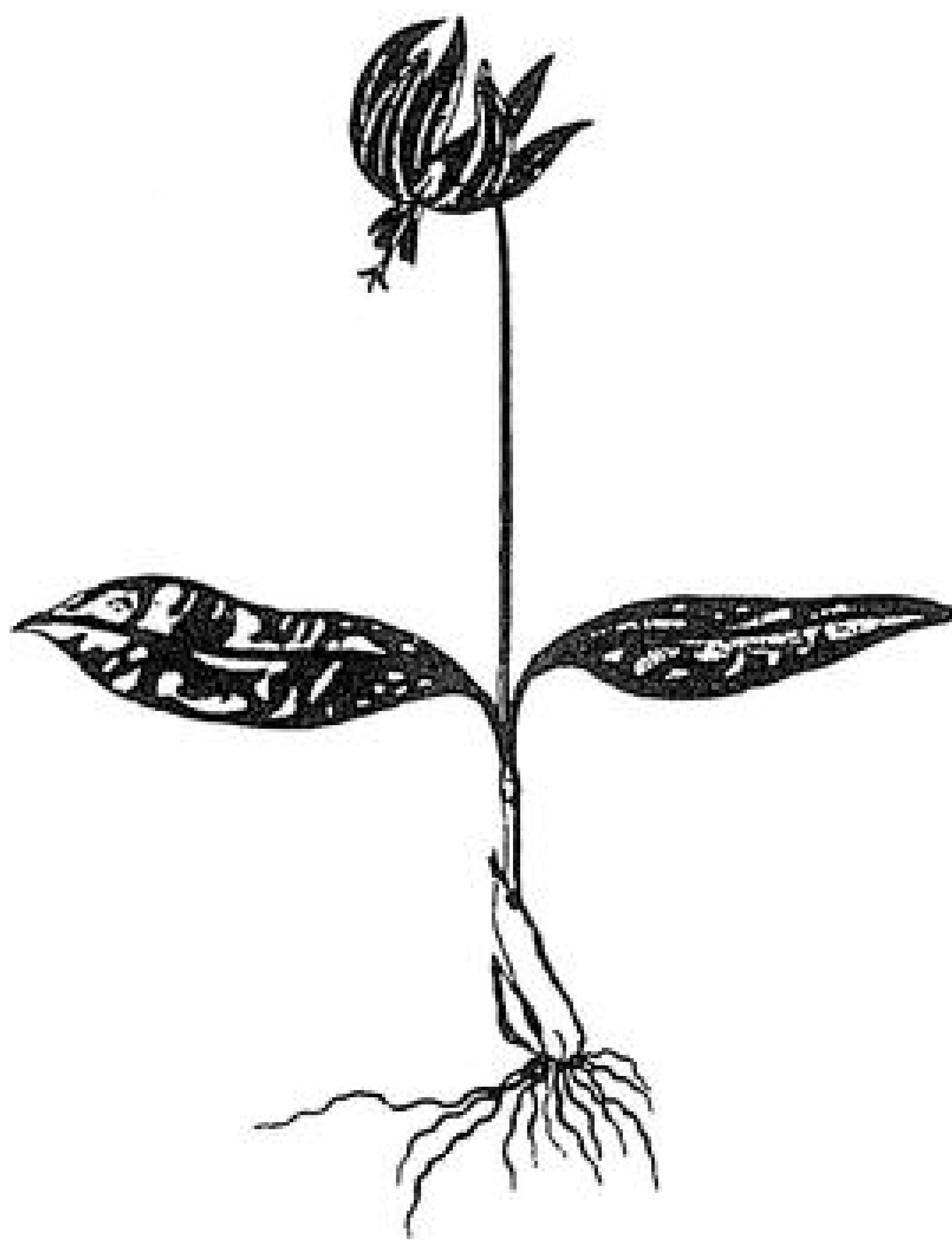


***THE BULB***  
***NEWSLETTER***



**Number 19**

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## The Bulb Newsletter No. 19

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### Another Korean *Lycoris*

Muyeol Kim, writing in the *Korean Journal of Botany* 26: 263-268 (1996), has described what appears to be a very attractive newly discovered variant of *Lycoris flavescens*, which is a pale yellow-flowered species. The new one is named *L. flavescens* var. *uydoensis*, so that the yellow-flowered 'typical' variant automatically becomes var. *flavescens*.

*Lycoris flavescens* var. *uydoensis* is said to be "different from var. *flavescens* in having ivory white flowers. The flower is also larger than the latter especially in the perianth tube length, perianth segment width and peduncle (scape) length." The key supplied with the text further tells us that the perianth tube is reddish at first (greenish-yellow in var. *flavescens*), the peduncle (scape) is 80-110 cm tall (40-70 cm in var. *flavescens*), the perianth tube is 2-2.5 cm long (0.8-1.8 cm in var. *flavescens*) and the pedicels (individual flower stalks) are 0.7-2 cm long (2.2-5.2 cm in var. *flavescens*). From the colour photograph published with the article it is clear that this is a handsome plant, with umbels of 6-8 large white, funnel-shaped flowers. Unlike the also white-flowered *L. albiflora* the perianth segments are not strongly crisped-undulate at the margins so it is very different in appearance from that species.

*Lycoris flavescens* var. *uydoensis* was found on the Korean island of Uyeon where it flowers in August/September (early autumn); the foliage appears in late winter/early spring.

### Old English Florists' Tulips

On a recent visit to the Spring Show at Malvern, Worcestershire, we were fascinated by an exhibit of old tulip cultivars by the Wakefield and North of England Tulip Society, a society steeped in history itself, having been founded in 1836. The tulips on display represented the group known as English Tulips, now unobtainable in commerce and maintained by enthusiasts such as those of this society. They were relatively small flowers by today's standards (e.g. the Darwin hybrids, May-flowering, Lily-flowered etc.) and beautifully formed in a classic bowl-shape - in fact they should have:

“six petals all equal in size and shape, and the flower when expanded should resemble the half of a hollow ball. The petals should be rounded on the top and not pointed, and they should fit closely together to make a semi-circular cup.”

The quotation is from a booklet published by the Society and is an extract from a lecture about the English Tulip by J.W.Bentley at the Great Tulip Conference held at Regent's Park, London, in 1897.

Although the flower shape of these interesting tulips was fairly uniform, the colours varied greatly and there was a good range on show at Malvern, in 'broken' colours, contrastingly flamed and feathered; some of them were very striking, in a combination of near-black and yellow.

For more information, The Wakefield and North of England Tulip Society can be contacted via its Secretary: Wendy Akers, 70 Wrenthorpe Lane, Wrenthorpe, Wakefield, WE2 0PT.

### ***The smallest of them all?***

Whilst not wishing to stimulate a competition to find the smallest flowering bulbous plant in the world, we thought it would be interesting to feature what must surely rank as one of the tiniest. It is the Southern African *Litanthus pusillus* from the Eastern Cape, Natal and Swaziland. The first collection was from Uitenhage, by the Zwartkops River, and one must admire Zeyher for finding it, since it must be a fairly insignificant part of the vegetation. For a description, one can do no better than to repeat W.H. Harvey's comments of 1844: "This is perhaps the smallest individual of the Liliaceous group. The bulb is scarcely larger than a good sized pea. The scape, no thicker than a bristle, and scarcely two inches high, appears before the development of the



leaves, and bears a solitary nodding greenish-white flower, little more than a line in length, and a third of a line in diameter....."

Exactly what was meant by the name *Litanthus* is not clear; *litus* (or *littus*) means a sea-shore, beach or bank, and *anthos*, flower, so it could refer to the habitat although the type was collected near a river, not the sea.

Surprisingly, in spite of its very modest appearance, *Litanthus pusillus* was illustrated in *Curtis's Botanical Magazine* in 1872 and J.D.Hooker noted that there could be one or two flowers on each stem, and that they were 'pearly-white'; the painting by W.H.Fitch made it look really quite appealing, which in fact it is if you can get close enough. The wild habitat is noted as being in humus-filled crevices and depressions but in cultivation it appears to grow quite readily in a well-drained sandy potting soil in frost-free conditions and kept slightly dryer in winter, but the small bulbs should never be dried out too much or they will shrivel. I have Chris Lovell and Danny Guildenhuys to thank for sending us this charming little bulb.

### **The NARGS Bulletin**

The Rock Garden, the Bulletin of the North American Rock Garden Society always contains plenty of interesting features, but the latest one for Spring 1997 is devoted to our favourite topic, bulbous plants. We find articles by Molly Grothaus on the bulbs in her Oregon garden, together with photos to prove that they are a great success, Andrew Osyany confesses to being 'nuts about bulbs' - well, to grow gageas you have to be - and John Grimshaw describes some of the spring crocuses in his garden at Maidenhead, England. There is an interesting discussion by Guy Gusman about the identity of *Arisaema bockii*, a little-known Chinese species which has entered cultivation via the NARGS seed exchange, and a further article on this increasingly popular genus by Jim McClements. Don Hackenberry looks at the hardier spider lilies - *Hymenocallis* - and suggests that these (notably

#### **IRIS RESEARCH AT KEW**

The Royal Botanic Gardens, Kew has 857 accessions of *Iris*, many of which are cultivated in the Mike Simmott's Alpine Section under the watchful eye of Iris expert Tony Hall. Reporting on this in the April 1997 issue of *Kew Scientist*, Margaret Johnson and Tony Hall comment that the species and hybrids of the 'Reticulata' group [otherwise known as *Iris* subgenus *Hermodactyloides* or the genus *Iridodictyum*] are currently the subject of detailed chromosome and molecular analyses: "the work is shedding light on the systematic delimitation of the group and the parentage of the 30 highly attractive cultivars".

*H. coronaria* and *H. occidentalis*) might be successfully cultivated further north than their native haunts in the south-eastern United States; yes, we would like to try!

The more specialist side of the Dutch bulb industry is given some coverage by Brent and Becky Heath (I like the photo of Brent sitting in a field of *Erythronium* 'Pagoda'!) and this is followed up with some notes by Wim de Goede on his specialist nursery in Breezand, Holland, where he propagates a range of the more unusual bulbs, especially *Fritillaria* and *Calochortus* species. Panayoti Kelaidis tempts us with some of the species of *Kniphofia* from the Drakensberg and nearby mountains of Southern Africa, with a dozen enticing colour photos to prove his point. The cultivation aspect of bulbs in frames is covered in great detail by Jane McGary, who gardens near Portland, Oregon, and grows a great range of bulbs, and the final article by John F. Gyer is also very detailed and valuable, dealing with germination in *Trillium* and how to overcome the problems of recalcitrant seeds. This is a very interesting and useful part of the Rock Garden Quarterly for those with bulbitis.

#### *CITES News*

We have recently learned that three more countries have acceded to CITES, the Convention on International Trade in Endangered Species: Turkey, Georgia and Latvia. This means that CITES export documents are now required when moving listed plants from these countries to others, in addition to CITES import documents for the importing country. For bulb specialists, this mainly involves *Galanthus*, *Cyclamen*, *Sternbergia* and Orchids.

**Anyone keen to know more about the NARGS can contact:  
The Executive Secretary, P.O. Box 67, Millwood, NY 10546, USA.**

### ***Useful Snowdrops***

Richard Hobbs recently appeared on BBC TV in a feature about snowdrops, as a result of which Prof. E.J. Shellard wrote in to the BBC with some medical information on *Galanthus*, and the letter eventually arrived on the BN desk via Richard. Prof. Shellard, who is now the Emeritus Professor of Pharmacognosy, University of London, writes:

"In September 1965 I attended a meeting of the Medicinal Plants Section of the International Pharmaceutical Federation in Prague where I heard a Russian pharmacognosist tell us how, when the peasant women living in the foothills of the Caucasian mountains observed certain symptoms developing in their young babies - which he described and were obviously poliomyelitis - they boiled up the bulbs of the Caucasian snowdrop *Galanthus woronowii* and gave them the decoction to drink. They always recovered and never showed any signs of paralysis. When I went to Bulgaria in 1971 I found that they had conducted pharmacological, pharmacokinetic and clinical

work on the alkaloid that the Russians had isolated from the bulbs. However, as the Bulgarians obtained the alkaloid, which was named Galanthamine, from *Galanthus nivalis*, the product was put on the market was named Nivalin. It was on sale in all countries of the Soviet Block (I am not sure about Romania) as a powerful anticholinesterase but, with the exception of Austria, never in Western Europe. However, today it is undergoing a large clinical trial in the USA and Europe for the treatment of Alzheimer's disease."

\*\*\*\*Our thanks to Richard Hobbs and Prof. Shellard for this item\*\*\*\*

### **And while on the subject-----**

The medicinal, and other, uses of the tassel hyacinth, *Muscari* (or *Leopoldia) comosum* are numerous and ancient. Dioscorides advocated the use of the bulbs for making a poultice for the removal of prickles, splinters, etc., and for making an ointment, mixed with the burnt heads of fishes, for the treatment of piles - I think I would put up with the piles.

Richard Hobbs recently visited Crete and saw bulbs of this species on sale in Hania market (dare I suggest that there were piles of them!) and, later at a meal, his host offered him some, boiled and pickled. Richard notes that they were rather bitter but "thankfully the sticky slime that I was expecting had gone in the cooking." Well done for testing them, Richard - all part of life's rich tapestry as Michael Upward, one of the AGS Sikkim Expedition team, used to say in times of great adversity!

### ***Fritillaria ojaiensis***

In response to a query from David King about the authenticity of this seldom-mentioned Californian fritillary, we did some delving into its background and found that opinion varies as to whether it is a 'good' species or merely one of the many variants of *F. affinis* (*F. lanceolata*).

The name *F. ojaiensis* is taken from the Ojai Valley, the area from where it was first collected in 1922. This is just north-west of Los Angeles, far to the south of the main area of distribution of *F. affinis* which is widespread in western North America from British Columbia south to central California (or southern California if *F. ojaiensis* is included) and eastwards to Idaho. *F. ojaiensis* was described as a new species in 1922 by A. Davidson in the *Bulletin of the Southern Californian Academy of Sciences* 21:41, based on a collection by L.E. Martindale (No. 3508) which was "collected on a dry ridge at Pine Flats, Santa Paula River". The description shows that it had the following characteristics: bulb ovate with rice-grain bulblets; stems about 60 cm in height with the lower leaves in whorls of three, linear, 15 cm long and only 5-7mm wide, and the upper leaves alternate; flowers 6 or 7, pendent bell-shaped, also subtended by narrow leaves (bracts),



greenish-yellow with scattered dark spots; perianth segments 2 cm long, 8mm wide; nectary very small and semi-circular; stamens  $\frac{2}{3}$  the length of the segments, anthers 3-5mm long; style divided to more than half its length. It was noted that "While this plant seems closely similar to some of the forms of *F.lanceolata* [i.e. *F.affinis*], the size and shape of the leaves, color of the flowers and the size of the anthers are sufficiently characteristic to entitle it to specific rank."

Dorothy E. Beetle, in her monograph of the North American species of *Fritillaria* (published in *Madroño* 7:148, 1944) incorporated *F.ojaiensis* into *F. lanceolata*, as it was then known, as did Phillip Munz, in *A California Flora with Supplement* (1968). However, the new edition of *The Jepson Manual - Higher Plants of California* (1993) recognises it (Bryan D. Ness is the author of the *Fritillaria* account) once more as a species and expands the description somewhat: height 40-70 cm, the lower leaves in 1-3 whorls of 3-5, the upper alternate or opposite, varying from 4-13 cm long and linear to narrowly lanceolate; perianth segments 1.5-3cm long with distinct or indistinct nectaries  $\frac{1}{3}$  the length of the segments and diamond-shaped to ovate, paler than the rest of the segment colour; the colour is described as "dull greenish-yellow with scattered to profuse dark dots"; style deeply divided for  $\frac{1}{2}$  to  $\frac{2}{3}$  its length. The distribution is given as Ventura, San Luis Obispo and Santa Barbara counties of southern California and it is stated to be "Closely related to *F. affinis*." In the key, the nectary shape is picked out as being one of the diagnostic features: widely elliptic to  $\pm$  diamond-shaped in *F. ojaiensis*, lanceolate or narrower in *F. affinis*. Although the "dull greenish yellow, dark-dotted" colour is also used in the key, it seems that there is a considerable overlap with *F. affinis* which, although often purple to nearly black, can also be pale or dark green, and sometimes dark-mottled on a green ground. The accompanying drawing shows the flowers of *F. ojaiensis* to be rather wide open, rather than a classic bell-shape, but *F. affinis* is very variable in this respect and can have similarly-shaped flowers.

More recently, the California Native Plant Society's *Inventory of Rare and Endangered Vascular Plants of California* (1994) continued to list *F.ojaiensis* as a separate species, and so does the newly published *Rare Lilies of California* by Peggy Lee Fiedler (1996) (see this BN, page 19). In this publication it is said to be known from less than five populations; there is an illustration by Catherine M. Watters showing the wide open green-yellow flowers, speckled dark brown.

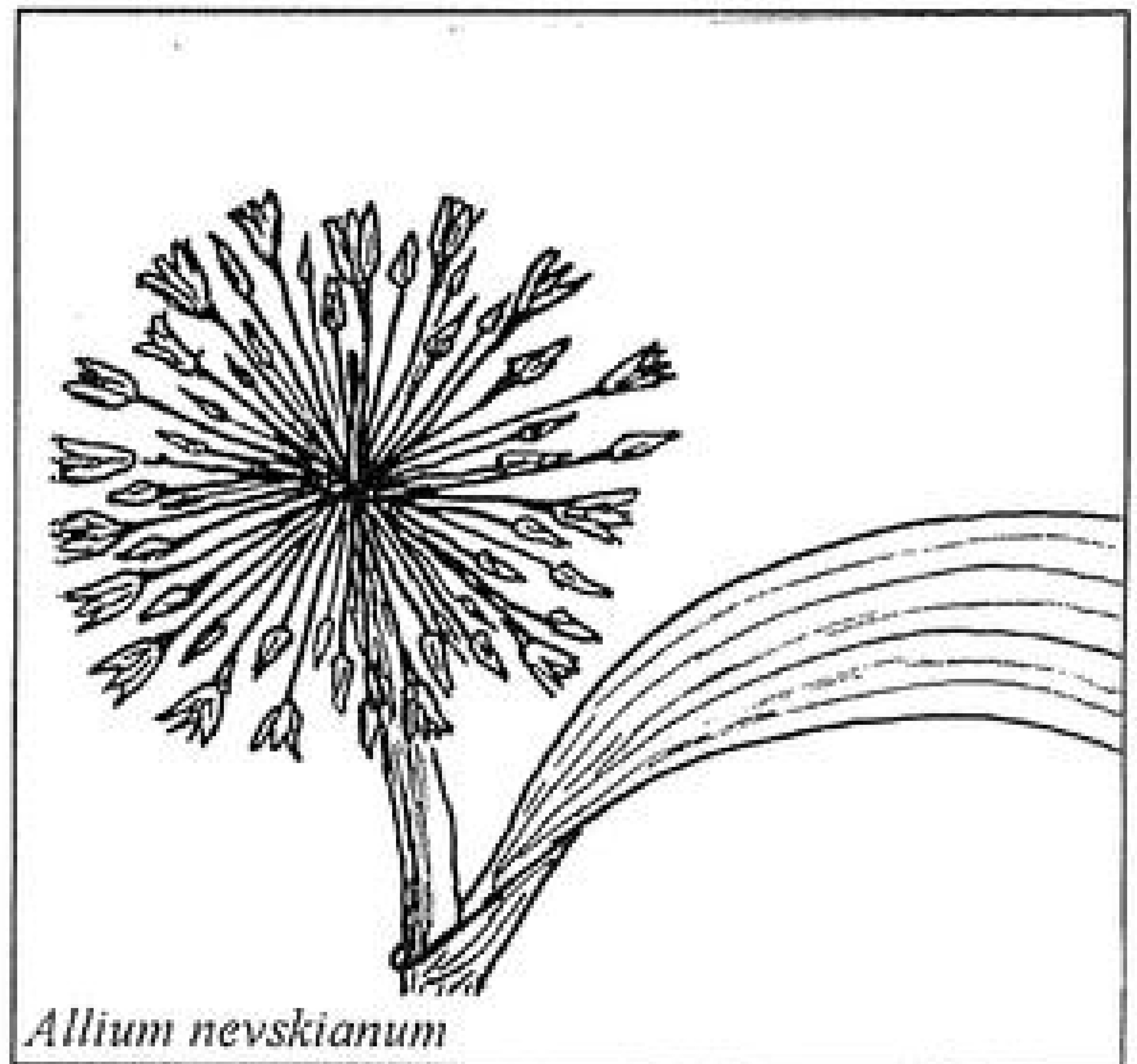
Of course, this case highlights the significance of taxonomy in matters of conservation - if *F.ojaiensis* is recognised as a separate species it is very local and rare, whereas, if sunk into *F.affinis*, the species as a whole is very widespread and common!

## *Allium nevskianum*

This splendid onion from Central Asia has made its appearance in European gardens only recently and we must hope that it is here to stay, for it is a handsome plant, akin to several other species belonging to the same group (subgenus *Melanocrommyum*, section *Acanthoprason*), as the Turkish *A. akaka*. It also resembles the well-known *A. karataviense* but is generally less robust and a more delicate-looking plant. The broad, glaucous green, purple-tinted leaves lie almost flat on the soil and stay in good condition through to the flowering stage, an unusual state of affairs in alliums where the leaves are so often tatty by the time the flowers are at their best. The flowers are quite a strong shade of reddish-purple and carried in a loose spherical umbel anything up to about 15 cm in diameter which is held on a short stem. Like *A. karataviense*, this is a plant which varies enormously depending upon vigour; young or weak individuals may have only one leaf per plant and small, almost stemless umbels whereas robust ones have more (2-3) leaves and larger umbels on taller stems.

There does seem to be a certain amount of doubt as to whether *A. nevskianum* is a distinct species. The new check-list of the plants of the former USSR, *Vascular Plants of Russia and Adjacent States*, lists it as a synonym of *A. alexeianum*; in fact, before it was described as a separate species it was known as *A. alexeianum* var. *hissaricum*. However, Reinhard Fritsch, who has been studying this subgenus, indicates that the two might well be distinct. In *The Genus Allium - Taxonomic Problems and Genetic Resources* (1992) he writes:

"After having studied *A. alexeianum* Rgl. and *A. nevskianum* Vved. ex Wdb. in all phases of development, I was astonished to detect some strong differences concerning the form of the inflorescence and the characters of the tepals between these two closely related taxa: great, loose inflorescences composed of flowers having stalks very different in lengths, and stiff tepals with thickened nerves in *A. alexeianum* but smaller, nearly orbicular inflorescences and weak tepals without thickened nerves in *A. nevskianum*."





On the other hand, Furkat Khassanov, in 'A Revision of the genus *Allium* in Uzbekistan', published later on in the same publication as the above paper, treats *A. nevskianum* as a synonym of *A. alexeianum*, so the matter is clearly not yet resolved.

I have to confess that I am guilty of perpetuating an error which has crept in over its name, and I am grateful to Robert Rolfe for pointing this out. The spelling is definitely *A. nevskianum*, not *nevskii*, as I have captioned a photograph of it in my new book *Growing Bulbs*. We have grown it for some years here in Surrey, firstly in an unheated frame and then planted out in a raised bed of gritty soil and it seems to be frost-hardy and relatively easy to please, although not seeding itself around like *A. karataviense*. This is a splendid plant, whether it turns out to be a 'good' species, or a synonym of *A. alexeianum*: in fact we have grown both, so I must look more closely at them in future to see if these characters appear to work and, if so, whether we have the names attached to the right plants!

### ***The Fritillaria Group***

Good news from the Alpine Garden Society is that the latest of their specialist groups to be formed is to be devoted to *Fritillaria*. The AGS Newsletter No. 90, announcing the formation of the Group, states that the aims and objectives include "publishing newsletters, operating an active seed exchange and holding non-competitive displays" and that "the Group exists "to increase the knowledge of all the species, both well-known and rare, which make up the genus." Members are being asked for their help in establishing a list of all the *Fritillaria* species which are in cultivation.

An initial Newsletter is expected shortly, and an inaugural meeting is being planned for 18 October 1997 in conjunction with the AGS Autumn Show at Millais School, Depot Road, Horsham, West Sussex; it is hoped that this will include a display of photographs and a sales stand for *Fritillaria* bulbs.

In view of the fact that this Group is an integral part of the AGS it is of course desirable that anyone interested should first be a member of the parent Society. Enquiries are invited to: Erna Frank, Cadenza, Butterfly Walk, Warlingham, Surrey CR6 9JA.

#### \*\*\*\*\**Bulbs for Sale*\*\*\*\*\*

*Clivia miniata* (orange) £5-12.50 depending on size; postage & packing extra.

Please contact direct (not via BN):

Mrs M. V. Criddle, 5 Storeys Lane, Burgh Le Marsh, Skegness, Lincs. PE24 5LR.

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## Stamps

Thank you, Nadine & Christian (of the nursery 'Ellebore' at St. Jouin de Blavou, France) for the 4.50 Franc stamp of *Lilium pyrenaicum*, celebrating the 'Parc des Pyrénées', and my sister Jean for a 70,000 Turkish Lira *Ophrys apifera*.

### A Ugandan "Haemanthus"

A lot of photographs of bulbs in the wild, with requests for identification, pass through the office; some are straightforward, some very difficult, some impossible since the crucial parts of the anatomy are not shown, but all are interesting. Recently, Isobyl la Croix sent us a colour print of an amaryllid growing in deep shade in Uganda's Bwindi forest.

Clearly it is a *Scadoxus*, but not the familiar *S. multiflorus*, which is what I was expecting to see. This one has rather few flowers in the umbel, individually rather large and a pale orange-brick colour, quite unlike the very dense spherical bright red heads of *S. multiflorus*. It is definitely the widespread *S. cinnabarinus* which occurs through western and central tropical Africa, although very rarely seen in cultivation. Fortunately the photograph shows the leaf arrangement, which is an important diagnostic feature; in this species the leaf stalks do not wrap around each other to form a false stem such as they do in the more frequently-cultivated *S. multiflorus*, *S. puniceus* and *S. pole-evansii*.

*Curtis's Botanical Magazine*, that venerable publication (started in 1787 and still going strong) usually has some items of interest for bulb enthusiasts. In Vol. 14, Part 1, *Leontochir ovallei* (see BN 18:12), *Roscoea praecox* and *Albuca pendula* were featured, with watercolour paintings and fully descriptive texts giving details of their history, botany and cultivation, while Vol. 14, Part 2 includes *Roscoea alpina* and *Alocasia melo*, a new tropical aroid from Sabah. Part 3, due out in August, will feature the amazing Peruvian Amaryllid *Paramongala weberbaueri* and the hardy Chinese slipper orchid *Cypripedium henryi* (also *Dodecatheon hendersonii*, but I doubt that we can legitimately claim that as a bulb, even if it does have small tubers and dies down for the summer!). In fact, the *Magazine* frequently includes monocots — which is hardly surprising with its current editor — and this trend will no doubt continue!

Anyone interested in finding out more about the *Bot. Mag.* should contact the Journals Marketing Manager, Blackwell Publishers, 108 Cowley Rd, Oxford OX4 1JF.

### ***And a nice photo of Sargent's Lily***

John Simmons, until recently Curator of the Royal Botanic Gardens, Kew, sent us a photo of a lily ("similar to *L. regale*") which he saw in the Erlang Shan, Sichuan, north-west of Ya'an. He describes it as a vigorous plant 1.5m in height, with the stems trailing down over rocks in its natural habitat on mountainsides. The photo shows a tall trumpet lily with large funnel-shaped white flowers stained purple-pink on the outside, very like those of *L. regale* but, significantly, with dark brown anthers; it is also possible to see that the leaves are rather wide (particularly the width:length ratio). John also comments that it has bulbils in the leaf axils. All these facts considered, this must surely be *L. sargentiae* since *L. regale* has yellow anthers and narrower leaves without bulbils in their axils. Although the two species occur near each other, it seems that *L. sargentiae* has a wider distribution than *L. regale*, the latter known only from a 75 km stretch of the Min River valley to the north-west of Chengdu whereas *L. sargentiae* is found more to the west and south-west of Chengdu.

This magnificent lily is not nearly as common in cultivation as the regal lily and one wonders why this should be so, for it has been known for as long a period - they were both collected in China by E.H.Wilson in 1903 and introduced into cultivation - and it is certainly just as desirable. The reason seems to be that it is not such a reliable garden plant. Patrick Synge (*Lilies*, 1980) notes that it appears to be less tolerant of lime in the soil than *L. regale* and that winter wet is probably the main cause of failure; Michael Jefferson-Brown (*Lilies, their Care and Cultivation*, 1990) and Derek Fox (*Growing Lilies*, 1985) both indicate that it is less hardy than *L. regale* and the latter suggests cultivation under glass in cold areas; he also remarks that it is very susceptible to mosaic disease and the fact that it is bulbil-producing makes it more likely that the virus will be passed on.

### ***Fritillaria dzhabavae***

This is a name which had escaped the trawl of the journals but recently came to our notice in *Vascular Plants of Russia and Adjacent States* (1995). Originally described by A.P. Khokhrjakov in *Byulletin Moskovskogo Obshchestva Ispytatelei Prirody* 96(4): 106 (1991), this was found in the Caucasus in western part of the Adzharo-Imeretinskiy range, on Mt Sarbiela on 10 June 1990. Since this publication is not likely to be readily accessible through the local library, the main elements of the description are repeated here:

Bulb rounded, slightly flattened, 6-10mm high and 8-12mm in diameter. Stem 6-12cm tall. Leaves 5-6(-7), the lower ones ovate, acuminate at the apex, 2.5-4cm long and 6-12mm wide, the upper ones linear or narrowly lanceolate, 2cm long and 2mm wide. Flowers horizontal (i.e. not nodding); perianth segments 2.5-3 cm long, 8-10mm wide, broadly ovate, dark brown, and/or tessellated; stamens 13-14mm long, filaments 8mm long, anthers 5mm long; ovary oblong-clavate, 7-8mm long, style slender, 10-11mm long, divided into three stigmas.

The author says that it is related to *F. latifolia* but the plant is smaller in all parts, coloured green rather than glaucous, and the flowers are not nodding. So, it must be very, very similar to *F. nobilis*, although this too is usually glaucous.

#### ***From the same source, a Muscari we hadn't heard of either-----***

A.P.Khokhrjakov (see above item) has also described *Muscari alexandrae*, a grape hyacinth apparently of no great distinction. It is said to be related to *M. neglectum* but has perianth teeth with white margins rather than all-white. The leaves are noted as appearing in autumn and are longer than the inflorescence (which agrees with the behaviour of *M. neglectum*). It was collected in Adzharia, Keda district.

#### ***The Four Galtonias***

Prompted by a query some months ago from Chris Irleand-Jones (of Avon Bulbs) about *Galtonia princeps*, and by the fact that all four known species are pushing up into growth in the garden (it is early summer here), we decided to run through the differences between these four, which should be fairly distinctive. However, it does seem a possibility that hybrids are appearing in gardens now that all the species are being cultivated, in which case some plants in cultivation may not conform.

The well-known *G. candicans* has the whitest flower, generally larger than in the other species with a perianth tube which is noticeably shorter than the six perianth segments. In *G. viridiflora* and *G. regalis* the tube is also shorter than the segments but the flowers are noticeably green, or at most a creamy-yellowish-green; these two may be distinguished by their leaves which are fairly stiff, erect and slightly greyish-green in *G. viridiflora* but bright green and 'floppy' in *G. regalis*. There is also a difference in the stamens between these two, those of *G. viridiflora* having filaments which are slender throughout, those of *G. regalis* widely expanded at the base. In the fourth species, *G. princeps*, the perianth tube is about equal in length to, or longer than, the perianth segments; the tube is green and the segments a paler, creamy-green.

B.L.Burt and O.M.Hilliard provided full descriptions of the four species in 'A Revision of Galtonia' in *Notes from the Royal Botanic Garden Edinburgh* 45(1): 95-104 (1988) and it is possible to extract the flower measurements from these as follows:

<i>candicans</i>	flower 32-46 mm long	[tube 12-20; outer segments 20-26]
<i>viridiflora</i>	flower 24-35(-40) mm long	[tube 9-15; outer segments 15-20(-25)]
<i>regalis</i>	flower 23-39 mm long	[tube 10-14; outer segments 13-25]
<i>princeps</i>	flower 23-40 mm long	[tube 12-23; outer segments 11-17]

In addition to these features, there is a marked difference in the flower shapes which is clear when they are growing alongside each other, although these differences are not easy to describe. All have dangling bells, but they are like small lampshades in *G. princeps* with a nearly straight-sided tube and the segments flared out - Bill Burt describes them as 'like a ballet skirt'. In the case of *G. candicans* the outline shape is more like that of a snowdrop, while the flowers of *G. viridiflora* and *G. regalis* are rather more funnel-shaped.

With regard to their cultivation, we have found that *G. viridiflora* is by far the most amenable here in our Surrey garden, seeding itself freely around and completely hardy; on the other hand, *G.candicans* dwindles away if left in





the ground and sometimes disappears in the first winter, *G. princeps* is persistent but does not seed itself and *G. regalis* has not yet (knowingly) been tried outdoors through a winter; I make that comment because I have a suspicion that one of the bulbs I was given in the past as *G. viridiflora* was in fact *G. regalis* - certainly it had green, rather soft, lax leaves and an inflorescence which tended to bend over at the apex, giving the whole plant a floppy appearance. That did survive the winter well, although succumbed to drought next to a conifer. Bill Burtt describes *G. regalis* as typically a plant of wet, shady cliffs (1770-3000m), *G. viridiflora* as growing on dryer cliffs and steep rubbly slopes (2100-2500m), *G. candicans* as occurring in damp grassy hollows (1350-2150m) and *G. princeps* occupying damp places among rocks and marshy streamsides, mostly at lower altitudes (near sea-level to 1250m).

There are also distribution differences between the four, although all are from the eastern side of Southern Africa - the Orange Free State, Natal, Transkei, Transvaal, Eastern Cape and Lesotho - and are therefore all within the summer rainfall area.

#### **Confusing hybrid epithets**

A letter from Rannveig Wallis prompted this short note on nomenclature.

It is recommended in the International Code of Nomenclature that names in Latin for any hybrids between species should not be formed by merging parts of the names of the parents [this does not apply to inter-generic hybrids where it is the recommended practice, as in *x Amarcrinum*]. There is at least one very good reason for this: species have their names changed too often whereas genera tend to stay with us rather more reliably!

Before the advent of the Code, hybrids between

#### **Bulbous Meetings**

>There is a 1-day Alpine Garden Society conference called "Bulb-Update" planned for 4 October 1997 at Horsham in Sussex, England; speakers are Bob and Rannveig Wallis, Ian Young, Chris Brickell and Brian Mathew. Further information & booking forms from: Mick Reed, 52 Purcell Road, Bewbush, Crawley, West Sussex, RH11 8XJ.

>The Birmingham Group of the AGS is also working on a special weekend bulb conference for 28 Feb.-1 March 1998; more details about this when available.

>The North American Rock Garden Society's next Eastern Study Weekend - known to its organisers as **Ontario Underground** - is to have bulbs as its main focus. This is hosted by the Ontario Rock Garden Society and takes place in Toronto over the weekend of 30 January to 1 February 1998. The BN Editor will be there, and looking forward to meeting up with bulb enthusiasts from across the water. There is another item about the NARGS on page 4 of this issue, including the Executive Secretary's address.

species were given names which were formed in this way, and they are now a possible source of confusion. In the spring, at one of the shows, two 'Juno' irises were exhibited, bearing the names 'Sindpers' and 'Sindpur'. Whether or not these were correctly identified I do not know as I did not see them, but for the purposes of this item it does not matter. These hybrids were raised a long time ago, by that very productive nursery, Van Tubergen, the first between *sind(jarensis)* and *pers(ica)* and the second between *sind(jarensis)* and *pur(purea)*. However, *I.sindjarensis* is now known as *I. aucheri* (because the two were found to be inseparable and *I. aucheri*, being the earliest-published name, takes precedence; *I. persica* is still a 'good' species and the name stays, but *purpurea* is now regarded as a synonym of *I. galatica*. Although the parent species have changed their names, the hybrids are left with their mixed epithets which are likely to be somewhat confusing to anyone who does not know the background. In another instance, *Iris* 'Warlsind' (*warleyensis* x *sindjarensis*), the matter is worse, since it appears that *I. sindjarensis* was probably not involved in the cross; certainly the plant cultivated today under that name seems to bear little evidence of it, so this is a very misleading name. To be fair, it could be that the original was a cross between these two species, but that at some stage there has been a switch and the current plant is an imposter, perhaps one of the *I. warleyensis* x *I. bucharica* crosses mentioned by W.R.Dykes in the early part of this century ("many different seedlings have been in flower here" - Dykes, 1917).

Incidentally, I am unaware of 'Sindpur' being in cultivation at the present time, whereas 'Sindpers' is available - and a very fine plant it is too, with a stocky habit and lovely pale turquoise blue flowers. If anyone knows of the existence of 'Sindpur' I would be very interested to hear; it was said to have amethyst (i.e., purplish) coloured flowers; there was also the reverse cross, 'Pursind'.

On the whole, for inter-specific hybrids, it is surely far better to give names which do not rely on the vagaries of nomenclature - such as the old hybrid *Crocus* x *stellaris* (*flavus* x *angustifolius*); now if that had been called *C. x auresus* or *C. x susireus* we would be quite lost - both species have had name changes and used to be known as *C. aureus* and *C. susianus*!

### **Some Commemorative Names - by Brian Halliwell**

When consulting seed lists, bulb catalogues, garden magazines or reading horticultural and botanical books, gardeners will be aware of the large number of botanical names derived from those of people. Have they, like

me, often wondered who these people might be? Here are a few of those likely to be encountered:

Pedanius Dioscorides who lived in the first century AD was Greek physician who compiled *Materia Medica*, a book about medicinal plants which proved to be of great importance in many countries for perhaps 1700 years. *Dioscorea*, a genus named for him, contains the yams, and he is also commemorated in *Nectaroscordum dioscoridis* and *Arum dioscoridis*.

Moving forward in time we come to Charles L'Ecluse (latinised to Clusius) (1526-1609), a noted Flemish botanist who collected plants in Spain and Portugal. Following a period in the household of Emperor Maximilian in Vienna, he was appointed professor at Leiden and was to lay out its botanic garden. His principal work was *Rariorum Plantarum Historia*, published in 1601. He was greatly interested in bulbs and collected and grew many of them, and has been regarded as the founder of the Dutch bulb industry. A number of bulbous plants commemorate him, including *Crocus clusii* and *Tulipa clusiana*.

John Sibthorp (1758-1796) was Professor of Botany at Oxford; following a collecting trip to Greece he was to publish *Flora Graeca* in 10 volumes. Two bulbous plants which are named after him are *Fritillaria sibthorpiana* and *Ornithogalum sibthorpii*.

John Gilbert Baker (1834-1920) (see BN 11:8) was Keeper of the Kew herbarium with a particular interest in the bulbous monocots. He published *A Handbook of the Amaryllidaceae* and *Handbook of the Iridaceae* and described a great many newly discovered species; several were named by others after him, including *Iris bakeriana* and *Tulipa bakeriana*.

Apart from specific epithets, there are many people commemorated in 'bulbous' genera: Sir Francis Galton (1822-1911), after whom *Galtonia* is named, was an anthropologist and geneticist who travelled widely in South Africa. Julian Milla, an eighteenth-century gardener to the King of Spain is remembered in the genus *Milla*, and a French botanist, Antoine Francois Ernest Coquebert Montbret (1781-1801), apart from having *Montbretia* named after him, accompanied Napoleon on his invasion of Egypt. Count Kaspar von Sternberg (1761-1838) founded the Bohemian museum in Prague and should be remembered every autumn when *Sternbergia* flowers and, in summer, when *Tulbaghia* is in bloom, a thought might be spared for Rijk Tulbagh (1699-1771), the Dutch governor of the Cape of Good Hope. Francis Masson (1741-1828), a student gardener at Kew, was sent to South Africa by Sir Joseph Banks to collect for the Royal Botanic Gardens. His genus, *Massonia*, is giving bulb

enthusiasts much enjoyment, and he is also commemorated in *Oxalis massoniana*.

A Swedish doctor, Carl Thunberg (1743-1828), was one of Linnaeus' students who, on qualifying, joined the Dutch East India Company. He went to South Africa where he collected many plants, sometimes with Masson. For almost 200 years, Japan was closed to Europeans, although the Company was allowed a trading post on the island of Deshima in Nagasaki Bay. Thunberg became its resident doctor and did a limited amount of plant collecting. He is commemorated in, for example, *Fritillaria thunbergii*.

Thomas Drummond (1790-1835), a Scot, was appointed Curator of the Belfast Botanic Garden. He joined the second arctic expedition of Sir John Franklin. On a second trip to North America he was collecting for British botanic gardens, and one of the plants which is dedicated to him is *Herbertia drummondii*. The genus is named after William Herbert (see BN 14:9) (1778-1847) who was the son of the Earl of Caernarvon. Herbert took holy orders and was to become Dean of Manchester. Specialising in the cultivation of bulbs, he published *Amaryllidaceae* in 1837. [*Haylockia* was named after Matthew Haylock who tended Herbert's collection of bulbs in his garden at Spofforth (see BN 16:6) - ed.]. Drummond is also commemorated in *Cooperia drummondii*, a genus named after Joseph Cooper who was head gardener in the first half of the nineteenth century to Lord Fitzwilliam at Wentworth in Yorkshire.

Henry John Elwes (1846-1922) was a wealthy landowner and all-round sportsman. A keen naturalist, he was interested in animals, birds, insects and in gardening; he travelled widely, collecting plants in various parts of the world including the Near, Middle and Far East, the Himalaya and North & South America. He was responsible for the publication of a *Monograph of the Genus Lilium* (1880) and has a number of bulbous plants named after him, including *Galanthus elwesii*, *Fritillaria elwesii*, *Crocus elwesii* and *Hippeastrum elwesii*. Another wealthy amateur - a lichenologist, gardener and plant collector - was Sir Thomas Gage (1781-1820) after whom R.A.Salisbury named that large and taxonomically difficult genus, *Gagea*. The greengage fruit was named for his grandfather, Sir William Gage.

Nurserymen have fared poorly in commemorative botanical epithets, although they are quite well remembered in cultivar names. Max Leichtlin (1831-1910) had a nursery in Baden-Baden, Germany, specialising in bulbous plants. Leichtlin commissioned plant collectors and introduced many new plants, some of which were named after him including the genus *Leichtlinia* (Agavaceae), which is no longer recognised, and species of *Crocus*, *Iris* and *Lilium*.

Few ladies have been remembered in bulbous plant names, but some are notable: The genus *Tecophilaea* was named by the Italian botanist Luigi Colla for his daughter Tecophila Billotti who was a botanical artist. In *Lilium mackliniae*, the specific epithet commemorates Jean Macklin who was the second wife of Frank Kingdon-Ward. Mrs C.G.Danford was the wife of the British Consul in Transsylvania and Bohemia. She travelled widely with her husband in Turkey and collected various plants and bulbs which were sent to J.G.Baker at Kew and to George Maw (see BN 6:9), who dedicated his *Monograph of the Genus Crocus* (1886) to her; she is commemorated in specific epithets in *Crocus* and *Iris*.

## Catalogues

Bulbes d'Opale are always worth checking for slightly out-of-the-ordinary bulbs, as well as supplying a good range of more familiar items. *Crinum moorei*, one of our favourite plants and so much more attractive than *C. x powellii*, is available, as well as a pure white form of it. *Lilium martagon* var. *daugava* is described as the most northerly-occurring form of the Martagon lily, much larger than the usual form and, for those who like real oddities, there is the extraordinary climbing African *Bowiea volubilis*. The autumn catalogue, apart from all the 'usual' genera, includes a range of Cape bulbs for the frost-free greenhouse or conservatory - *Babiana*, *Ferraria*, *Moraea*, etc. and I was surprised to find some Chilean *Leucocoryne* species. Bulbes d'Opale, 384 Boerenweg Ouest, F-59285 Buyssechre, France.

Cotswold Garden Flowers are noted for their fine range of unusual hardy perennials and list few bulbs, but there are some interesting non-bulbous monocots in their 1997 catalogue. The South African irid, *Aristea ecklonii*, with its small but brilliant blue flowers over clumps of grassy leaves, is a good conservatory plant and may succeed outside in a very sheltered mild garden. Arisaemas and arums appear quite prominently, some of them unusual: *Arisaema ciliatum*, *A. concinnum* and *A. exappendiculatum*. The climbing South American Bomareas are seldom-offered; the spectacular but tender *B. caldasii* is another good conservatory plant, but also worth a try in that very mild garden. We should try more *Bulbinella* species in the milder parts of Britain - they have dense showy spikes like slender kniphofias; *B. cauda-felis* is offered here, the cat's tail is obviously for cat-lovers since it smells of them as well! A hardy *Chlorophytum* from China, *C. majus*, is a novelty, and I have never seen *Chamaelirium luteum* on sale before - it is a rhizomatous Liliaceae/Melanthiaceae from the Eastern United States with spikes of pale yellow flowers. Also offered are several *Crocasmia* cultivars, *Kniphofia* species and hybrids, and the increasingly



popular 'lily-turfs', *Liriope* and *Ophiopogon* and *Tulbaghia* species which are also seeing a boom in popularity. Cotswold Garden Flowers, 1 Waterside, Evesham, Worcestershire WR11 6BS, UK. (catalogue £1).

The same comments apply to Monksilver Nursery, famous for their innovations in the world of hardy perennials, but they have a number of unusual 'bulbs' in their interesting and very descriptive catalogue. Several *Ophiopogon* feature here as well, including the little Chinese *O. chingii* which has white flowers followed by blue berries. Sandwiched between the many Euphorbias and Geraniums some good *Galanthus* are to be found, and I noticed a pale blue variant - 'Sapphirino' - of the normally deep blue Mexican *Commelina dianthifolia* which has a succession of 3-petalled flowers over narrow leaves. Some will not be able to list *Lilium* 'Bums' - apparently a Latvian word meaning Wow! For curiosity value, there are several double-flowered lily species as well. Monksilver Nursery, Oakington Road, Cottenham, Cambridge, CB4 4TW, UK.

Mention of non-bulbous liliaceous plants reminds me to mention Crûg Farm Plants since they have an extraordinary range of Solomon's seals: *Polygonatum altelobatum*, *P. biflorum*, *P. cryptanthum*, *P. cyrtonema*, *P. graminifolium*, *P. punctatum*, etc., and their relatives the disporums: *Disporum flavens*, *D. kawakamii*, *D. lanuginosum*, *D. lutescens*, *D. nantauense*, *D. smilacinum*, *D. taiwanense*, several *Clintonia* spp. There is a long list of *Arisaema*, many of them not offered previously as far as I know. Crûg Farm Plants, Griffith's Crossing, Caernarfon, Gwynedd, LL55 1TU, UK.

Rupert Bowlby continues to provide *Allium* enthusiasts with splendid exhibits at the Chelsea Flower Show, and a large range in his catalogues. The 1997 bulb list includes quite a lot of South African winter-growers for despatch in August/September (the start of our Northern Hemisphere bulb growing season), including some good *Gladiolus* spp., such as the spectacular orange and yellow *G. alatus*, and the seldom-seen *Micranthus plantagineus*, an irid with spikes of dark blue tubular flowers. Rupert Bowlby, Gatton, Reigate, Surrey RH2 0TA.

Avon Bulbs have issued their 1997-1998 catalogue which is full of interest as usual and it is difficult to pick out what to mention from the hundreds of bulbs offered. *Fritillaria ussuriensis* must be one of the more unusual, a Far-Eastern woodland species with whorls of leaves and brown-green flowers. *Helicodiceros muscivorus* is one of the most spectacular of aroids, but it does need a cold greenhouse in the climate of England. Chris

Ireland-Jones remarks that 'Huge freckled buds hold one in suspense until they open with much drama'; he might have mentioned that the breath should be held as well until the smell passes - but only for a day or so! *Iris unguicularis* 'Starkers Pink' is a much sought after pink variant of this winter-flowering species, but 'few to spare' means that you have probably missed it. *Disporopsis pernyi* is another Solomon's seal relative from China with waxy greeny-white, very fragrant flowers. Avon Bulbs, Burnt House Farm, Mid Lambrook, South Petherton, Somerset TA13 5HE.

We have mentioned the new Buried Treasure list before, but it is so special that a dip into the second one seems well worthwhile. Here are just a few 'specials', without further comment: *Biarum davisii marmarisense* (non-smelly!), *Colchicum parlatoris*, *Galanthus peshmenii* (autumn-flowering), *Fritillaria argolica*, *Iris* (Juno) *stenophylla*, *Muscari grandifolium* (a good one I can vouch for), *Narcissus cordubensis*, *Scilla melaina*, *Tulipa cretica* ---need I say more! Buried Treasure, Llwyn Ifan, Porthyrhyd, Carmarthen SA32 8BP, UK.

I am working from Jim Almond's 1996 Bulb List but I have no doubt that the 1997 one will be as interesting, most of the items grown from wild-collected seed; last year's list included many *Calochortus*, *Erythronium* and *Fritillaria*, for example *C. kennedyi*, *C. coxii*, *E. klamathense*, *F. glauca* and *F. zagrica*. Jim Almond, 5 Coolock Close, St Peters Park, Shrewsbury SY3 9QD.

## Bookends

*Rare Lilies of California* by Peggy Lee Fiedler, with illustrations by Catherine M. Watters. Published in 1996 by the California Native Plant Society, 1722 J Street, Suite 17, Sacramento, California 95814, USA. ISBN 0-943460-30-1. Price \$24.95.

At first one might think that this would be a rather slim pamphlet since there are not that many lilies in California, but it deals with the whole family Liliaceae in its widest concept to include *Allium*, *Bloemeria*, *Brodiaea*, *Calochortus*, *Chlorogalum*, *Erythronium*, *Fritillaria*, *Nolina*, *Trillium*, *Triteleia* and *Veratrum*, as well as *Lilium* of course; many other genera are mentioned, apart from those picked out as having rare representatives. This is no trivial paperback: it is a book of 153 pages with plant portraits of 38 species considered to be rare in the state of California. Although it is clearly the primary aim to highlight the plight of the relatively few plants illustrated, Dr Fiedler has provided us with much more and I have found this to be a most interesting book from several angles. In an introductory chapter she explains what defines the 'lilies' and describes each of the 40 genera, from *Agave* to *Zigadenus*, which

occur in this extraordinarily monocot-rich state (6 of these are exotics which have 'gone native'). Although short, these descriptions are readable rather than in stuffy botanical form and the author manages skilfully to include other interesting details such as uses and etymology. Chapter 2 deals with the patterns of rarity of lilies in California, the probable causes of rarity and the legal protection which exists in the state. This is followed by a chapter on evolution and ecology using two case studies; one of these, based on a detailed survey by Randy Zebell, concerns patterns of floral evolution in *Calochortus venustus* and the other (from a study by M. Skinner), floral variation and pollination in Californian *Lilium*. Chapter 4 makes up the bulk of the book with the 38 whole page colour plates, each facing a page of text about the plant illustrated. The text contains information about the distribution, rarity status and threats, as well as some descriptive botanical information. There are 7 pages of useful monocot references, a glossary of terms, an appendix with a table showing the "major morphological differences between the Liliaceae and several monocot families now segregated but traditionally included in the Liliaceae"; this is where we find mention of 'splits' such as Alliaceae, Trilliaceae etc. The plants given the 'full treatment' are:

*Allium* - *munzii*, *sanbornii*, *shevockii*, *yosemitense*

*Bloomeria* - *humilis*

*Brodiaea* - *coronaria* ssp. *rosea*, *Insignis*

*Calochortus* - *albus* var. *rubellus*, *argillosus*, *clavatus* ssp. *clavatus* & ssp. *recurvifolius*, *obispoensis*, *persistens*, *pulchellus*, *striatus*, *tiburonensis*, *weedii*, *westonii*

*Chlorogalum* - *grandiflorum*, *purpureum*

*Erythronium* - *helenae*, *tuolumnense*

*Fritillaria* - *agrestis*, *ojaiensis*, *pluriflora*, *purdyi*, *roderickii*, *striata*

*Lilium* - *bolanderi*, *humboldtii*, *maritimum*, *occidentale*, *pitkinense*, *vollmeri*

*Nolina* - *interrata*

*Trillium* - *rivale*

*Trieleia* - *crocea* var. *crocea*

*Veratrum* - *fimbriatum*

Some of these are well-known to bulb enthusiasts as cultivated plants and this interesting book serves to remind us that we should do our best to grow them well, propagate them and distribute them for others to enjoy.

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